Meeting Common Core Standards with Pixie®

Grades K – 5

Tech4Learning 10+ YEARS SERVING EDUCATION

Meeting Common Core Standards with Pixie®

Kindergarten

What is Pixie?

Pixie is software kindergarten students can use to write, paint pictures, and tell stories. Pixie provides a fun way for students to explore and respond to curriculum topics related to the Common Core Standards.

Students can add text to a Pixie page to practice their writing, draw using the paint tools, record narration for stories, and more. Students can share their work as a printed page, comic book, or even as a video.

Using Pixie with Kindergarten Students

Kindergarten students are building foundations for a life of learning. They need lots of direction and assistance, and learning is mainly accomplished through exploration and play. Pixie provides a fun way to build early learning foundations.

As you explore some of the ideas in this guide, think of the students in your class. Which ones will respond if allowed to explore content in this way? Which activities work best as an entire class project on a projector or interactive white board? Which tasks and projects should be done at a center or with an aide or student buddy?

Don't forget time to explore and play in Pixie so students can explore wherever their interests lead. Passion for learning is one of the most important things to teach at this age!

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Kindergarten Language Arts

Reading: Literature

Key Ideas and Details

1. With prompting and support, ask and answer questions about key details in a text.

I Remember...

Read a simple story, like the ***Three Little Pigs***, to your students. Talk as a whole group about the story. What do they remember? Ask questions about who, what, and when to prompt their thinking. Have each student use the text and paint tools in Pixie to create a page about what they remember from the story.

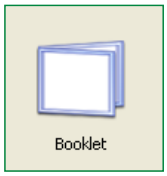
Print each student's page and share them with the class. If you have a presentation station or corkboard in your room, you can display the pages to help students remember the story.

Select the Project button, choose New, go to the Activities area, open the Language Arts folder, open the Writing folder, Open the Book activity

2. With prompting and support, retell familiar stories, including key details.

Retell a Story

Read a story to your students. Have each student create three pages in Pixie and use the paint tools and stickers to illustrate characters and events in the story. Have them partner with a parent, aide, or older school buddy to type a sentence that describes each page. You can add a title page and the student's name and print each story as a foldable booklet your students can take home and share with their families.



To add a level of excitement to this project, have students create podcast versions of their stories. To make an enhanced podcast, have students record narration for each page in their story. Then, export the project as a podcast. Send the stories home on video iPods, post them on your web page, or publish them to K12Share. While podcasts are a great way to share class work with students' families, you can also use them to support struggling readers and help students review material for a missed class.

As students' comprehension abilities grow, you can ask them to organize by beginning, middle, and end. Print their Pixie stories as postcards (4 to a page), cut the pages into individual pieces, and have the students practice sequencing using each others' stories.

Reading: Literature

Key Ideas and Details

3. With prompting and support, identify characters, settings, and major events in a story.

Key Ideas

As you read aloud to students or share a favorite class book, you naturally ask students, "What will happen next?" or "What will this character do now?" After reading as a class, have students individually relate what they learned from listening to or reading a story on their own using the "Key Ideas" activity.

You can also use Pixie to create your own activities. You may want to create a template that includes images for characters, setting, and event information specific to the story, or stories, you are reading. For example, you can start by opening the "Key Ideas" activity and add clip art of characters, setting, and graphics to represent events. Save the activity and have the students sort the graphics into the correct boxes. If you have an interactive whiteboard, you can complete this activity as part of a whole group discussion.

Select the Project button, choose New, go to the Activities area, open the Language Arts folder, open the Reading folder, open the Comprehension folder, Open the Key Ideas activity

Reading: Literature

Craft and Structure

4. Ask and answer questions about unknown words in a text.

New Vocabulary

When you are reading to the class and encounter a word students may not know, ask them to guess at its meaning. Collect new vocabulary on the board or somewhere all students can see. Encourage students to share or copy words they are reading that they do not know.

At the end of the week, look at all of the new words you have found. Have students choose a word from the list and write a definition. Then have them type (with a buddy or assistant) this definition on a Pixie page and draw a picture that supports or explains their definition.

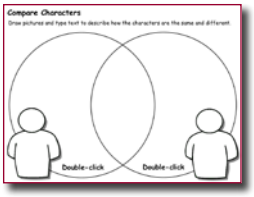
You can also print each student's page as a postcard (4 to a page with the Repeat Page option checked), and have students trade these flashcards with each other to add new words to their collection.

Reading: Literature

Integration of Knowledge and Ideas

9. With prompting and support, compare and contrast the adventures and experiences of characters in familiar stories.

Main Character Comparison



After students have read two stories, use the "Compare Characters K-2" activity in Pixie to talk about each story's main character. Write the name of one main character in the large yellow box and the other in the large red box. Brainstorm ways that the characters are similar and write or draw them in the orange boxes. Brainstorm ways that they are different and write or draw them in the outside boxes.

You can also have your students compare themselves to the main character in a story using the "Main Character Comparison" activity in the Language Arts>Reading>Literature folder in the Activities. This helps students build reading for meaning and descriptive writing skills as well as self-awareness.

Select the Project button, choose New, go to the Activities area, open the Language Arts folder, open the Reading folder, open the Literature folder, open the Compare Characters K-2 activity

Reading: Informational Text

Key Ideas and Details

1. With prompting and support, ask and answer questions about key details in a text.

Elements of Nonfiction

Many young students lack appreciation of nonfiction and do not find it exciting. But once they understand how to read nonfiction, they are less afraid and can quickly become independent researchers. Find and share a nonfiction book about an animal you are studying in class. Show students how they can use pictures, captions, picture labels, and bold text to find information.

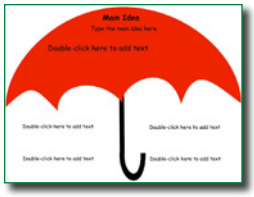
Have students create a page in Pixie that shares information about a favorite animal. Have them utilize one of these elements (bold text, labels, captions) to make it easier for someone to find the information on their page. Use the Import Pages feature to combine the student work into one file to show to the class. As each page displays, have students share what is the most important information on the page and the strategy they used to find it. Print the project for each student so they can take home and share a nonfiction book they helped author.

Reading: Informational Text

Key Ideas and Details

2. With prompting and support, identify the main topic and retell key details of a text.

Explore Main idea



Have your students think about the main idea as an umbrella that covers all of the content and holds it together. Share a couple of different nonfiction books for early readers with your students. Look at the cover picture and title. What is the main idea? Now explore the titles, pictures, and text inside the book. How are they organized? Project a copy of Pixie's "Main Idea Umbrella" activity for students to see. Work together to add text to describe the main idea as well as key details for one of the books you have shared. Invite students to use the paint tools and stickers to add images to support the ideas.

Have students complete the "Main Idea Umbrella" activity on a nonfiction topic they will be exploring in their writing workshop. This will help them collect information for their writing. You can also have students create a page that illustrates the main idea using clip art, the text tool, and the paint tools.

Click the Project button, click Activities on the left, open the Language Arts folder, open the Reading Folder, open the Comprehension folder, open the Main Idea Umbrella activity

Reading: Informational Text

Craft and Structure

4. With prompting and support, ask and answer questions about unknown words in a text.

Vocabulary Supports

As you read to the class or when students are reading independently, have students raise their hand to let you know when they encounter an unfamiliar word. Have them ask the rest of the class if anyone can help share the meaning of the word. Open Pixie's "Vocabulary" activity and project it where students can see it. Type the word at the top of the page and work together to define the new word. Copy the sentence they are reading that includes the word or ask advanced students if they can help you use it in a new sentence.

Save each Pixie file and collect these new words on a wall or paper in your classroom. At the end of the week or unit, give each student one of the words you have already defined. Ask students to draw a picture of the word to help others remember the meaning. Print the pages in Postcard style (4 to a page) and distribute them to the class as vocabulary postcards or trading cards.

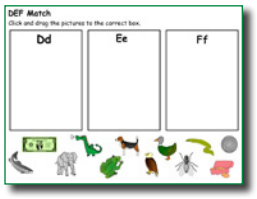
Click the Project button, click Activities on the left, open the Language Arts folder, open the Vocabulary (green) activity

Reading: Foundational Skills

Phonological Awareness

2. Demonstrate understanding of spoken words, syllables, and sounds (phonemes).

Alphabetic Principle



Pixie contains a wealth of activities on alphabetic principle. After the class has learned the different letters of the alphabet and their sounds, complete a few of the activities in the "A is for" folder. Project the activity in your classroom or on your interactive whiteboard. Have students say the word for each picture at the bottom of the page to identify its initial sound. Then, drag the images to the corresponding letter box.

As students gain proficiency, have them each create a page in Pixie and add stickers for the letters of their name (Stickers>Alphabet>Uppercase). Then, have them paint pictures or add stickers from the library that represent words with the same initial sounds.

Click the Project button, click Activities on the left, open the Language Arts folder, open the Reading folder, open the Alphabetic Principle folder, open the A is for folder>choose any activity

Writing

Text Types and Purposes

1. Use a combination of drawing, dictating, and writing to compose opinion pieces in which they tell a reader the topic or the name of the book they are writing about and state an opinion or preference about the topic or book (e.g., My favorite book is...).

Book Review

Have students choose one of the books they have read and enjoyed to share with other students. In Pixie, have each student open the "Book Review" activity. Have them type the title of the book and a one-sentence summary of the book on the left and a sentence about what they liked about the book on the right. Have them use Pixie's paint tools to illustrate their favorite parts of the book.

Have students create postcards or trading cards to tell other students about books in the library. Have students create a page in Pixie that includes text and drawings describing their favorite scene of a story. Print out the pages in postcard (four to a page) or comic (six to a page) style, laminate them, and share them with other kindergarten students at your school to help them choose books when they visit the school library.

Select the Project button, choose New, go to the Activities area, open the Language Arts folder, open the Reading folder, open the Literature folder, open the Book Review activity

Writing

Text Types and Purposes

2. Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic.

Welcome to Our Classroom

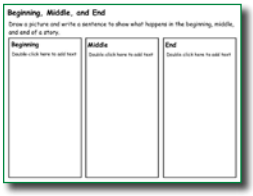
After students have been in class a couple of weeks, have them help you create a tour of your classroom that shows important features and how they are used. As a class, brainstorm the different parts of your room, such as the reading corner, desk groups, pencil sharpener, etc. Walk around the room and take pictures of each place students have identified. Import all of the pictures into Pixie.

Assign each student to record a simple sentence about each area. You may want to start with a repetition ("At the reading corner, we…"). Have aides or older students help your students complete their sentences and record their voices. Save all student work to a common folder. Then, use the Import Pages function to combine them into one Pixie file. Export this file as a video for new students, to show parents, or as HTML to share on your web site or K12Share.com.

Students can also create a movie on classroom and school procedures for new students or for parents to see during open house. This is a great way to both introduce Pixie and review classroom procedures at the beginning of the year. Include things such as getting materials, checking out a book, paying for lunch, signing in to a computer, arriving at school in the morning, what to do before leaving in the afternoon, and fire drill procedures.

3. Use a combination of drawing, dictating, and writing to narrate a single event or several loosely linked events, tell about the events in the order in which they occurred, and provide a reaction to what happened.

Beginning, Middle, and End



After visiting the library, art class, music, or physical education, talk with your students about what happened. How did it start? What did they do? How did it end? Brainstorm a list of things that occurred and then work as a class to put them in order. In Pixie, project the "Begin and End" activity where all students can see it and work as a class to describe what happened at the beginning, middle, and end.

As students get more sophisticated, have them retell an important or recent event that happened at home using the "Begin and End" book activity. In this activity, they will write, illustrate, and narrate an event by dividing it into actions that occurred in the beginning, middle, and end.

You can also talk with students about the steps in an important process, such as getting ready to go to school. Open the "Flowchart" activity (Activities>Templates>Graphic Organizers>Flowchart) and write out each step in the process.

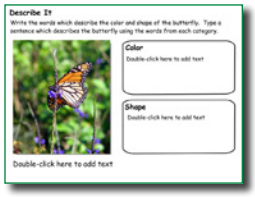
Select the Project button, choose New, go to the Activities area, open the Language Arts folder, open the Reading folder, open the Comprehension Folder, open the Begin and End activity

Writing

Production and Distribution of Writing

5. With guidance and support from adults, respond to questions and suggestions from peers and add details to strengthen writing as needed.

Butterfly Challenge



Talk about descriptive words with your students. Point out objects in the room and ask students to describe them. In Pixie, open the "Describe It" activity and project it for students to see. Work as a class to brainstorm and write words that describe the butterfly.

Then, have students picture a different butterfly in their minds. Have them share words that describe the size, shape, and color of their butterfly. Write these words down, drawing from word lists you have shared with them. Have each student create a page in Pixie that includes their name and the descriptive words they came up with.

Select the Project button, choose New, go to the Activities area, open the Language Arts folder, open the Parts of Speech folder, open the Describe It activity

6. With guidance and support from adults, explore a variety of digital tools to produce and publish writing, including in collaboration with peers.

Our Version

Read a story that follows a repetitive pattern, such as ***In the Tall, Tall Grass*** by Denise Fleming. Talk to students about the repetition and let them know your class will be making their own version of this book. Then, have students create their own version of the story by changing the noun and verb of the sentence. For example, "In the blue, blue water, a fish swam."

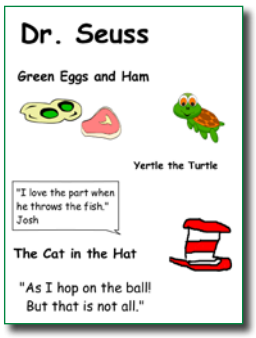
Have each student create a page in Pixie that includes the completed sentence and an illustration to match. You can set up a template for the students by adding a text object for the sentence and saving the file as an activity. When they are finished, use the Import Page function to combine all student pages into one Pixie file. Then, export the book as a video or HTML story to present to the class and school or to share with the community on your web site.

Writing

Research to Build and Present Knowledge

7. Participate in shared research and writing projects (e.g., explore a number of books by a favorite author and express opinions about them).

Our Favorite Author



After reading many books to your students over the year, ask them to talk about who their favorite author might be, like Laura Numeroff, Dr. Seuss, or Shel Silverstein. Divide students into groups based on their favorite authors, or divide them into teams and have them choose after grouping. Have each team find, list, and explore other titles by this author. What makes this author good? Are they funny? Do they use rhyming words really well?

Have each team use Pixie to create a simple video advertisement for the author. Choose one student to create an illustration of the author with the paint tools and use the record feature to introduce other students to this author. Have the other team members choose a different book by this author and create a page with an illustration about the book and narration describing why they liked it. Export the pages as a video to share on the school video system, web site, or on a computer in the library.

Click the Project button, click New, choose the Portrait orientation

8. With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.

Our Class Field Trip

Field trips are one of the most enjoyable and memorable events of the school year. They offer a great opportunity for students to recall what they saw or experienced. After returning from a field trip, use Pixie to recall your experiences. You could import photos from the trip into one Pixie project and work as a class to write a caption for each image. You could also have each student create a page in Pixie that includes a sentence and illustration that answers a question like, "What was your favorite part of the field trip?" or "What will you always remember about this field trip?"

If your students create individual pages, use the Import Pages function to combine them into one Pixie file. You can print the project to create a class book or print trading cards students can cut out, trade, and combine to make their own individual books. You can also export student work as a video or HTML that you can post to your web site to share with family, community, and staff from the site you visited.

Speaking and Listening

Comprehension and Collaboration

4. Describe familiar people, places, things, and events and, with prompting and support, provide additional detail.

My Favorite Relative

Barbara Fairchild, Tuscarora School District, Mercersberg, PA

"I wanted to find a meaningful project to highlight my first graders' accomplishments in writing, and since we were studying a Language Arts unit on families, I suggested that the students write about a very familiar topic, relatives. The response and excitement was immediate and overwhelming. My students made an instant connection with the topic. It was a familiar topic, and their interest was evident.

My students were excited to get started and immediately chose a favorite relative. As the students prepared to write first drafts, one asked, "Why can't we do this with Pixie?" The chorus of approval from his peers had us all heading for the computer lab.

As the project progressed, students' excitement grew! The students began to converse and share ideas with one another instead of coming to me. They were complimenting and encouraging one another. I simply sat back and watched in amazement. I noted that the students were passionate about what they were writing and drawing. Their passion for the project led to even more suggestions and requests, which in turn led to a deeper learning.

We shared the digital stories online and at a classroom event. The expressions and pride on the students' faces were priceless. One father began to cry when he learned that he was his son's hero. My students were connected, excited, motivated, inquisitive, and left first grade with memories that will last a lifetime."

5. Add drawings or other visual displays to descriptions as desired to provide additional detail.

Paint and Tell

Show and tell is an opportunity for students to speak to their peers with the prompting of something they have chosen as important. The object they choose to share helps them focus their descriptions and stories and will often prompt additional questions from the audience.

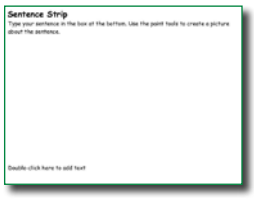
To encourage more detail and more questions, have students in your class paint pictures of their favorite topic or important events from home in Pixie at a center in your classroom or on computers that are available when other work has been completed. Print out the student pictures and have the students talk about them during show and tell. Use the content of the picture as prompts for more descriptions and sharing. Encourage your students to also use the pictures to formulate questions.

Language

Conventions of Standard English

2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

Writing with Capitals and Periods



Have students use the Pixie "Sentence Strip" activity, or simply add text to a blank page and write a sentence using sight words. Have students underline the capital letter at the beginning of the sentence and circle the punctuation at the end. You may even want to have them use green at the beginning to signal start and red at the end to signal stop, the same way the capital letter signals the start of a new sentence and the period signals the end.

Because it combines text and pictures and supports multiple formats for publishing, Pixie is an engaging way to get students to write. Try printing out student stories as booklets they can fold and share, or publishing science cycles as comic strips. Asking students to publish and share their work and have others read it will encourage them to use and help them understand the need for writing conventions.

Select the Project button, choose New, go to the Activities area, open the Language Arts folder, open the Writing Folder, open the Sentence Strip activity

Language

Vocabulary Acquisition and Use

5. With guidance and support from adults, explore word relationships and nuances in word meanings.

Verbs are Opposites too!

Read a simple book of opposites, like Sandra Boynton's ***Opposites***, ***What's Up Duck*** by Tad Hills, or Eric Carle's ***Opposites.*** Kindergarteners will likely be familiar with most of these opposite adjectives. Work with your class to come up with a list of more opposites. Anytime you encounter a word students may not be familiar with, provide an explanation and ask students what they might draw if they were to make a picture of this word.

Finding opposites for verbs is a bit harder. Share a few verbs that you think students know, such as sleep (wake up), remember (forget), and break (fix). Develop a list of these verbs as a class. Have each student choose one set of verb opposites. Have each student create a page in Pixie that includes the verbs, as well as illustrations for both. Use the Import Pages feature to collect all pages into one file to present to the class or export the project as a movie, podcast, or HTML storybook to share on your web site.

Language Arts Lesson

A,B,C – It's as Easy as 1,2,3

Students will explore initial sounds through the creation of a classroom ABC book. Students each choose a letter of the alphabet and create a Pixie page that includes a "Cool Letter," stickers, pictures that represent words that begin with this letter, and narration that names each picture. Combine all of their pages together to publish a class ABC book!

Engage

Share books about the alphabet like ***Chicka, Chicka, Boom, Boom; Dr. Seuss's ABC's***, and ***The Z was Zapped*** with your students to help make learning and using the alphabet fun. These books also help students begin thinking about how letters associate with sounds and words.

Once students have developed some expertise with the alphabet, let them know that they will be creating a book to teach other students about the sounds the letters in the alphabet make. Assign each student a letter based on what you know about their skill with letter-sound correspondence.

Create

Before you begin, explore the images in Pics4Learning and download images of objects that begin with each letter. Have each student choose one picture from the folder of A-Z pictures you downloaded from Pics4Learning to represent their letter. Help them use Pixie's Cool Word feature to create a cool letter. Save their letter file to a common alphabet folder, using the letter as the name of the file.

Next, have students use the stickers tab to add additional objects that begin with this letter. Show students how to open different folders in the library and how to add a sticker to their page. Have each student record a sentence naming the things that begin with their letter. Save each students' letter file to the class folder.

Share

Once all of the files have been saved, click the Project button and choose Import Pages to combine all individual student pages into one project. Click the storyboard view from the View options to rearrange the pages and place them in alphabetical order. Click the Project button, choose Export, and select the HTML option to publish your class ABC book.

Share the ABC book in its interactive form on a classroom web site or present it from a local computer. Have students discuss the page they created and share how they chose each sticker to match the letter.

Common Core Standards

W.K.6. With guidance and support from adults, explore a variety of digital tools to produce and publish writing, including in collaboration with peers.

RF.K.2. Demonstrate understanding of spoken words, syllables, and sounds (phonemes).

RF.K.3. Know and apply grade-level phonics and word analysis skills in decoding words.

W.K.2. Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic.

SL.K.5. Add drawings or other visual displays to descriptions as desired to provide additional detail.

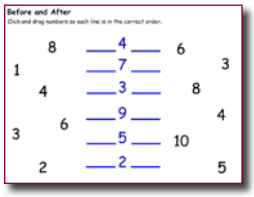
Kindergarten Mathematics

Counting & Cardinality

Know number names and the count sequence.

2. Count forward beginning from a given number within the known sequence (instead of having to begin at I.)

Number Order



Open the "Number Order" activity and project it or display it on an interactive whiteboard so that all students can see it. At the top of the list is the number four. Ask students which number comes before four. Have a student click and drag with the mouse or on the interactive whiteboard to move the number three into the correct location. Repeat this process to complete the rest of the number sequences on the page.

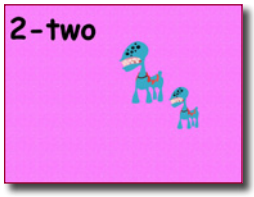
Select the Project button, choose New, go to the Activities area, open the Math folder, open the Numbers and Operations folder, open the Numbers folder,open the Number Order activity

Counting & Cardinality

Count to tell the number of objects.

4. Understand the relationship between numbers and quantities; connect counting to cardinality.

Counting Book



"I like to use the counting activity templates as a first project with Kindergarten students in the computer lab, since some students are very good with a mouse, and other have no computer experience at all.

After opening a counting book activity, each student chooses a sticker from the library and then drags the correct number of that sticker to their page. Each student completes this process for the numbers one through ten. Once the students finish their ten pages, I help them record each page by saying 'One dog,' 'Two horses,' and so on, and choose background music and transitions for their video. When the process is complete, we use the share options to export their project and I upload each student's work to my wiki page for the parents to view. Parents love seeing and hearing students' work online, and many send relatives to the site to view the project as well."

You can find a complete lesson plan at the end of this guide for a similar counting book, titled ***The 13 Days of Halloween****.*

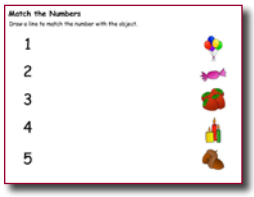
David Floyd
Washington, DC

Counting & Cardinality

Count to tell the number of objects.

5. Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.

Match Numbers



Create situations where students are asked to assign a number to each item in a group and provide you with the total number of items. Practice the relationship between numbers and quantities by drawing a line to match the number with the group of objects that have the same value. In Pixie, have students create pages in a project for the numbers 6–10. Add groups of objects for the numbers 6–10 and drag stickers from the Library to represent the number.

Read ***The Very Hungry Caterpillar*** by Eric Carle to your students. Talk about how the caterpillar ate one food item the first day, two the next, and so on in increasing order. Have the students create a "Very Hungry" book about another animal and write what it would eat with the number getting larger every day. Have the students type the correct number in the sentence and use the stickers or paint tools to add the correct number of each object.

Select the Project button, choose New, go to the Activities area, open the Math folder, open the Numbers and Operations folder,open the Match Numbers activity

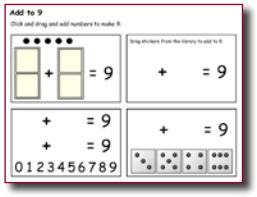
Operations & Algebraic Thinking

Understand addition as putting together and adding to, and understand subtraction as taking apart and taking from.

2. Solve addition and subtraction word problems, and add and subtract within 10, e.g., by using objects or drawings to represent the problem.

3. Decompose numbers less than or equal to 10 into pairs in more than one way, e.g., by using objects or drawings, and record each decomposition by a drawing or equation (e.g., 5 = 2 + 3 and 5 = 4 + 1).

Decomposing Numbers



Decomposing numbers refers to the ability of students to break numbers apart and form equivalent representations. When determining place value, one decomposes numbers into tens and ones. In Kindergarten, decomposing numbers below ten involves understanding that 9 can be 4+5, 6+3, 7+2, and even 6+2+1. To help students think about the numbers that can be added to create a number, open the "Add to 9" activity in Pixie. Ask your students if anyone knows of a way to add to 9. Let this student choose how they might want to represent this using dominoes, numbers, dice, or other images. Continue to explore ways to decompose and compose the number nine.

Divide students into small teams and assign each team a number. Have them collaborate on a Pixie file on the topic of "Facts about the Number X." Have the team create different pages that show the ways to add to get to this number. Encourage them to use facts, objects, symbols, and drawings. Also encourage them to record narration. Export the project as a podcast or video so that students can watch on an iPod or view online to practice adding.

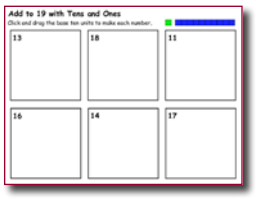
Select the Project button, choose New, go to the Activities area, open the Math folder, open the Numbers and Operations folder, open the Numbers folder,open the Add to 9 activity

Number & Operations in Base Ten

Work with numbers 11-19 to gain foundations for place value.

1. Compose and decompose numbers from 11 to 19 into ten ones and some further ones, e.g., by using objects or drawings, and record each composition or decomposition by a drawing or equation (such as 18 = 10 + 8); understand that these numbers are composed of ten ones and one, two, three, four, five, six, seven, eight, or nine ones.

Add to 19



Our fingers make it easy to represent ten, but numbers to 20 require a partner. Place students in teams of two, call out a number between 11 and 19, and have one student hold up all 10 fingers to represent the tens while the other student holds up one to nine fingers to represent the ones. When they start to get the hang of how to decompose numbers 11–19 into tens and ones, open the "Add to 19" activity. Show students how the bar for Tens is composed of ten ones. Work as a class to complete the activity. If you have an interactive whiteboard, designate one student to always drag the Tens over to help cement this concept.

Pixie includes a library with base ten blocks. At a center in your classroom, assign a number under twenty and task students with adding base ten blocks to make that number. Combine their pages together and run a presentation to show the different ways students positioned their blocks to make that number. You could also instruct each student to create a project that includes nine pages and represent the numbers 11–19 using base ten blocks. Print the entire project at Trading Card size. Cut out the trading cards and create a class game in which someone calls out a number between 11 and 19 and students try to find the number as fast as they can from their own set of cards.

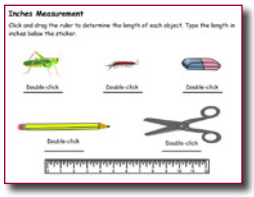
Select the Project button, choose New, go to the Activities area, open the Math folder, open the Numbers and Operations folder, open the Base Ten folder,open the Add to 19 activity

Measurement & Data

Describe and compare measurable attributes.

2. Directly compare two objects with a measurable attribute in common, to see which object has "more of"/"less of" the attribute, and describe the difference. For example, directly compare the heights of two children and describe one child as taller/shorter.

Measure to Compare



Distribute rulers to your students. Ask them how they can use it to measure objects in the room. Open the "Measure – Inches" activity and project it so that all students can see or display it on an interactive whiteboard. Use the virtual ruler to measure the objects in the activity. Ask students to tell you which object is the smallest and which is the largest. Find a pencil, eraser, and scissors in your classroom and compare them to the ones in the activity. Which is larger? Which is smaller? How can students be sure? Measure!

Have students measure three objects they find on and in their desks. They might find pencils, books, stickers, flashcards, and so on. Have them put the objects on their desk in order from top to bottom from smallest to largest.

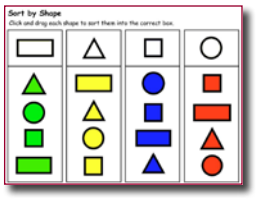
Click Project button, click Activities, open the Math folder, open the Measurement folder, open the Measure - Inches activity

Measurement & Data

Classify objects and count the number of objects in each category.

I. Classify objects into given categories; count the numbers of objects in each category and sort the categories by count.

Sort the Shapes



You can help your students to recognize common characteristics so they can begin to organize and understand data. Project for your class or have students complete the "Sort by Shape" activity at a center in your classroom. In this activity, students sort shapes by dragging them to the correct box. You can find a similar activity in this folder that requires students to sort by color.

Divide students into groups and assign the team an attribute like "blue" or "round." Have them collect objects with this attribute from around your classroom or bring in objects from home. Collect the objects on their table or desks and take a photo of them. Transfer the pictures from your camera to your computer and import the folder of images into Pixie (Project button >Import Pages). Project the pictures where the entire class can see them and ask the class to guess what attribute the objects on each page have in common.

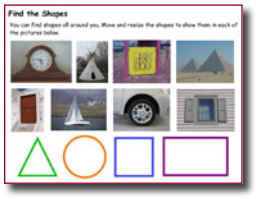
Select the Project button, choose New, go to the Activities area, open the Math folder, open the Data Analysis folder, open the Sorting folder, open the Sort by Shape activity

Geometry

Identify and describe shapes (squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders, and spheres).

I. Describe objects in the environment using names of shapes, and describe the relative positions of these objects using terms such as *above, below, beside, in front of, behind*, and *next to.*

Shapes Around Us



Ask students to name shapes in their environment. For example, the flag in the front of the school is a rectangle; the yield sign is a triangle. Ask students to look around your classroom to find objects that are, or contain, a particular shape like a circle or square. Open the "Find Shapes" activity and project it so the entire class can see it. Work together to name the shapes in each picture. Drag the shapes onto the images and use the handles to resize.

Take a class walk around the room or school looking for additional shapes in the environment. Use a digital camera to take pictures of the shapes you find. Transfer the pictures from your camera to your computer and import the folder of images into Pixie (Project button >Import Pages). Project the pictures where the entire class can see them and have your students identify the shape in each picture. Ask them to describe where it is using position words like on top of, next to, and so on. Then, let the students use the paintbrush or line tool to paint the shape on each page.

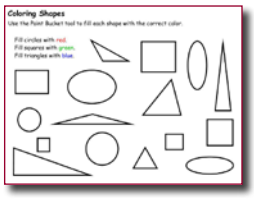
Select the Project button, choose New, go to the Activities area, open the Math folder, open the Geometry folder

Geometry

Identify and describe shapes.

2. Correctly name shapes regardless of their orientations or overall size.

My Life as a Triangle



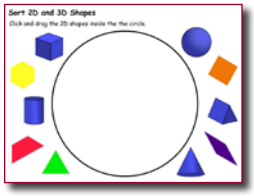
As an assessment of student understanding, have each student color and print the "Color Shapes" activity at a center in your classroom. In this activity, students identify circles, squares and triangles by filling them in with the correct color.

As a more open-ended and individual assessment, challenge students to draw a picture (of anything they want) using only one shape. For example, ask them to create a self portrait drawn entirely with triangles.

Select the Project button, choose New, go to the Activities area, open the Math folder, open the Geometry folder, open the Color Shapes activity

3. Identify shapes as two-dimensional (lying in a plane, "flat") or three-dimensional ("solid").

Ideas in 3D



As an assessment of student understanding, have each student color and print the "2D and 3D Shapes" activity at a center in your classroom. In this activity, students drag two-dimensional shapes into a circle, while leaving three-dimensional shapes outside.

Pixie also contains templates for printing, cutting, and folding three-dimensional shapes. Have students open the "Cube" activity and draw a different picture on each side. Then, have them print out their work, cut along the edges, fold, and paste to make a cube. Students can make cubes that include six different pieces of information about a topic you are studying in the classroom, such as important elements of a holiday, types of transportation, or facts about an animal.

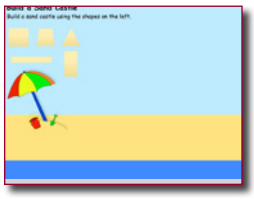
Select the Project button, choose New, go to the Activities area, open the Math folder, open the Geometry folder, open the 2D and 3D Shapes activity

Geometry

Analyze, compare, create, and compose shapes.

5. Model shapes in the world by building shapes from components (e.g., sticks and clay balls) and drawing shapes.

Make It With Shapes



Open the "Shapes Around Us" activity and project it so the entire class can see it. Work together to build the house out of the shapes provided. Add another page to the Pixie file and paint a balloon using the circle shape and a triangle. Create a car out of a couple of rectangles and circles. Ask your students if they can find objects that include multiple shapes in your classroom.

Challenge your students to build a sandcastle from the different shapes. Open the "Sand Castle" activity at a center in your classroom and have each student design their own version, or head to the lab and do it all at once so the students can see one another's ideas and modify their designs.

Select the Project button, choose New, go to the Activities area, open the Math folder, open the Geometry folder, open the Sandcastle activity

Math Lesson

While individual activities can be used to address specific language standards, you can also create engaging lessons that address multiple standards in one project.

The 13 Days of Halloween

Students will practice counting through the creation of a Halloween (or any holiday!) counting book.

Engage

Read the story the ***Two Little Witches*** by Harriet Ziefert and Simms Taback to help students practice their counting skills, experience a repetitive story form, and get them thinking about the characters associated with Halloween.

After reading this story, tell the students that their class is going to create a "13 Days of Halloween" project. Ask them if anyone knows the "12 Days of Christmas carol". Play it so they can all remember or experience it for the first time. If you don't have a copy, you can find many free versions of this old English carol online.

Explain to students that they will each create a page that includes a specific number of Halloween characters based on the song you create as a group. For example, "On the fifth day of Halloween, my goblin gave to me 5 witches."

Assign each student a number.

Create

Demonstrate how to launch Pixie, use the Paint tools, add stickers, and type text. You can also create a template each student can use so they only have to type in the name of the object.

Have each student choose the Halloween object they wish to count on their page. Have a parent, aide, or school buddy work with each student at a center in your classroom to develop their page, or have the entire class work on their pages at the same time in the computer lab. Make sure everyone is aware of the Halloween folder of images in the Holidays folder in the Stickers library.

Share

Once all of the files have been saved, click the Project button in Pixie and choose Import Pages to combine all individual student pages into one project. Click the storyboard view from the View options to rearrange the pages and place them in numeric order. Click the Project button, choose Export, and select the HTML option to publish your class Halloween book. Share the book in its interactive form on a classroom web site or present it from a local computer.

You could also print copies of each student's page as trading cards or comics. Have students cut them out, trade them, and then work to put them in the correct sequence to make their own set of Halloween cards to take home.

Common Core Standards responding to texts.

K.CC.1. Count to 100 by ones and by tens.

K.CC.3. Write numbers from 0 to 20. Represent a number of objects with a written numeral 0-20 (with 0 representing a count of no objects).

K.CC.4. Understand the relationship between numbers and quantities; connect counting to cardinality.

K.CC.5. Count to answer "how many?" questions about as many as 20 things arranged in a line, a rectangular array, or a circle, or as many as 10 things in a scattered configuration; given a number from 1–20, count out that many objects.

Meeting Common Core Standards with Pixie®

Grade 1

What is Pixie?

Pixie is software first-grade students can use to write, paint pictures, and tell stories. Pixie provides a fun way for students to explore and respond to curriculum topics related to the Common Core Standards.

Students can add text to a Pixie page to practice their writing, draw using the paint tools, record narration for stories, and more. Your students can share their work as a printed page, comic book, or even as a video. Pixie 3 also include collaboration tools that can help students meet Language Arts Writing standard #6.

Using Pixie with First Grade Students

First-grade students are learning to read, strengthening existing literacy skills, and learning to do basic mathematical calculations. They are learning to use words, pictures, and math concepts as they explore their world. At this foundational stage of learning, Pixie provides an opportunity for students to create products that reflect what they are learning in the classroom and are unique to their abilities and passions.

Pixie is also the perfect canvas for free play on the computer. Play is a powerful way for students to learn about the world. Rather than passively consuming computer games, Pixie encourages students to actively create artwork, stories, diagrams, designs, and more.

Contents

Grade 1 Language Arts

Grade 1 Mathematics

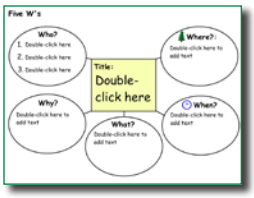
Grade 1 Language Arts

Reading Standards: Literature

Key Ideas and Details

1. Ask and answer questions about key details in a text.

Five W's



Read a favorite or familiar story to your class. Then, open the "5 W's" activity and project it where students can see it. Write the title of the story in the middle and ask the students to help identify who, when, where, what, and how.

Ask students to choose their favorite scene from the story. Click the Add Page button on the toolbar to add a blank page to the file and work with the entire class to recreate the scene. What could they draw in the background to indicate where and when? What can you add as clip art or draw with the paint tools to show who and what? Have students create their own story scenes at a Pixie center in your classroom.

Select the Project button, choose New, go to the Activities area, open the Templates folder, open the Graphic Organizers folder, open one of the 5W's activities

2. Retell stories, including key details, and demonstrate understanding of their central message or lesson.

Retell a Story

Read a story to your students. Have each student create three pages in Pixie and use the paint tools and stickers to illustrate characters and events in the story. Have them partner with a parent, aide, or older school buddy to type a sentence that describes each page. If you add a title page and the student's name, you can print these stories as foldable booklets to share with the class.

To add a level of excitement to this project, students can create podcast versions of their stories. Have your students use the Record feature to narrate each page in their story. Then, export the project as a podcast. Share the stories on video iPods to support struggling readers, engage students in the content you are learning, or as a review for a missed class.

As their comprehension abilities grow, you can ask students to organize by beginning, middle, and end. If you print each story as a comic, you can cut the paper into individual pieces and have the students practice sequencing the story.

Reading: Literature

Key Ideas and Details

3. Describe characters, settings, and major events in a story, using key details.

Key Ideas

As you read aloud to students or share a favorite class book, you naturally ask students "What will happen next?" or "What will this character do?" After reading as a class, have students individually relate what they learned from listening to or reading a story on their own using the "Key Ideas" activity.

At the beginning of the year, you may want to create a template that includes characters, setting, and events from the story. Open the "Key Ideas" activity and add clipart that represents characters, setting, and events. Then, have the students sort the graphics into the correct boxes. If you have an interactive whiteboard, you could complete this activity as part of a whole group discussion.

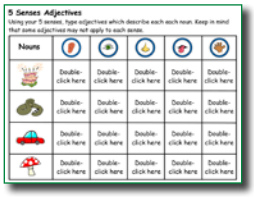
Select the Project button, choose New, go to the Activities area, open the Language Arts folder, open the Reading folder, open the Comprehension folder, open the Key Ideas activity

Reading: Literature

Craft and Structure

4. Identify words and phrases in stories or poems that suggest feelings or appeal to the senses.

Sensory Writing



Ask your students to name the five senses and give examples of things they can see, touch, hear, smell, and taste. Talk about how writers use the five senses to bring a story alive. Read a book that utilizes strong descriptions from the five senses like ***Come on Rain*** by Karen Hesse or ***Night in the Country*** by Cynthia Rylant.

Open the "5 Senses" activity in the Language Arts folder. Work with your students to come up with sense-related adjectives to describe the objects.

Explore other books that include language that calls on the five senses. Have students find a phrase they like and type it onto a Pixie page. Have them draw a picture to support the phrase and record their voice to describe how they felt when they read this part of the book. Combine the student pages into a class book about describing with the five senses.

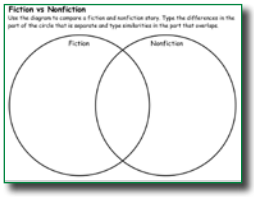
Select the Project button, choose New, go to the Activities area, open the Language Arts folder, open the Parts of Speech folder, open the 5 Senses activity

Reading: Literature

Craft and Structure

5. Explain major differences between books that tell stories and books that give information, drawing on a wide reading of a range of text types.

Compare Fiction and Nonfiction



Ask your students if they can help you decide how to determine if something is fiction or nonfiction. Remind them that fiction is a make-believe story that is not real, while nonfiction is true information that gives you facts to explain something.

Give groups of students 8-10 books to sort into piles that are fiction and nonfiction. Open the "Fiction and Nonfiction" activity in Pixie and project it for the class. Ask students to share how they determined the difference between the two kinds of books. Work as a class to write and draw the attributes of both types of books in the Pixie Venn diagram.

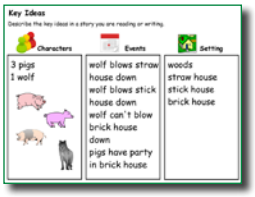
Select the Project button, choose New, go to the Activities area, open the Language Arts folder, open the Reading folder, open the Literature folder, open the Fiction and Nonfiction activity

Reading: Literature

Integration of Knowledge and Ideas

7. Use illustrations and details in a story to describe its characters, setting, or events.

Pictures Tell a Story



Students enjoy reading when they have success. Even before they can decode the words in a story, they can comprehend the meaning using pictures. To support their desire to read independently and boost comprehension, share a new picture book with your class and do a picture walk. Open the "Key Ideas" activity in Pixie and work as a class to write about what they know about characters, setting, and events using only the pictures in the book.

Next, read the story, and compare the actual story to what students interpreted based on the illustrations. How close were the students' guesses to the actual characters, setting, and events in the story? Find a part that students didn't interpret correctly based on the pictures. Ask them what the illustrator could have done to better help them understand. Ask students to develop their own illustrations for this passage at a center in your classroom and record their voice describing how their picture supports and reflects the text.

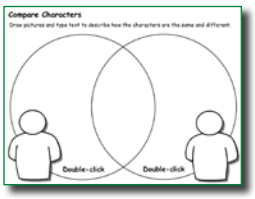
Select the Project button, choose New, go to the Activities area, open the Language Arts folder, open the Reading folder, open the Comprehension folder, open the Key Ideas activity

Reading: Literature

Integration of Knowledge and Ideas

9. Compare and contrast the adventures and experiences of characters in stories.

Main Character Comparison



After students have read two stories, use the "Compare Characters K-2" activity in Pixie to talk about the main character in each story. Write the name of one main character in the large yellow box, and the other in the large red box. Brainstorm ways the characters are similar and write or draw them in the orange boxes. Brainstorm ways that they are different and write or draw them in the boxes on the outside.

You can also have your students compare themselves to the main character in a story using the "Main Character Comparison" activity in the Language Arts>Reading>Literature folder in the Pixie activities. This helps students build reading for meaning and descriptive writing skills as well as self-awareness.

Select the Project button, choose New, go to the Activities area, open the Language Arts folder, open the Reading folder, open the Literature folder, open the Compare Characters K-2 activity

Reading: Literature

Key Ideas and Details

1. Ask and answer questions about key details in a text.

Facts and Key Ideas

Choose a topic you want to explore with your students. This could be based on the animal or place your are studying this month. Explore books, web sites, and other resources about the topic as a class. Open the "Take Notes" activity and project it where students can see. Work together to list information and facts you have found in your reading.

You could also break students into small teams and have them complete research on their own. Have each team member choose one important fact on the topic. Students can use the Text tool to add the fact to a Pixie page, and use the paint tools to create a supporting illustration. You can use the Import Pages feature under the Project menu to combine all student pages into a class facts book about the topic.

Select the Project button, choose New, go to the Activities area, open the Templates folder, open the Research folder, open the Take Notes activity

Reading: Informational Text

Key Ideas and Details

2. Identify the main topic and retell key details of a text.

Explore Main Idea

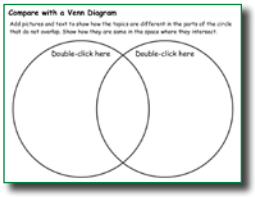
Have your students think about the main idea as an umbrella that covers all of the content and holds it together. Share a couple of different nonfiction books for early readers with your students. Look at the cover picture and title. What is the main idea? Now explore the titles, pictures, and text inside the book. How are they organized? Project a copy of Pixie's "Main Idea Umbrella" activity for students to see. Work together to add text to describe the main idea as well as key details for one of the books you have shared. Invite students to use the paint tools and stickers to add images to support the ideas.

Have students complete the "Main Idea Umbrella" activity on a nonfiction topic they will be exploring in their writing workshop. This will help them collect information for their writing. You can also have students create a page that illustrates the main idea using clip art, the text tool, and the paint tools.

Select the Project button, choose New, go to the Activities area, open the Language Arts folder, open the Reading Folder, open the Comprehension folder, open the Main Idea Umbrella activity

3. Describe the connection between two individuals, events, ideas, or pieces of information in a text.

Venn Diagram



Read and share informational texts on a historic time period, like the Revolutionary War. Have students identify important people at the time, such as Ben Franklin, Thomas Jefferson, and George Washington. Read more texts about these people. Open the "Venn Diagram" activity and work as a class to identify similarities, differences, and connections between two of these people.

You can use a similar process to learn and analyze information about George Washington and Abraham Lincoln around the Presidents' Day holiday.

Select the Project button, choose New, go to the Activities area, open the Templates folder, open the Graphic Organizers Folder, open the Venn - 2 activity

Reading: Informational Text

Craft and Structure

4. Ask and answer questions to help determine or clarify the meaning of words and phrases in a text.

Vocabulary Supports

As you read to the class or as students are reading independently, have them raise their hands to let you know they encounter an unfamiliar word. Have them ask the rest of the class if anyone can help share the meaning of the word. Open Pixie's "Vocabulary" activity and project it where students can see it. Type the word at the top of the page and work together to define the new word. Copy the sentence they are reading that includes the word or ask advanced students if they can help you use it in a new sentence.

Save each Pixie file and collect the new words on a wall or bulletin board in your classroom. At the end of the week or unit, give each student one of the words you defined together. Ask students to draw a picture of the word to help others remember the meaning. Print the pages in Postcard style (4 to a page) and distribute them to the class as vocabulary postcards or trading cards.

Select the Project button, choose New, go to the Activities area, open the Language Arts folder >open the Vocabulary folder, open the Vocabulary (green) activity

5. Know and use various text features (e.g., headings, tables of contents, glossaries, electronic menus, icons) to locate key facts or information in a text.

Elements of Nonfiction

Many young students are not interested in or excited by nonfiction writing. Once they understand how to read nonfiction, however, they are less afraid and can quickly become independent researchers. Find and share a nonfiction book about an animal you are studying in class. Show students how they can use pictures, captions, picture labels, and bold text to find information.

Have students create a page in Pixie that shares information about a favorite animal. Have them utilize one of the elements you discussed (bold text, labels, captions) to make it easier for someone to find the information on their page. Use the Import pages feature to combine all students' work into one class file to show to the class. As each page displays, have each student share what is the most important information on their page and the strategy they used to find it. Print a copy of the project for each student so they can take home and share a nonfiction book that they helped author.

Reading: Informational Text

Integration of Knowledge and Ideas

7. Use the illustrations and details in a text to describe its key ideas.

Reading Pictures

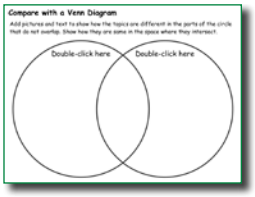
Select a nonfiction book about an unfamiliar animal, place, or historic event. Show the cover of the book to your students. What can they tell about the topic from the picture(s) on the cover? Page through the book or pass it around so students can look at the individual pages. Project a copy of one of Pixie's note taking pages for students to see, such as the "Clouds" activity that includes bulleted text boxes. Work together to write descriptive details about the animal, place, or event based on the pictures.

Ask the students which pages in the book look the most interesting. Have a few of the stronger readers read the text on these pages. Add more facts to the list. Leave the page of facts open on the computer so students who complete other class work can add pictures and illustrations to the page. Print out the final page as a class poster on the topic.

Select the Project button, choose New, go to the Activities area, open the Templates folder, open the Research folder, open a note taking page like Clouds.

9. Identify basic similarities in and differences between two texts on the same topic. (e.g., in illustrations, descriptions, or procedures).

Information Display



Read and share two different texts about a topic with your students. Open and project the "Venn Diagram" activity in Pixie so that all students can see. Let your students know you want them to compare the two books. Students will likely first come up with differences in content between the two books. You may need to prompt them toward also identifying differences in style and delivery. Record their observations on the Venn diagram.

Ask the class to vote on which one they like the best. After you have tallied the voting, ask students to share the reasoning behind their choice. Were the pictures better in one of them? Did one have a better cover? Is this difference noted on the Venn diagram? Why or why not? Make changes and edits to the Venn diagram to ensure that it shows both content differences and methodology differences.

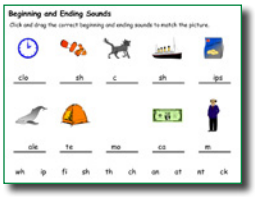
Select the Project button, choose New, go to the Activities area, open the Templates folder, open the Graphic Organizers Folder, open the Venn 2 activity

Reading: Foundational Skills

Phonological Awareness

2. Demonstrate understanding of spoken words, syllables, and sounds (phonemes).

Alphabetic Principle



Pixie contains a wealth of activities on alphabetic principle. Have students complete activities at a center in your classroom. For example, the "Blends" activity uses clip art to support students as they drag beginning and ending sounds to complete words. Have students print or save their finished work to use as an assessment of mastery of particular skills as you work one-on-one with other students.

As students gain proficiency, create a class ABC book on a topic. For example, students creating an ABC book for school might choose A for author, B for backpack, etc.

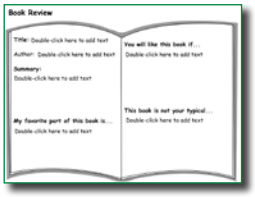
Select the Project button, choose New, go to the Activities area, open the Language Arts folder, open the Reading folder, open the Alphabetic Principle folder, choose any activity

Writing

Text Types and Purposes

1. Write opinion pieces in which they introduce the topic or name the book they are writing about, state an opinion, supply a reason for the opinion, and provide some sense of closure.

Book Review



Have students choose one of the books they have read and enjoyed to share with other students. In Pixie, have each student open the "Book Review" activity. Have them type a sentence explaining what the book is about on the left and type a sentence sharing what they liked about the book on the right. Have them use Pixie's paint tools to illustrate their favorite parts of the book.

Have students create postcards or trading cards to tell other students about books in the library. Each student can create a page in Pixie that includes a text description and an illustration of their favorite scene of a story. Print out the pages in postcard (four to a page) or comic (six to a page) style, laminate them, and share them with other students at your school to help them choose books when they visit the school library.

Select the Project button, choose New, go to the Activities area, open the Language Arts folder, open the Reading folder, open the Comprehension folder, open the Book Review activity

Writing

Text Types and Purposes

2. Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure.

Welcome to Our Classroom

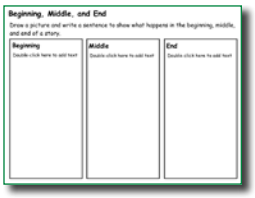
After students have been in class for a couple of weeks, have them help you create a tour of your classroom that shows important features and how they are used. As a class, brainstorm the different parts of your room, such as the reading corner, desk groups, pencil sharpener, etc. Walk around the room and take pictures of each place students have identified. Import all of the pictures into Pixie.

Assign each student to record a simple sentence about each area. You may want to start with a repetition like, "At the reading corner, we…" Have your students work with an aide or an older student buddy to complete the sentence and record their voice. Save all student work to a common folder. Then, use the Import Pages feature to combine them into one Pixie file. Export this file as a video you can play for new students and parents, or export it as HTML to share on your web site or K12Share.com.

Students can also create a movie on classroom or school procedures for new students and parents to see during open house. This is a great way to introduce Pixie and review classroom procedures at the beginning of the year. Include things such as finding materials, checking out a book, paying for lunch, signing in to a computer, arriving at school in the morning, what to do before leaving in the afternoon, and fire drill procedures.

3. Write narratives in which they recount two or more appropriately sequenced events, include some details regarding what happened, use temporal words to signal event order, and provide some sense of closure.

Beginning, Middle, and End



After visiting the library, art class, music, or physical education, talk with your students about what happened. How did it start? What did they do? How did it end? Brainstorm a list of things that occurred and then work as a class to put them in order. In Pixie, project the "Begin and End" activity where all students can see it and work as a class to describe what happened during the beginning, middle, and end.

After returning from a school break, have students revisit the concept of beginning, middle, and end to share the story of their vacation time. To help them organize and sequence the project, have them use Pixie to create a four-page storybook. Have each student use the "Begin and End book" activity to write, illustrate, and narrate an event by dividing it into actions that occurred during the beginning, middle, and end.

You can also talk with students about the steps in an important process, such as getting ready to go to school. Open the "Flowchart" activity (Activities>Templates>Graphic Organizers>Flowchart) and write out each step in the process.

Select the Project button, choose New, go to the Activities area, open the Language Arts folder, open the Reading folder, open the Comprehension Folder, open the Begin and End activity

Writing

Production and Distribution of Writing

5. With guidance and support from adults, focus on a topic, respond to questions and suggestions from peers, and add details to strengthen writing as needed.

Descriptive Writing Video Stories

As you head out on a field trip, document the trip using a digital camera. Import the images into Pixie to create a visual story. Project the images so that students can see them. Use the storyboard to reorder any photos that are out of sequence.

Utilize sentences and details from your students to add text to each page. Export the pages as an HTML storybook to share on your website, or print comics or booklets students can take home. Place the template file you create at a center in your classroom so that students can type in their own descriptive sentences.

Show the first picture. Ask students to look at the picture and write a sentence about what happened. You may want to prompt with supports and write on the Pixie page by adding a text object. After a basic sentence has been crafted, have students look at the details in the picture. What colors do they see? Can they remember any special sounds they heard at that time? Work together, and individually, to add details to the story.

6. With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers.

Our Version

Utilize sentences and details from your students to add text to each page. Export the pages as an HTML storybook to share on your website, or print comics or booklets students can take home. Place the template file you create at a center in your classroom so that students can type in their own descriptive sentences.

Have each student create a page in Pixie that includes the completed sentence and an illustration of the sentence. You can set up a template for the students by adding text for the sentence and saving the file as an activity. When they are finished, use the Import Pages feature to combine all student pages into one Pixie file you can export as a video or HTML story to present to the class or school or publish for the community on your web site.

Writing

Research to Build and Present Knowledge

7. Participate in shared research and writing projects (e.g. >explore a number of "how-to" books on a given topic and use them to write a sequence of instructions).

Create a Flow Chart

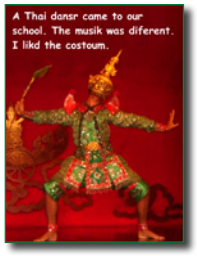
"How to make a peanut butter sandwich" is probably getting old for you! To make learning more authentic, brainstorm events and procedures at school. What should you do if the fire alarm goes off? How do you check out a book from the school library? How do you find your bus after school? Discuss different ways students can find out these answers, including books, experts, visual displays, and posters.

Divide students into small teams and have them choose the procedure they will define and sequence. Each team should complete research to learn the proper steps. The teams can then write the necessary steps in Pixie's "Flowchart" activity and decorate it with clip art, stickers, and painted illustrations to create posters or instruction sheets to share with the rest of the class or school. Students can even record narration to explain the steps.

Select the Project button, choose New, go to the Activities area, open the Templates folder, open the Graphic Organizers folder, open the Flowchart activity

8. With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.

Guest Appearance



The next time you have a special guest join your classroom, take pictures of their discussions, sharing, and student reactions. After the event, students can use Pixie to retell the experience. You can import photos from the visit into a Pixie project and work as a class to write a caption for each image. You could also have each student create a page in Pixie that includes a sentence and illustration that answers the question, "What will you always remember about this visitor?"

If students create individual pages, use the Import Pages function to combine them into one Pixie file. You can print the project to create a class book or print trading cards students can cut out and combine to make their own individual books. You can also export student work as a video or HTML that you can post to your web site to share with family, community, and the special guest.

Speaking & Listening

Presentation of Knowledge and Ideas

4. Describe people, places, things, and events with relevant details, expressing ideas and feelings clearly.

My Favorite Relative

"I wanted to find a meaningful project to highlight my first graders' accomplishments in writing, and since we were studying a Language Arts unit on families, I suggested that the students write about a very familiar topic, relatives. The response and excitement was immediate and overwhelming. My students made an instant connection with the topic. It was a familiar topic, and their interest was evident.

My students were excited to get started and immediately chose a favorite relative. As the students prepared to write first drafts, one asked, 'Why can't we do this with Pixie?' The chorus of approval from his peers had us all heading for the computer lab.

As the project progressed, students' excitement grew! The students began to converse and share ideas with one another instead of coming to me. They were complimenting and encouraging one another. I simply sat back and watched in amazement. I noted that the students were passionate about what they were writing and drawing. Their passion for the project led to even more suggestions and requests, which in turn led to deeper learning.

We shared the digital stories online and at a classroom event. The expressions and pride on the students' faces were priceless. One father began to cry when he learned that he was his son's hero. My students were connected, excited, motivated, inquisitive, and left first grade with memories that will last a lifetime."

Barbara Fairchild
Mercersberg, PA

5. Add drawings or other visual displays to descriptions when appropriate to clarify ideas, thoughts, and feelings.

Sentence Strips

Have students use the Pixie "Sentence Strip" activity, or simply add text to a blank page and write a sentence using sight words. Have students underline the capital letter at the beginning of the sentence and circle the punctuation at the end. You may even want to have them use green at the beginning to signal start and red at the end to signal stop, the same way a capital letter signals the start of a new sentence and a period signals the end.

Allowing students to combine text and pictures and providing many ways to publish their work makes Pixie an engaging way to encourage students to write. Try printing out student stories as booklets they can fold and share, or publishing science cycles as comic strips. Asking students to publish and share their work for others to read will encourage them to use and help them understand the power of pictures and text for sharing their ideas.

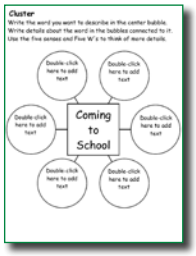
Select the Project button, choose New, go to the Activities area, open the Language Arts folder, open the Writing Folder, open the Sentence Strip activity

Language

Vocabulary Acquisition and Use

5. With guidance and support from adults, demonstrate understanding of figurative language, word relationships and nuances in word meanings.

Choosing Words for Nuance



First grade students have a fairly large mental library of words they understand but a much smaller subset they use in everyday speech. At this age, students are starting to understand that "run" and "jog" might not mean exactly the same kind of movement, but they might only use the word "run" as they are writing. Open the "Cluster" activity and project it for the class to see. Type "Getting to School" in the large box in the center of the activity. It should be fairly easy for students to come up with different nouns and verbs like bus, car, ride, and walk.

Click the Storyboard View at the bottom of the Pixie window, go to the Edit menu, and choose Duplicate. You will see a second copy of the page. Choose one of the words from the first page, such as "car" or "walk." As a class, brainstorm more specific words that mean the same thing, like Corvette, van, SUV, hike, skip, jog, march, and run. How are these words different? Better?

Use this cluster model when students are having trouble making their writing nuanced and specific. Have them choose a word they are using often and brainstorm alternative vocabulary.

Select the Project button, choose New, go to the Activities area, open the Templates folder, open the Graphic Organizer folder, open the Cluster activity

Language Arts Lesson

While individual activities can be used to address specific language standards, you can also create engaging lessons that address multiple standards in one project.

How to Get Ready for School

Students will write how-to stories about getting ready for school and publish them to share with their families and to use at home. They will organize their ideas using a beginning, middle, and end organizer. They will then write and illustrate their stories using this template in the Pixie Activity Library. This project provides a window into student home life so you can better get to know and understand your students.

Engage

Read, or reread, ***Alexander and the Terrible, Horrible, No Good, Very Bad Day*** by Judith Viorst. Focus on Alexander's problems as he gets ready for school. You may even choose to simply focus on this section or revisit it when students are preparing to write their own "Getting Ready for School" stories.

As a class, create a list of some of the things your students do when they get ready for school, such as brush their teeth, eat breakfast, get dressed, feed the dog, and so on.

Then, have each student brainstorm the things they do at their houses by grouping events and tasks by beginning, middle, and end. You can use Pixie's "Begin and End" activity (Project button>Activities>Language Arts>Reading>Comprehension>Begin and End). Have students list what they do and draw one or two objects to illustrate a step.

Create

Once the students have completed their organizer, have them write complete sentences for each part of the story. What happens

first? Next? Last? Talk to students about their writing to make sure they have included capital letters at the beginning and periods at the end. Ask them what they will draw on each page. Will their illustration support their writing? What can they add or change?

Have each student use the "Begin and End Book" activity to write and illustrate their story. Each page in the activity has a text box and room for a picture. You may want to have an older student buddy or aide help students type their stories. You may want to save this activity to your classroom computer(s) and add a shortcut they can use so they can begin working right away.

Share

Click the Print button on the toolbar and choose the Booklet option. This will print all four pages in the project on one sheet of paper students can folder into a small booklet they can share with peers and family. If they record their voices, you can also click the Project button, choose Export, and select HTML to publish an interactive book you can share online or on CD. You can also export the files as a video podcast!

Language Arts Lesson (continued)

Common Core Standards

RF.1.1. Demonstrate understanding of the organization and basic features of print.

W.1.3. Write narratives in which they recount two or more appropriately sequenced events, include some details regarding what happened, use temporal words to signal event order, and provide some sense of closure.

W.1.6. With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers.

SL.1.4. Describe people, places, things, and events with relevant details, expressing ideas and feelings clearly.

SL.1.5. Add drawings or other visual displays to descriptions when appropriate to clarify ideas, thoughts, and feelings.

SL.1.6. Produce complete sentences when appropriate to task and situation.

L.1.1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.

L.1.2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

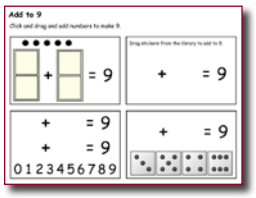
Grade I Mathematics

Operations & Algebraic Thinking

Represent and solve problems involving addition and subtraction.

1. Use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

Decomposing Numbers



Decomposing numbers refers to the ability of students to break numbers apart and form equivalent representations. When determining place value, one decomposes numbers into tens and ones. Decomposing numbers below ten involves understanding that 9 can be 4+5, 6+3, 7+2, and even 6+2+1. To help students think about the numbers that can be added to create another number, open the "Add to 9" activity in Pixie. Ask your students if anyone knows of a way to add to 9. Let this student choose how they will represent numbers using dominoes, numbers, dice, or other images. Continue to explore ways to decompose and compose the number nine.

Divide students into small teams and assign each team a number. Have them collaborate on a "Facts about the Number X" Pixie file. Have the team create different pages that show ways to add to get to their number. Encourage students to use fact along with objects, symbols, and drawing. Encourage them into include audio. Export the project as a podcast or video so that students can watch on an iPod or view online to practice adding.

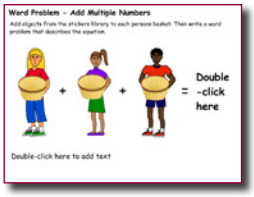
Select the Project button, choose New, go to the Activities area, open the Math folder, open the Numbers and Operations folder, open the Numbers folder, open the Add to 9 activity

Operations & Algebraic Thinking

Understand and apply properties of operations and the relationship between addition and subtraction.

2. Solve word problems that call for addition of three whole numbers whose sum is less than or equal to 20, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.

Adding 3 Numbers



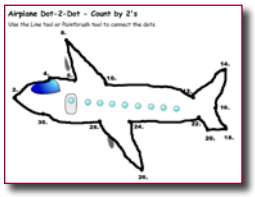
Word problems can be a struggle to master, but they are helpful for getting students to visualize equations and to see how math is applied in the world beyond the classroom. Open the "Addition Word Problem" activity in Pixie and project it so the entire class can see it. Have students choose objects from the Stickers library to add to the baskets in the activity. Have the class call out the equation you create. Then, work together to translate the equation into a word problem. You may want to start by giving each person a name and writing out the number and name of the objects before adding verbs and the rest of the story.

Pixie is great for creating visual representations of any equation or word problem. Share examples of word problems with your students, then have them create their own word problem riddles. Students can use the Pixie paint tools and stickers to show the number of objects and the symbols for the operations. They can type numbers in a text object or use number stickers to show value. If students are exploring word problems around a holiday, encourage them to use objects and events from that holiday to connect to the world outside of the classroom.

Select the Project button, choose New, go to the Activities area, open the Math folder, open the Numbers and Operations folder, open the Computation folder, open the Addition Word Problem activity

5. Relate counting to addition and subtraction.

Skip Counting



Two, four, six, eight! What do we appreciate? Skip Counting! Students usually know this cheer long before they are skip counting or adding by twos correctly. Start off with this cheer and then practice skip counting to 20. Open, or create a shortcut to, the "Count by Twos" activity at a center in your classroom and use this as an individual assessment to see how well your students can skip count to 20.

In addition to helping with multiplication, skip counting also helps us add faster. Demonstrate how to skip count on a clock to tell time by the hour AND minute. What other examples can the class come up with for using skip counting?

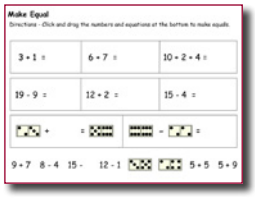
Select the Project button, choose New, go to the Activities area, open the Math folder, open the Numbers and Operations folder, open the Computation folder, open the Count by Twos activity

Operations & Algebraic Thinking

Work with addition and subtraction equations.

7. Understand the meaning of the equal sign, and determine if equations involving addition and subtraction are true or false.

Complete the Equation



Understanding the meaning of equal and balancing equations on both sides of an equals sign is the foundation for algebraic thinking. Locate at least 40 objects that are all the same size and weight, such as marbles, blocks, or dice. Using a balance scale, place objects on one side of the scale in two groups to represent the equation in front of the equals sign. For example, 3 blocks plus 4 blocks. Then, ask a student, or students, to help you add the total number of blocks to the other side. Once you have success, have students move the blocks on the scale so they are in two groups, such as 2 blocks plus 5 blocks. The scale will still balance since the total is the same on both sides.

Open the "Make Equal" activity in Pixie and project it on your wall or interactive whiteboard. Work with your students to complete the first equation using objects on the balance scale. Let students solve the second equation on their own, with the balance scale for support. Then, see if they can complete the other equations on their own, and then share answers with the class.

Select the Project button, choose New, go to the Activities area, open the Math folder, open the Numbers and Operations folder, open the Computation folder, open the Make Equal activity

Number & Operations in Base Ten

Understand place value.

2. Understand that the two digits of a two-digit number represent amounts of tens and ones. Understand the following as special cases:

Place Value

Skip counting and grouping objects help us count, or add, faster. When we consider place value, two digit numbers aren't grouped randomly. The two digits always represent the number of groups of ten and the number of ones. For example, the number 36 represents three groups of ten and six ones. Representing numbers as ones and groups of ten can make understanding place value easier.

Work through the list of two-digit numbers on the "Place Value 1" activity with the entire class using an interactive whiteboard or projector. When students get comfortable with the process, head to the computer lab and have students use the Base Ten stickers (Stickers Library>Math>Base Ten) to create numbers you call out or assign. Students can also add stickers to the page and then compute the numbers they represent.

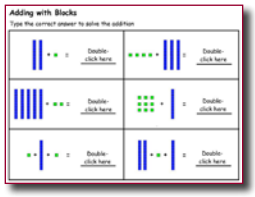
Click the Open button, click Activities, open the Math folder, open the Numbers and Operations folder, open the Base Ten folder, open the Place Value I activity

Number & Operations in Base Ten

Understand place value.

4. Add within 100, including adding a two-digit number and a one-digit number, and adding a two-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used. Understand that in adding two-digit numbers, one adds tens and tens, ones and ones; and sometimes it is necessary to compose a ten.

Add with Blocks



Grouping numbers together using ten as a base helps make adding and subtracting much quicker. Begin working through the various base ten activities in Pixie. At first, you might want to project the "Base Ten" activity and work as a class to compose numbers base ten groupings. If you project on an interactive white board, students can move the ones blocks over groups of tens to fill them up and see remainder.

As students gain confidence, open the "Adding with Blocks" activity. This activity includes integers already grouped by tens and ones. Then, work to complete the Base Ten Grouping activity which requires student to regroup ones into tens.

To help students understand the idea of grouping, share a real life problem from your school. For example, if your grade was going to go on a field trip, how many bus seats would you need? If classes have 24 students in each and there are three classes going, can you group tens together to more quickly estimate how many buses with 50 seats you will need? You can also use the Base Ten stickers (Stickers library>Math>Base Ten) to visually represent this data, making it even easier to solve.

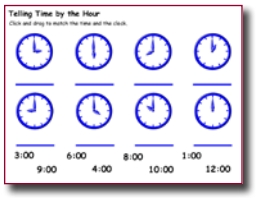
Select the Project button, choose New, go to the Activities area, open the Math folder, open the Numbers and Operations folder, open the Computation folder, open the Adding Blocks activity

Measurement & Data

Tell And Write Time.

3. Tell and write time in hours and half-hours using analog and digital clocks.

Tell Time



Direct students' attention to the clock. How many big numbers are on the clock? Have students point to the hour hand. Tell them that when the hour hand moves from one number to the next, one hour has passed. What can you do in an hour? Open the "Tell Time" activity in Pixie so your class can view it. Ask students to help you determine the time shown on each clock.

You can also have students use Pixie's paint and text tools to show and describe an event that happens at a certain time each day, such as going to sleep at 8pm. You might want to have students first add a clock with a specific time from the Stickers library (Objects>Clocks) and then have students draw a picture about what happens at that time of day, or draw a daily event and drag a clock to show the time it normally occurs. If students draw pictures without clocks, combine them all together into one project, project it in your classroom, and play a class game to add the correct time.

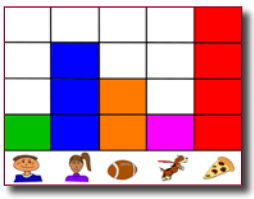
Click the Open button, click Activities on left, open the Math folder, open the Measurement folder, open the Tell Time activity

Measurement & Data

Represent And Interpret Data.

4. Organize, represent, and interpret data with up to three categories; ask and answer questions about the total number of data points, how many in each category, and how many more or less are in one category than in another.

Our First Graphs



"One of our biggest challenges with mathematics learning in the early grades is representing data in graphs. Since our students love working with pictures in Pixie, we created a Pixie template our kindergarten and first-grade classes could use to learn how to make bar graphs.

Working at a table in groups of four, students count how many of them are boys, how many are girls, which students like football, and which students have a dog. Then they add their own category in the fifth column and do the counting. Students tally their findings and fill each square in the graph to represent one student's answer.

Because we can change the stickers and table groups, each time is a unique experience. Kids fill in the squares with the Paint bucket tool to create their graphs, or use the stickers to create a pictograph. We also have students customize the graph to include their own objects, print it out, survey family and friends, and complete the graph as homework."

Laura Spencer
Santee, CA

Geometry

Reason With Shapes And Their Attributes.

2. Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.

Shapes Around Us

Open the Shapes Around Us Activity and ask students to call out where you should place each shape to build a house.

In the computer lab, or at a center in your classroom, have students draw their own imaginary cities using the Shapes tool. Challenge them to only create with the rectangle, circle, and triangle. For an even more advanced challenge, ask students to draw a self-portrait using only these tools – no eraser, paint bucket, line, or pencil tool. This also helps them see that they can layer shapes to create what they envision in their mind, helping them think geometrically. (See also "The Shape of Things" lesson plan.)

Select the Project button, choose New, go to the Activities area, open the Math folder, open the Geometry folder, open the Shapes Around Us activity

Math Lesson

While individual activities can be used to address specific math standards, you can also create engaging lessons that address multiple standards in one project.

The Shape of Things

Students will compose images from 2-dimensional shapes and complete a sentence that describes their creation.

Engage

Ask students to find shapes around your classroom. While the clock is probably round and the whiteboard is probably a rectangle, prompt your students to find shapes that are part of a group of shapes. For example, your pencil sharpener will have a hole where you insert the pencil, but the entire shape of the sharpener may be a rectangle or an oval. As students call out shapes, highlight ones that are part of a group of shapes, and challenge them to find additional groups of shapes in your classroom.

Read the story the ***The Shape of Things*** by Dayle Ann Dodds and Julie Lacome. This rhythmic story showcases the basic shapes in common objects. As you read each page, have students look at the illustrations and name all of the shapes they find. After reading this story, tell the students that they will work in small groups to create their very own Shape of Things book.

Group students together to form small teams. Assign each student a basic shape like circle, square, triangle, rectangle, or oval. Explain to students that each team member will create a page for the assignment that includes an illustration made from a combination of shapes that uses one particular shape as the main one in the group. Each student will then complete the following sentences

A _____ is just a _____until you add a _____. Then it becomes a _____!

For example: A circle is just a circle until you add a hole. Then it becomes a donut!

Create

Demonstrate how to launch Pixie, use the Paint tools, and type text. Be sure to demonstrate how to use the shape tool to draw both shape outlines and filled shapes. You may want to create a template that already includes the phrase above, so that students simply have to illustrate and complete the phrase. Post the words for common shapes so that students can easily see how to spell them.

Have students start by drawing the main shape first. Then add details to transform it into a special character, object, or location. Be sure to have each student record their voice reading their phrase. Encourage them to practice before recording for the final time, or to preview the sound and try again. Have students save their files to a team folder. If one student finishes first, have them create a title page.

Share

Click the Project button in Pixie and choose Import Pages to combine all individual student pages into one team project. Choose Storyboard from the View menu and sort the pages in the order you want them to appear. Click the Project button, choose Export, and select the HTML option to publish each group's Shape of Things project as an interactive storybook. Share the books in their interactive form on a classroom web site or present them from a local computer.

Math Lesson (continued)

Common Core Standards

1.G.1. Distinguish between defining attributes (e.g., triangles are closed and three-sided) versus non-defining attributes (e.g., color, orientation, overall size); build and draw shapes to possess defining attributes.

1.G.2. Compose two-dimensional shapes (rectangles, squares, trapezoids, triangles, half-circles, and quarter-circles) or three-dimensional shapes (cubes, right rectangular prisms, right circular cones, and right circular cylinders) to create a composite shape, and compose new shapes from the composite shape.

RF.1.1. Demonstrate understanding of the organization and basic features of print.

RF.1.2. Demonstrate understanding of spoken words, syllables, and sounds (phonemes).

W.1.6. With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers.

SL.1.6. Produce complete sentences when appropriate to task and situation.

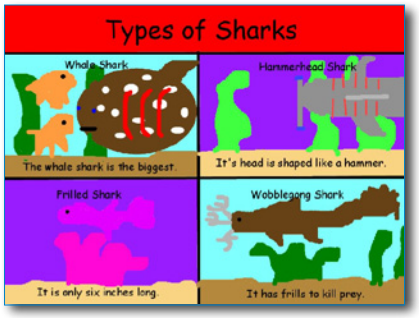
Meeting Common Core Standards with Pixie®

Grade 2

What is Pixie?

Pixie is software second-grade students can use to write, paint pictures, and tell stories. Pixie provides a fun way for students to explore and respond to curriculum topics related to the Common Core Standards.

Students can add text to a Pixie page to practice their writing, draw using the paint tools, record narration for stories, and more. Students can share their work as a printed page, comic book, or even as a video.



Using Pixie with Second Grade Students

In second grade, students' abilities with language, writing, reading, and math are emerging and blossoming. They can increasingly explore and think about the world independently. Pixie provides an opportunity to support their exploration of the world around them and respond to what they find.

Pixie is also the perfect canvas for free play on the computer. Play is a powerful way for children to learn about the world. Pixie encourages children to create artwork, stories, diagrams, designs, and more.

Contents

Grade 2 Language Arts

Grade 2 Mathematics

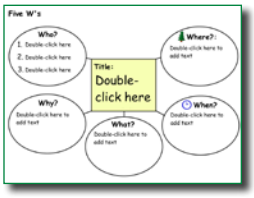
Grade 2 Language Arts

Reading: Literature

Key Ideas and Details

1. Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text.

Five W's



Read a favorite or familiar story to your class. Then, open the "5 W's" activity and project it so students can see it. Write the title of the story in the middle and ask the students to help identify who, when, where, what, and how.

Ask students to choose their favorite scene from the story. Click the Add Page button on the toolbar to add a blank page to the Pixie file and work with the entire class to recreate the scene. What could they draw in the background to show the story's "where" and "when?" What can you add as clip art or draw with the paint tools to show "who" and "what?" Have students create their own story scenes at a Pixie center in your classroom.

Select the Project button, choose New, go to the Activities area, open the Templates folder, open the Graphic Organizers folder, and open a 5W's activity.

2. Recount stories, including fables and folktales from diverse cultures, and determine their central message, lesson, or moral.

And the Moral of the Story is...

Stories with a moral are designed to teach a lesson, but generally do so in a fun way that makes the moral easy to understand and remember. After reading a variety of stories with morals to your students, ask them to create and print booklets that retell the tale.

To ensure that students are internalizing the story, have them create four- or six-panel comics. Rather than using a template, have students complete the process by starting with blank pages in Pixie. When they have created four or six pages, they can click the Print button on the toolbar and choose the 4-panel (postcard) or 6-panel (comic) layout to print their comics.

To add even more excitement to the project, students can create podcast versions of their tales! Have students use the Record feature to narrate each page in their story and export the project as a podcast. Click the Project button on the toolbar, choose Export, and select Podcast to export a video they can play back on an iPod.

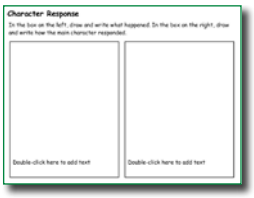
Select the Project button, choose New, go to the Activities area, open the Templates folder, and open the Booklet activity.

Reading: Literature

Key Ideas and Details

3. Describe how characters in a story respond to major events and challenges.

What Would You Do?



After reading a story like one of the ***Magic Tree House*** books, ask the students to tell you about important events. Ask questions like: *How did Jack respond? How did Annie respond? Were they the same?* You might even ask: *What would you have done?*

To add a high-level thinking aspect to their work, have the students add a blank page to the file and write and draw what they would have done in the same situation. Have students repeat this process on their own, with the same or a different story, by drawing and illustrating using the "Character Response" activity in Pixie.

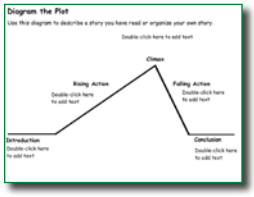
Click the Project button, click Activities, open the Language Arts folder, open the Reading folder, open the Comprehension folder, and open the Character Response activity.

Reading: Literature

Craft and Structure

5. Describe the overall structure of a story, including describing how the beginning introduces the story and the ending concludes the action.

Plot – Beginning, Key Event, and End



By now your students are probably comfortable thinking about a story in three blocks: the beginning, middle, and end. But the events in a story are actually structured a bit differently. Share a story that has an obvious key event with your students. Have the students identify the beginning, middle, and end. Then, open the "Diagram the Plot" activity in Pixie.

Explain how the beginning introduces the story and the end concludes it. Explain that there are often multiple events in the middle and ask them to help you identify the most important. When does it occur in the story? What page is it on? Is it precisely in the middle? Encourage them to use their math skills to find out.

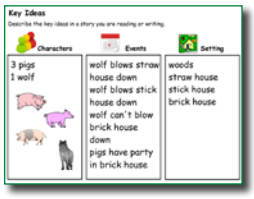
Select the Project button, choose New, go to the Activities area, open the Reading folder, open the Comprehension Folder, and open the Diagram the Plot activity

Reading: Literature

Integration of Knowledge and Ideas

7. Use information gained from the illustrations and words in a print or digital text to demonstrate understanding of its characters, setting, or plot.

Pictures Tell a Story



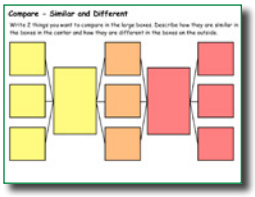
Students enjoy reading when they have success. Even before they can decode the words, students can comprehend the meaning of a story using pictures. To support their desire to read independently and boost comprehension, share a new picture book with your class and do a "picture walk." Open the "Key Ideas" activity in Pixie and work as a class to write about the characters, setting, and events using only the pictures in the book.

Next, read the story and compare their interpretations with the actual plot. How close were the students' guesses to the actual characters, setting, and events in the story? Choose a scene where the students' inferences did not match the text and ask what the illustrator could have done to help them better understand. Ask students to use Pixie to create their own illustrations for a specific passage and record their voice describing how their picture supports and reflects the text.

Select the Project button, choose New, go to the Activities area, open the Language Arts folder. open the Reading folder, open the Comprehension folder, and open the Key Ideas activity.

9. Compare and contrast two or more versions of the same story (e.g., Cinderella stories) by different authors or from different cultures.

Compare Stories



After students have read two versions of the same story (such as ***Cinderella***), use the "Compare Stories" activity in Pixie to identify similarities and differences. Write the name and draw a small picture of the story in the large yellow and red boxes. Brainstorm ways that the characters, setting, and events are similar and write or draw them in the orange boxes in the middle. Brainstorm ways that the characters, setting, and events are different and write or draw them in the appropriate yellow and red boxes on the sides.

You can also have your students compare themselves to the main character in a story using the "Main Character Comparison" activity in the Language Arts>Reading>Comprehension folder in the Activities. This helps students build reading for meaning and descriptive writing skills as well as develop self-awareness.

Select the Project button, choose New, go to the Activities area, open the Language Arts folder. open the Reading folder, open the Comprehension folder, open the Compare Stories activity

Reading: Informational Text

Key Ideas and Details

1. Ask and answer such questions as who, what, where, when, why, and how to demonstrate understanding of key details in a text.

Five W's

As you approach a holiday, such as the Fourth of July, Martin Luther King's birthday, or Presidents Day, ask your students to help you investigate the details of that holiday. Share a book or web site that tells about this person's life or events unique to that day in history. Open the "5 W's" activity and project it for your students to see. Ask them to help you answer the key details of who, what, where, when, and how of the holiday.

Once you have modeled this for one holiday, task a student or a small group with investigating upcoming holidays. Utilize your media specialist or librarian to help you find books and web sites appropriate for your students' reading level. Have them use Pixie at a center in your classroom to compile their findings and then present them to the class.

Select the Project button, choose New, go to the Activities area, open the Templates folder, open the Graphic Organizers folder, and open a 5 W's activity.

2. Identify the main topic of a multiparagraph text as well as the focus of specific paragraphs within the text.

Explore Main Idea

Have your students think about the main idea as an umbrella that covers the content of an entire book. Share a couple of different nonfiction books for early readers with your students. Look at the cover picture and title and ask students to guess the main idea.

Now explore the titles, pictures, and text inside the book. How are they organized? Project a copy of Pixie's "Main Idea Umbrella" activity for students to see. Work together to add text to describe the main idea of one section of the book and identify key details from each paragraph in that section.

You can also have students complete the "Main Idea Umbrella" activity on a nonfiction topic they will be exploring in their writing workshop. This will help them collect information for their writing. You can also have students create a page that illustrates the main idea using clip art, the text tool, and the paint tools.

Select the Project button, choose New, go to the Activities area, open the Language Arts folder, open the Reading Folder, open the Comprehension folder, open the Main Idea Umbrella activity

Reading: Informational Text

Craft and Structure

4. Determine the meaning of words and phrases in a text relevant to a grade 2 topic or subject area.

Vocabulary Supports

As you read to the class or as students read independently, instruct them to raise their hand to let you know when they encounter an unfamiliar word. Ask the rest of the class if anyone can help share the meaning of the word.

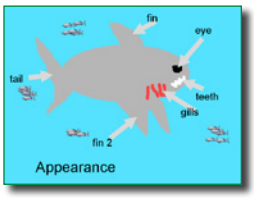
When you encounter a word the whole class is unsure of, open Pixie's "Vocabulary" activity and project it where students can see it. Type the word at the top of the page and work together to define the new word. Copy the sentence they are reading that includes the word or ask students to help you use it in a new sentence.

Save each Pixie file you create for new vocabulary words and post them on a wall or bulletin board in your classroom. At the end of the week or unit, give each student one of the words you have already defined. Ask the students to draw a picture of their word to help others remember its meaning. Print the pages in Postcard style (4 to a page) and distribute them to the class as vocabulary flashcards or trading cards.

Select the Project button, choose New, go to the Activities area, open the Language Arts folder, open the Vocabulary (green) activity

5. Know and use various text features (e.g., captions, bold print, subheadings, glossaries, indexes, electronic menus, icons) to locate key facts or information in a text efficiently.

Creating Non-Fiction Books



"When we were doing research projects, I noticed that my students were not making effective use of the features of non-fiction text to find the information they were seeking.

After discussing text features like table of contents, types of print, photographs, captions, close-ups, and labeling, I asked my students to create non-fiction animal reports that utilized the text features. They began by reading an assortment of non-fiction texts identifying the features. Students then selected an animal and used Pixie to develop their own non-fiction book to show their understanding of the animal's characteristics, habitat, offspring, and amazing facts.

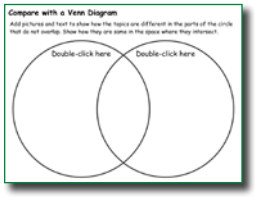
It was exciting to observe as they explored each tool, increasing their skills as they added to the creativity of the pictures in their project. The result was a collection of unique, colorful, high-quality nonfiction books."

Reading: Informational Text

Integration of Knowledge and Ideas

9. Compare and contrast the most important points presented by two texts on the same topic.

Information Display



Read and share two different texts about one topic with your students. Open the "Venn Diagram" Pixie activity on your projector or interactive whiteboard so in everyone can see it. Let your students know you want them to compare the two books. Students will likely first come up with differences in content between the two books; lead them toward identifying differences in style and delivery. Record their observations on the Venn diagram.

Ask the class to vote on which text they like the best. After you have tallied the voting, ask students to share the reasons for their choice. Were the pictures better in one of them? Did one have a better cover? Is each difference noted on the Venn diagram? Why or why not? Make changes and edits to the Venn diagram to ensure that it shows both content differences and style differences.

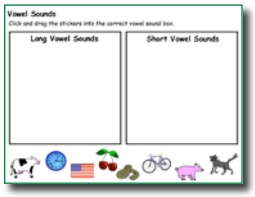
Select the Project button, choose New, go to the Activities area, open the Templates folder, open the Graphic Organizers folder, open the Venn -2 activity

Reading: Foundational Skills

Phonics and Word Recognition

3. Know and apply grade-level phonics and word analysis skills in decoding words.

Vowel Sounds



Remind students how words are pronounced when they end in a "silent e." Explore words that use the long ā with a silent e, such as date, mane, frame. This activity provides opportunity to practice long and short vowel sounds.

Continue with this activity and add words and more illustrations to fill each block with long and short vowel sounds. Have the students record themselves saying the words and practicing the vowel sounds. They can play back the recordings to hear themselves.

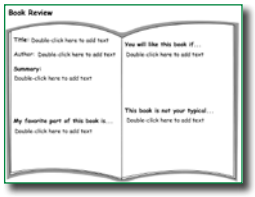
Select the Project button, choose New, go to the Activities area, open the Language Arts folder, open the Reading folder, open the Alphabetic Principle folder, open the Vowel Sounds activity

Writing

Text Types and Purposes

1. Write opinion pieces in which they introduce the topic or book they are writing about, state an opinion, supply reasons that support the opinion, use linking words (e.g., because, and, also) to connect opinion and reasons, and provide a concluding statement or section.

Book Review



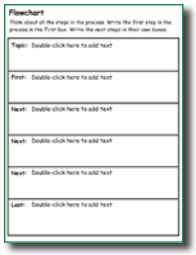
Have students choose one the books they have read and enjoyed to share with other students. In Pixie, have each student open the "Book Review" activity. Have them type a sentence about what the book is about on the left and type a sentence about what they liked about the book on the right. Click the Add Page button on the toolbar to add more pages they can illustrate to show their favorite parts of the book.

Print out the pages in postcard (four to a page) or comic (six to a page) style, laminate them, and share them with other students at your school to help them choose books when they visit the school library.

Select the Project button, choose New, go to the Activities area, open the Language Arts folder, open the Reading folder, open the Comprehension folder, open the Book Review activity

2. Write informative/explanatory texts in which they introduce a topic, use facts and definitions to develop points, and provide a concluding statement or section.

How to Make an Ice Cream Sundae



As you first help students learn how to write informative texts, you want to keep the focus on the structure of their writing, not the content. So rather than completing a text that requires research or the synthesis of new information, choose something they already know or can apply their imagination to writing. Have each student use the "Flowchart" activity to design their dream ice cream sundae.

Once students have had experience with a straightforward subject like a sundae, challenge them to create short how-to books on more sophisticated topics like how to find a book in the library, how to wash your hands, how to dress for winter, how to get somewhere, and so on. They can start with the "Flowchart" activity to get their ideas in order. Encourage them to use order words like first, after, next, and finally. When the order is complete, have them use the "Booklet" activity (Activities>Templates>Booklet) to write in complete sentences using order words to design a 4-page booklet. Have students print and share their booklets with peers and family or use them as resource guides in your classroom library.

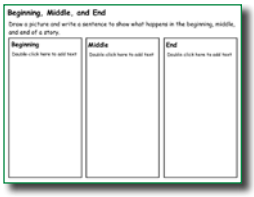
Select the Project button, choose New, go to the Activities area, open the Language Arts folder, open the Writing folder, open the Flowchart activity

Writing

Text Types and Purposes

3. Write narratives in which they recount a well-elaborated event or short sequence of events, include details to describe actions, thoughts, and feelings, use temporal words to signal event order, and provide a sense of closure.

Beginning, Middle, and End



After visiting the library, art class, music, or physical education, talk with your students about what happened. How did it start? What did they do? How did it end? Brainstorm a list of things that occurred and then work as a class to put them in order. In Pixie, project the "Begin and End" activity where all students can see it and work as a class to describe what happened at the beginning, middle, and end.

After returning from a school break, have students use the idea of beginning, middle, and end to share the story of their vacation time. To help them organize and sequence their project, have them use Pixie to create a four-page storybook. Have each student use the "Begin and End" activity to write, illustrate, and narrate an event by dividing it into actions that occurred in the beginning, middle, and end.

You can also talk with students about the steps in an important process, such as getting ready to go to school. Open the "Flowchart" activity (Activities>Templates>Graphic Organizers>Flowchart) and write out each step in the process.

Click the Project button, click Activities , open the Language Arts folder, open the Reading folder, open the Comprehension Folder, open the Begin and End activity

Writing

Production and Distribution of Writing

6. With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers.

Classroom Projects Go Digital

"At Taylors Creek Elementary, students use Pixie to show evidence of their understanding of standards learned across the curriculum.

During language workshop, my second-grade students used Pixie to illustrate and narrate a page in a class book of homophones. Each student chose a pair of homophones and used them in a single sentence. Using Pixie, each student illustrated the sentence, adding color to the homophones to help them stand out. Then, students recorded their voices, chose a transition, and added music in the background, turning their work into a project entitled 'Are you ready to HEAR what we're learning in HERE?'

During math workshop, students used the stickers in Pixie to make arrays that represent multiplication facts and fractions. Students used the paint and text tools to create a 'math facts house.' They chose three numbers to show the relationship between addition and subtraction, arranging the three numbers on the roof of the house. Then, they typed four related facts on the windows or door of the house.

As the world becomes more technology driven, giving students the opportunity to experiment with programs like Pixie motivates and enhances their learning at an early age, helping them to be successful in and out of the classroom."

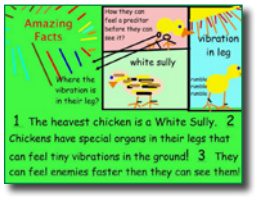
Melissa Aspinwall
Hinesville, GA

Writing

Research to Build and Present Knowledge

7. Participate in shared research and writing projects (e.g., read a number of books on a single topic to produce a report; record science observations).

All About Animals



Ask your class to name their favorite animals. After several have been listed, have students form groups of 3-4 around their favorite animal (this gives more control and ownership to the students). You may need to have a few students move around and compromise, or split one animal into multiple teams.

Rather than having students divide up the content and tackle parts of the report independently, have each individual team member complete research on the animal to learn about its appearance, diet, habitat, predators, and other interesting facts. Let them know they will be choosing different roles for the project, such as writer, illustrator, fact checker, director, and narrator.

Since Pixie includes collaboration, multiple students on different computers can work on the same file at the same time. Have the student in the role of director begin the project and start sharing. Then, the writer, illustrator, and narrator can join the project. Have students complete their part of the task on each page in the project. Make sure that the director is the last one to save and close the program. Print out the finished projects as booklets to share with the rest of the class, or export the files as interactive projects or videos you can share on your website.

8. Recall information from experiences or gather information from provided sources to answer a question.

Creating Documentaries

"In the summer of 2007 I attended a National Endowment of the Humanities workshop at Ellis Island. I decided a documentary that included my students' illustrations and narration would be an effective way to challenge and engage them while exploring this powerful content.

Students researched Ellis Island in their classroom using print resources and the Internet, and then focused on a particular topic to explore. After they learned the content, they decided the best way to illustrate it, including details like the chalk marks on clothing to indicate a medical concern, steamships, and the steps the new arrivals had to ascend for their 'six-second medical exam.'

This project encouraged creativity, and my students were engaged as they researched and illustrated their topic and practiced recording their narration. As we viewed the documentary, they also had the opportunity to learn from each other."

Pat Leslie
Flemington, NJ

Speaking & Listening
Presentation of Knowledge and Ideas

5. Create audio recordings of stories or poems; add drawings or other visual displays to stories or recounts of experiences when appropriate to clarify ideas, thoughts, and feelings.

Adapting a Favorite Book

"One of our very first Pixie projects was an electronic book based on ***Things That Are Most in the World,*** by Judi Barrett. Second-grade teacher Miss Alia read the book to her students, and the class wanted to create their own version. The class worked together to brainstorm and record all of the superlatives they could think of. Then, each student chose their favorite superlative and wrote a sentence using the superlative that provided a clue to the meaning of the word.

After students wrote the text and created a storyboard sketch for their pages, I provided a fifteen-minute introduction to Pixie. Following that brief introduction, second graders who had never used Pixie before were able to create amazing illustrations in a single class period as well as record themselves reading their sentence. We then easily combined all of their pages into a class book.

Students are, of course, motivated to get to the 'Pixie part' of the project, and they have learned that the preparatory steps must be completed first. Knowing that their final product was going to be published to the Web for a potentially global audience encouraged the students to do their best work."

Shelley Paul
College Park, GA

Language
Conventions of Standard English

I. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.

Student-created Grammar Tutorials

"I have given much thought over the past year about the progress of students in my Title I classroom. After innumerable worksheets and countless review activities on the interactive whiteboard, some students still lack mastery over grade-level grammar and language skills.

A new grant-funded iPod Touch cart means I finally have a media viewing device for every student. At the ISTE conference, I learned how some teachers were creating JPG flashcards with images and text for vocabulary review, and I became convinced there was a way I could use this technique to help my struggling students.

I knew that my below-grade-level readers would have difficulty with some of the words, so I created Pixie projects that include pictures, text, and voice narration. I exported the Pixie files as podcasts so my students could see and hear them for review and to learn about a concept on the iPod Touch.

While making Pixie podcasts is easy and fun for me, I soon realized that having my students create the multimedia grammar tutorials would provide them with an opportunity to demonstrate their knowledge while helping their peers.

Each student-made tutorial must include a title page and a page that introduces the skill being demonstrated. The remaining pages in the tutorial include examples of the concept. Students enjoy building tutorials by themselves or in small teams, first planning on paper and then creating the final product in Pixie. Some students prefer to stick with the basics, while others inject their own personality into their tutorials.

When I notice someone having a grammar problem, I refer them to a student-created tutorial designed by one of their peers... and when one of my students shows mastery of a concept, I know it's time for them to create one of their own!"

Katy Hammack
Santee, CA

Language

Vocabulary Acquisition and Use

5. Demonstrate understanding of figurative language, word relationships and nuances in word meanings.

Cool Word Similes

"Second graders at Pepper Drive School used Pixie's Cool Word feature to support the visual nature of figurative language as they learned about similes. Their teacher, Mrs. Meyer, read the book, ***Quick as a Cricket*** by Aubrey Meyer, which begins, 'I'm as quick as a cricket, I'm as slow as a snail. I'm as small as an ant, I'm as large as a whale.'

Students in the class then brainstormed more similes, comparing themselves to an animal. When they had all written a few examples, the students chose one that they liked the best and came to the computer lab to illustrate them. Using images from Pics4Learning and Pixie's Cool Word feature, they made their word 'become' the animal in their simile.

They added the rest of the text for the comparison and we printed them to display on the classroom walls and for Open House, where they were a big hit with parents."

Katy Hammack
Santee, CA

Language Arts Lesson

While individual activities can be used to address specific language standards, you can also create engaging lessons that address multiple standards in one project.

Amazing Animal Alliterations

Students create a class Alliteration Alphabet book in Pixie as they write an alliterative sentence, create an illustration that supports and explains it, and read the sentence.

Engage

Step 1: Introduce Alliteration.
Read ***Marti and the Mango*** to set the stage for recognizing and utilizing alliteration as a tool to entertain readers. As you read, identify alliteration and how it is used in the story. This will prepare students for how to use alliteration when they create their own original sentence.

Tongue twisters often use alliteration. Share a few tongue twisters with your students. You might try nursery rhyme favorites like Betty Botter Bought Some Butter or Peter Piper (Peter Piper picked a peck of pickled peppers. A peck of pickled peppers Peter Piper picked. If Peter Piper picked a peck of pickled peppers, where's the peck of pickled peppers Peter Piper picked?).

Step 2: Practice Writing Alliterative Sentences.
Before students work on creating their own pages, write a sentence together to practice. Choose a letter from the alphabet. Select a hard or an easy letter depending on the ability level of your class. Begin by brainstorming with the class all the animals that begin with this letter. For example, if you choose B, students will brainstorm examples such as bear, beaver, bunny, bobcat, bird, or buffalo. As a class, write an original sentence using alliteration. A great place to start is by creating a short sentence in the noun–verb–noun format, starting with the animal. As students suggest new verbs and nouns, write them on the board and then choose the ones you want to use. An example might be, "Birds build bubbles."

Now, have the class brainstorm all of the adjectives and adverbs they can think of for this letter. For example, big, blue, boldly, bravely. Then, see where you can add them into the sentence. For example, "Blue birds build big bubbles".

Open Pixie and ask a student volunteer to draw a picture depicting the sentence. If you have an interactive whiteboard, work together as a class to take turns using the paint tools to illustrate the sentence. Have a strong reader read the sentence as you record it on the Pixie page.

Create

Step 3: Begin Student Work.
Have students draw a letter out of a bag or assign letters based on student academic ability. Each student should begin by brainstorming animals that begin with this letter. If students get stuck, head to http://wiki.answers.com/ and search for "What animal begins with the letter _?"

Next, have them brainstorm all of the verbs, nouns, adjectives, and adverbs they can think of that begin with their letter. If students are struggling, have them ask their classmates for help. You might also want to assign this project for homework to involve other family members.

Have students follow the noun-verb-noun model to begin writing their sentences. Then, add additional adjectives and adverbs. Once students have written their alliterative sentences, have them think about how they might create an illustration that supports their writing.

Have them look at the adjectives to develop details they will include in their drawings. Next, have students use Pixie to write their sentences, illustrate the page using the paint tools, and

record themselves reading the sentences. Have each student save his or her page, naming it to indicate the letter and the author (e.g., "z_alicia").

Share

Step 4: Create a Class Book and Share.
Have all students share their project by clicking on the Project button and choosing Share Project. Create a new Pixie project and make a title page. Import each student page by clicking on the Project button and choosing Import Pages. Save the class book as an online storybook or export it as a podcast or video. If students recorded their voices on each page, this will be included automatically. You can also use the Print features in Pixie to print the pages as a booklet, comic strip, or as trading cards.

Get your school together for a formal presentation of your class's Amazing Animal Alliterations book! You will also want to share electronic and print copies in your school's media center.

Common Core Standards

RF 2.1 Demonstrate understanding of the organization and basic features of print.

RF 2.2. Demonstrate understanding of spoken words, syllables, and sounds (phonemes).

W 2.6. With guidance and support from adults, use a variety of digital tools to produce and publish writing, including in collaboration with peers.

SL 2.5. Create audio recordings of stories or poems; add drawings or other visual displays to stories or recounts of experiences when appropriate to clarify ideas, thoughts, and feelings.

SL 2.6. Produce complete sentences when appropriate to task and situation in order to provide requested detail or clarification.

L 2.1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.

L 2.2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

L 2.3. Use knowledge of language and its conventions when writing, speaking, reading, or listening.

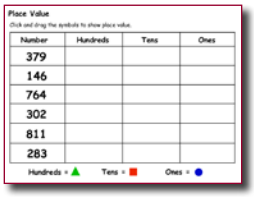
Grade 2 Mathematics

Number & Operations in Base Ten

Understand place value.

1. Understand that the three digits of a three-digit number represent amounts of hundreds, tens, and ones; e.g., 706 equals 7 hundreds, 0 tens, and 6 ones. Understand the following as special cases:

Game - What Number is It?



Place value is the value of a digit depending on its position in the number, such as ones, tens, hundreds, and thousands places. Open the "Place Value – Hundreds" activity and work as a whole class to add the correct number of shapes to each column to illustrate the number of hundreds, tens, and ones.

In a computer lab, or at a center in your classroom, have students create three-digit numbers using the Base Ten blocks in the Stickers Library (Math>Base Ten). Have each student save to a common location. Then, click the Project button and choose Import Pages to combine all of their work into one file. Click the View Full Screen button at the bottom of the window to present it to the class. Display each page for a given number of seconds and ask the students to write down the numbers they see.

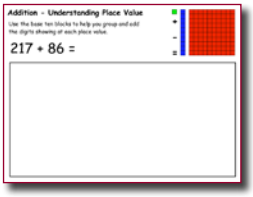
Select the Project button, choose New, go to the Activities area, open the Math folder, open the Numbers and Operations folder, open the Numbers folder, open the "Place Value - Hundreds" activity

Number & Operations in Base Ten

Use place value understanding to add and subtract.

7. Add and subtract within 1000, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method. Understand that in adding or subtracting three-digit numbers, one adds or subtracts hundreds and hundreds, tens and tens, ones and ones; and sometimes it is necessary to compose or decompose tens or hundreds.

Adding Three-Digit Numbers – Place Value



While there are many ways students can decompose numbers to 1000, the easiest way is to decompose by base ten units. Demonstrate for and practice with your students how to represent three-digit numbers with base ten blocks. Finally, compose an example with two different numbers represented. Then add an addition symbol between them. Ask students how they might solve the problem by regrouping the blocks of various values. Show your students how this regrouping is represented when they add three digital numbers using numerals.

Work through the operations on the first page of the "Addition – Place Value" activity with the entire class using an interactive whiteboard and projector. When students get comfortable with the process, head to the computer lab and have students replicate the work on this page, complete the operations on the next two pages, and then develop their own numerical operation after adding base ten blocks to the last page.

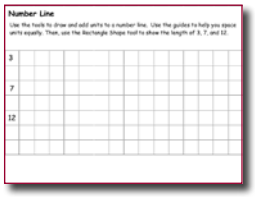
Select the Project button, choose New, go to the Activities area, open the Math folder, open the Number and Operations folder, open the Base Ten folder, open the Addition – Place Value activity

Measurement & Data

Relate addition and subtraction to length.

6. Represent whole numbers as lengths from 0 on a number line diagram with equally spaced points corresponding to the numbers 0, 1, 2, ... and represent whole-number sums and differences within 100 on a number line diagram.

Length on a Number Line



Length is the distance from one end of an object to another counted against an equal set of units. Because a number line contains equally spaced units, you can use a number line to plot and measure distance. Open the "Length on a Number Line" activity on your interactive white board or project it where all students can see. Work together to draw a number line and decide the value of each unit.

Once the number line is complete, plot the specific number on the page on the number line. Draw a vertical line from that number to the row where the number is shown. Have students use the Rectangle tool to draw a filled rectangle from the 0 point on the number line to the length specified for each row.

Move to the second page and show the students the number 20. Is that going to fit on a number line like the one on the first page? How can you change the unit value on the number line to solve this problem? Work together to create a number line and draw the length of each number on the page.

When students get comfortable, have them try drawing their own number lines. What is the most important feature they need to remember? Equal units!

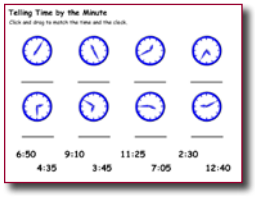
Select the Project button, choose New, go to the Activities area, open the Math folder, open the Measurement folder, open the Length on a Number Line activity

Measurement & Data

Work with time and money.

7. Tell and write time from analog and digital clocks to the nearest five minutes, using a.m. and p.m.

Tell Time



Skip count with your class by fives from 0 to 60. Open an image of a clock without any hands (you can find one in Stickers>Math>Clocks). Point to various spots on the clock and count from 0 to that number by fives, indicating each mark on the outside of the clock face as you count.

To assess student ability to tell time by the minute, have them complete the "Tell Time – Minute" activity in a computer lab, or at a center in your classroom. You might also suggest a more open-ended project where students create clocks at various times of the day and write and illustrate what happens at that time.

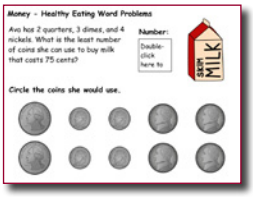
Select the Project button, choose New, go to the Activities area, open the Math folder, open the Measurement folder, open the Tell Time – Minute activity

Measurement & Data

Work with time and money.

8. Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately. Example: If you have 2 dimes and 3 pennies, how many cents do you have?

Money Problems



Students in second grade are generally confident knowing the value of money, but adding coins that have different value adds another layer of complexity. Completing operations involving money that are presented as word problems gets even more complex.

Share loose change with each student and present a few word problems they can try to first solve on their own and then with the help of the rest of the class. After practicing, have each student complete the "Money – Least Coins" multi-page activity so you can assess each student's individual comprehension and mastery.

You can also use the "Money Problems" activity in the same location for additional practice. To further develop their skills, have them start a new project and write and illustrate their own money problem (see the "Now That's a Problem" lesson). Have each student save to a common location. Then, click the Project button and choose Import Pages to combine all of their work into one file. Click the View Full Screen button at the bottom of the window to present the student created problems to solve together.

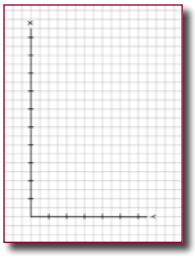
Select the Project button, choose New, go to the Activities area, open the Math folder, open the Measurement folder, open the Money folder, open the Money – Least Coins activity

Measurement & Data

Represent and interpret data.

9. Generate measurement data by measuring lengths of several objects to the nearest whole unit, or by making repeated measurements of the same object. Show the measurements by making a line plot, where the horizontal scale is marked off in whole-number units.

Length Over Time



Place a small object like a plant on a sunny window sill or table near a window in your classroom. Using a yard or meter stick, measure and record the length of the object's shadow at least 6 times over the course of one day. "Open the Graph" activity so all students can see. Work as a class to enter the time and distance units on each axis of the graph.

Ask students to come up and plot each measurement point on the graph showing the correct time on the x-axis and the length of the shadow y-axis. Use Pixie's Line tool to connect each point on the graph to make a line plot.

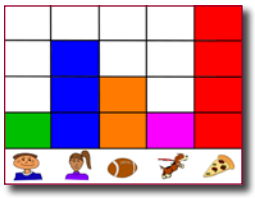
Click the Open button, click Activities, open the Math folder, open the Templates folder, open the portrait-oriented Graph activity

Measurement & Data

Represent and interpret data.

10. Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put-together, take-apart, and compare problemsl using information presented in a bar graph.

Our First Graphs



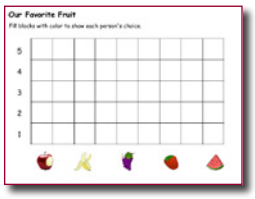
"One of our biggest challenges with mathematics learning in the early grades is representing data with graphs. Since our students love working with pictures in Pixie, we created a Pixie template our kindergarten and first-grade classes could use to learn how to make bar graphs.

Working at a table in groups of four, students count how many of them are boys, how many are girls, which students like football, and which students have a dog. Then they add their own category in the fifth column and do the counting. Students tally their findings and fill each square in the graph to represent each student's answer.

Because we can change the stickers and table groups, each time is a unique experience. Kids fill in the squares with the Paint bucket tool to create their graphs, or use the Stamp tool to create a pictograph. We also have students customize the graph to include their own objects, print it out, survey family and friends to complete the graph as homework."

Laura Spencer
Santee, CA

Favorite Fruit



You can model this process to get your students started! Open the "Favorite Fruit Graph" activity on your interactive whiteboard and see how the fruits at the bottom compare to your students' favorites. Have each student come to the interactive board and use the Paint Bucket fill tool to add their individual data.

Click the Open button, click Activities, open the Math folder, open the Data Analysis folder, open the Graphing folder, open the Favorite Fruit Graph activity

Geometry

Reason with shapes and their attributes.

1. Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. 1) Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.

Go on a Shape Hunt

Open the "Find Shapes" activity and project it so that your students can see. Look at each picture and call out the shapes you see in it. This activity contains basic shapes and is great for younger students, but your second graders are capable of much more! What other shapes can your students think of? Prompt them if they don't start sharing the 3-dimensional shapes they know.

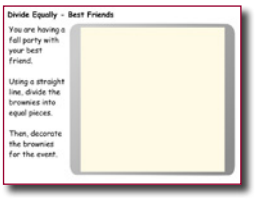
Once you have a list of shapes, form small teams of students around each shape. Ask the student teams to work together to find or draw a single page with at least 4 different examples of their shape in the real world. You may want to provide a digital camera students can use to take pictures around school, or go to http://www.pics4learning.com to find additional photographs.

Combine the students' pages into one class book on Shapes by clicking the Project button and choosing Import Pages. Present the project to the students and ask for additional examples for each shape as you show each page.

Click the Open button, click Activities, open the Math folder, open the Geometry folder, open the Sort the Shapes activity

2. Partition a rectangle into rows and columns of same-size squares and count to find the total number of them.

It's a Party!



We all know how important it is to get the biggest piece of dessert! What's the best way to avoid trouble when you are the host? Divide equally! Ask your class to describe the meaning of the word equal. What does equal mean when you talk about shapes in math? To assess your students' understanding of equal, have them complete the multi-page "Divide Equally" activity in Pixie.

Once they have the hang of dividing equally, ask your students to draw a picture of equal parts and then write a story to support the illustration. You can use the "Sentence Strip" activity as a template, or have them add a new page to the "Divide Equally" activity.

Click the Project button, click Activities , open the Math folder, open the Geometry folder, open the Divide Equally activity

Math Lesson

While individual activities can be used to address specific math standards, you can also create engaging lessons that address multiple standards in one project.

Now That's a Problem

Students will improve algebraic thinking skills by writing and illustrating their own word problems in Pixie.

Engage

Introduce the concept of skip counting to your students. A fun way to get them excited about skip counting and to practice their skills is to play with a rubber ball. Have the students take turns bouncing the ball and counting off by 2's, 5's, 10's, etc. Be sure to explain to them that skip counting is another way to multiply.

Once the students have an understanding of skip counting, read Bunches and Bunches of Bunnies by Louise Mathews. This book explains the concept of multiplication using pictures. Ask your students to illustrate this word problem:

There are four cats. Each cat has four legs. How many cat legs are there in all?

Have the students share their pictures in small groups. Encourage them to notice that while the pictures are different, they still have the same numbers in them. Post them on the wall as examples.

Next, work on the same process using a different approach. Have students practice identifying numbers in pictures and writing multiplication word problems. Project Pixie, insert a sticker of a rain cloud, and pose this question:

This cloud has four raindrops. If there were X clouds, how many raindrops would there be?

Continue this process with a few other stickers. As an entire class, brainstorm everyday objects that work for multiplication word problems. Ask the students to find an object at home that could be part of a multiplication word problem. When you meet again, have each student share their object with the rest of the class. You may even want to ask them to bring the object to school.

Create

Let students know they will be working with Pixie in small teams to create interactive storybooks that teach multiplication through word problems. Assign students to small groups and give each group a number series (2's, 3's, 4's) appropriate for their multiplication skill level.

Give each team a four-pane storyboard to help them develop the pages of their book. Have students write an equation in each of the panes. Next, have each team explore Pixie to find stickers they can use to represent the numbers in the equation. Have them write down the name of the sticker (or a description) and write the text of their multiplication word problem in each box on their storyboard.

Before students begin building their book, create a folder where students can save their files. Each team's book should have a page for each multiplication word problem. You might want students to create two pages for each problem, with the first page containing the problem and the second page containing both the problem and the answer.

Share

Once the students have completed their problems, use the Import Pages feature under the Project button to combine all student

Math Lesson (continued)

files into one project. Export to HTML to share online or print out in postcard, comic, or booklet style. Share the books with your school's librarian to place in the library for other students to use as reference material.

Common Core Standards

OAT 2.1. Use addition and subtraction within 100 to solve one- and two-step word problems involving situations of adding to, taking from, putting together, taking apart, and comparing, with unknowns in all positions, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

MD 2.5. Use addition and subtraction within 100 to solve word problems involving lengths that are given in the same units, e.g., by using drawings (such as drawings of rulers) and equations with a symbol for the unknown number to represent the problem.

MD 2.8. Solve word problems involving dollar bills, quarters, dimes, nickels, and pennies, using $ and ¢ symbols appropriately. Example: If you have 2 dimes and 3 pennies, how many cents do you have?

Meeting Common Core Standards with Pixie®

Grade 3

Tech4Learning 10+ YEARS SERVING EDUCATION

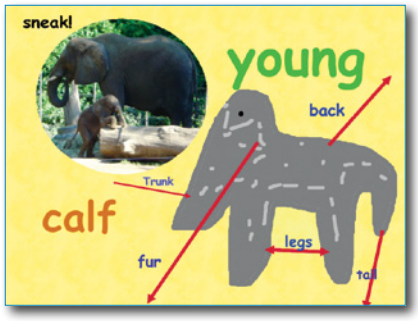
What is Pixie?

Pixie is software third grade students can use to write, paint pictures, and tell stories. Pixie provides a fun way for students to explore and respond to curriculum topics related to the Common Core Standards.

Students can add text to a Pixie page to practice their writing, draw ideas from their imagination using the paint tools, record narration for stories, and more. Your students can share their work in Pixie as a printed page, comic book, or even a video.

Using Pixie with Third-Grade Students

In third grade, a student's ability to read, write, do math, and explore the worlds of science and history is expanding rapidly. Their work with Pixie is growing more sophisticated as their writing and drawing includes more detail and complexity. Respond to student work in the same way – with more detail and complexity and ask them lots of questions about their work.



Pixie Use Improves Student Test Scores

During the 2010-2011 school year, independent research firm SEG Measurement conducted a study of approximately 1,000 third, fourth, and fifth grade students across five states to examine the effectiveness of Pixie in Reading Comprehension and Mathematics. Findings showed students participating in the treatment group demonstrated an additional half-year's growth over students in the control group on a nationally recognized standardized test.

Read the report at: **www.tech4learning.com/pixie/research**

Contents

Grade 3 Language Arts

Grade 3 Mathematics

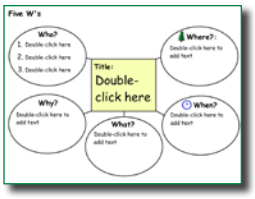
Grade 3 Language Arts

Reading: Literature

Key Ideas and Details

1. Ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers.

What I have read... and who, where, when, and how!



Have students complete a leveled reader. Then, have each student complete the "5 W's" activity in Pixie. Students should write the title of the story in the middle and identify who, when, where, what, and how in the appropriate circles. Once they have finished, have them share the activity with a peer and use it to help them summarize and retell the story.

To extend the project, ask students to add pages to the Pixie file and use the paint and text tools to recreate their favorite scene. What could they draw in the background to indicate where and when? What can they add as clip art or draw with the paint tools to show who and what?

Select the Project button, choose New, go to the Activities area, open the Templates folder, open the Graphic Organizers folder, open a 5W's activity

2. Recount stories, including fables, folktales, and myths from diverse cultures; determine the central message, lesson, or moral and explain how it is conveyed through key details in the text.

Folktales

Folktales – traditional stories that include a moral – can be found in cultures around the world. Explore examples of a variety of folktales. You can find a great collection of American folktales at: www.americanfolklore.net. Once your students are familiar with the format, have them choose one of their favorite folktales and use Pixie to create and print booklets that retell the story.

To give the project a more authentic spin, have the students retell the stories in the form of comic pages. Rather than using a template, have students create and illustrate four or six pages in Pixie. Then, click the Print button on the toolbar and choose the Postcard (4 panel) or comic (6 panel) layout to create one comic sheet with each Pixie page as a panel.

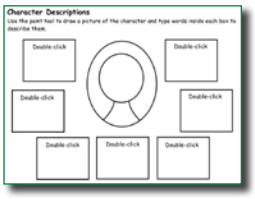
Select the Project button, choose New, go to the Activities area, open the Templates folder, open the Booklet activity

Reading: Literature

Key Ideas and Details

3. Describe characters in a story (e.g., their traits, motivations, or feelings) and explain how their actions contribute to the sequence of events.

Character Cause and Effect



Third graders begin to understand the motivations and traits of characters within a story. To help assess their growing ability, have them complete Pixie's "Character Description" activity to show the traits of the main character in a book you have read as a class or they have read independently.

To challenge your students to share what they comprehend about the actions in a story, have them complete the "Cause and Effect" activity to describe events in the story. Make sure they identify the "who" for each cause. When they are finished, have them use both of their Pixie files to explain how the main character's motivations and feeling impacted the events in the story.

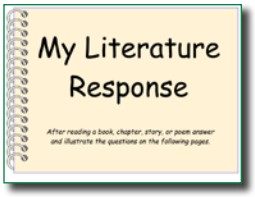
Select the Project button, choose New, go to the Activities area, open the Language Arts folder, open the Reading folder, open the Comprehension folder, open the Character Description and Cause and Effect activities

Reading: Literature

Craft and Structure

5. Refer to parts of stories, dramas, and poems when writing or speaking about a text, using terms such as chapter, scene, and stanza; describe how each successive part builds on earlier sections.

Response to Literature



Asking students to share what they think and understand about what they have read helps you assess comprehension and validates their perspective. After students read a story or poem, have them respond to and illustrate the prompts on each page of the "Response to Literature" book. Ask them to identify a chapter, scene, or stanza as they respond to and illustrate each sentence.

Students can also use Pixie to create a booktalk video or podcast (see the "Digital Book Talks" lesson). They can share excerpts from the story, retell an important scene, and record their thoughts about the story.

Select the Project button, choose New, go to the Activities area, open the Language Arts folder, open the Reading folder, open the Comprehension folder, open the Response to Literature activity

Reading: Literature

Integration of Knowledge and Ideas

7. Explain how specific aspects of a text's illustrations contribute to what is conveyed by the words in a story (e.g., create mood, emphasize aspects of a character or setting).

Pictures Tell a Story

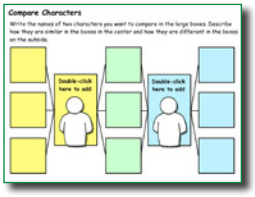
Chris Van Allsburg's books, like ***Jumanji*** and ***Zathura***, are as well known for their illustrations as they are for their stories. Share one of his books with your class, and do a picture walk. Ask students to share what they think happens on each page based on the illustrations. Open the "Key Ideas" activity in Pixie and project it so that students can see it. Work as a class to enter information about what they infer about characters, setting, and events using only the pictures in the book.

Next, read the story. How close were the students' guesses to the actual characters, setting, and events in the story? Find a part that students didn't know from the pictures. Ask them what the illustrator could have done to better help them understand. Ask students to develop their own illustrations for this passage at a center in your classroom and record their voice to point out the extra details in the illustrations and explain how they enhance the story.

Select the Project button, choose New, go to the Activities area, open the Language Arts folder, open the Reading folder, open the Comprehension folder, open the Key Ideas activity

9. Compare and contrast the themes, settings, and plots of stories written by the same author about the same or similar characters (e.g., in books from a series).

Compare Stories



Have students read a series such as ***The Hidden Stairs and the Magic Carpet*** series by Tony Abbot. After students have read two stories, use the "Compare 3-5" activity in Pixie to compare them.

Write the name and draw a small picture of each story in the large yellow and red boxes. Brainstorm ways that the themes, settings, and plots are similar and write or draw them in the orange boxes in the middle. Brainstorm ways that the themes, settings, and plots are different and write or draw them in the corresponding yellow and red boxes on the sides.

Select the Project button, choose New, go to the Activities area, open the Language Arts folder, open the Reading folder, open the Literature folder, open the Compare Characters 3-5 activity

Reading: Informational Text

Key Ideas and Details

2. Determine the main idea of a text; recount the key details and explain how they support the main idea.

Explore Main Idea

Have your students think about the main idea as an umbrella that covers all of the content and holds it together. Share a couple of different nonfiction books related to a science or social studies topic you are studying.

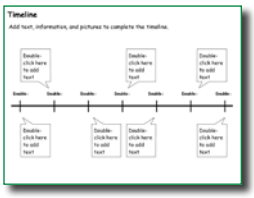
Look at the cover picture and title. What is the main idea? Now explore the titles, pictures, and text inside the book. How are they organized? Project a copy of Pixie's "Main Idea Umbrella" activity for students to see. Work together to add text to describe the main idea of one section. Also brainstorm key details from each paragraph in that section.

Have students complete the "Main Idea Umbrella" activity on a nonfiction topic they will be exploring in their writing workshop. This will help them collect information for their writing. You can also have students create a page that illustrates the main idea using clip art, text, and the paint tools.

Select the Project button, choose New, go to the Activities area, open the Language Arts folder, open the Reading Folder, open the Comprehension folder, open the Main Idea Umbrella activity

3. Describe the relationship between a series of historical events, scientific ideas or concepts, or steps in technical procedures in a text, using language that pertains to time, sequence, and cause/effect.

Thanksgiving on Thursday



Before the Thanksgiving holiday, read the Magic Tree House book ***Thanksgiving on Thursday*** by Mary Pope Osborne. Talk with your students about Jack and Annie's adventure. What facts about Thanksgiving does the adventure share? What else do your students know about Thanksgiving? Use Pixie as a class to complete a timeline about the events students can remember about this holiday. Use the ***Magic Tree House: Pilgrims*** research guide to learn more facts and details.

Have students choose one event from the class timeline to research and share. Have each student create a page in Pixie with text, illustrations, and voice narration to share information and facts about each important part of the Thanksgiving story.

Select the Project button, choose New, go to the Activities area, open the Templates folder, open the Graphic Organizers folder, open the Timeline activity

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Reading: Informational Text

Craft and Structure

4. Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 3 topic or subject area.

Vocabulary Trading Cards

Students are more eager to learn new vocabulary when they get some choice in the matter. As you are exploring nonfiction on a topic in your classroom, ask your students to keep track of new words they encounter. Give them the definition or have them look up the meaning of each word on their list.

At the end of the week or unit, ask students to choose their favorite new word and create a trading card to teach the meaning to other students. Students should define the word so that other students can understand the meaning, use it in a sentence with the same context as the unit you are studying, and draw a picture that helps describe the meaning. Have students print enough copies of their page using the Postcard style (4 to a page with the Repeat Page option checked) to cut out and distribute to the rest of the class.

Select the Project button, choose New, go to the Activities area, open the Language Arts folder, open the Vocabulary folder, open the Vocabulary Trading Card activity

5. Use text features and search tools (e.g., key words, sidebars, hyperlinks) to locate information relevant to a given topic efficiently.

Creating Non-Fiction Books

"When we were doing research projects, I noticed that my students were not making effective use of the features of non-fiction text to find the information they were seeking.

After discussing text features like table of contents, types of print, photographs, captions, close-ups, and labeling, I asked my students to create non-fiction animal reports that utilized the text features. They began by reading an assortment of non-fiction texts identifying the features. Students then selected an animal and used Pixie to develop their own non-fiction book to show their understanding of the animal's characteristics, habitat, offspring, and amazing facts.

It was exciting to observe as they explored each tool, increasing their skills as they added to the creativity of the pictures in their project. The result was a collection of unique, colorful, high-quality nonfiction books."

Sheila Buscemi
Frederick, MD

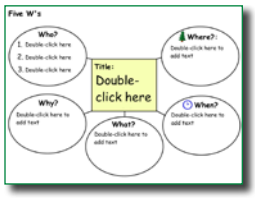
www.tech4learning.com 7

Reading: Informational Text

Integration of Knowledge and Ideas

7. Use information gained from illustrations (e.g., maps, photographs) and the words in a text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur).

Five W's of Pictures



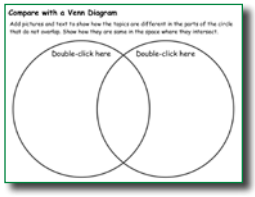
Locate a nonfiction book about an unfamiliar historic event or person. Show the cover of the book to your students. What can they tell about the topic from the picture, or pictures, on the cover? Page through the book or pass it around so that students can look at the individual pages. Open the "5 W's" activity and project it so the entire class can see. Work together to do a picture walk and try to answer who, what, when, where, and how.

Have students choose one event from this time period or person's life and create an illustration that includes details to answer as many of the 5 W questions as possible. What could they draw in the background to indicate "where" and "when?" What can they add as clip art or draw with the paint tools to show "who" and "what?"

Select the Project button, choose New, go to the Activities area, open the Templates folder, open the Graphic Organizers folder, open one of the 5W's activities

9. Compare and contrast the most important points and key details presented in two texts on the same topic.

Information Display



Read and share two different texts about one topic with your students. Open the "Venn Diagram" activity in Pixie so that it is projected for all students to see. Let your students know you want them to compare the two books. Students will likely first come up with differences in content between the two books. If necessary, lead the conversation toward identifying differences in style and delivery. Record their observations on the Venn diagram.

Ask the class to vote on which one they like the best. After you have tallied the voting, ask students to share the reasoning for their choice. Were the pictures better in one of them? Did one have a better cover? Is this difference noted on the Venn diagram? Why or why not? Make changes and edits to the Venn diagram to ensure that it shows both content differences and methodology differences.

Select the Project button, choose New, go to the Activities area, open the Templates folder, open the Graphic Organizers folder, open the Venn-2 activity

Reading: Foundational Skills

Phonics and Word Recognition

3. Know and apply grade-level phonics and word analysis skills in decoding words.

Practice with Prefixes

Pixie contains a wealth of activities on parts of speech. These activities can help you zero in on specific areas for practice for English Language Learners. Rather than working as a whole class or even in a lab situation, consider making specific activities available for student practice at a center in your classroom.

The "Prefixes" and "Suffixes" activities ask students to drag the prefix or suffix at the bottom of the page to complete words that include a short definition or description. Have students print or save their finished work to use as an assessment of skill mastery as you work one-on-one with other students.

Students can also create a word journal using multisyllabic words and words with common suffixes (for example, likable, admirable, adorable). They can extend their written journal entries by drawing pictures of the meaning and narrating each word and its sounds.

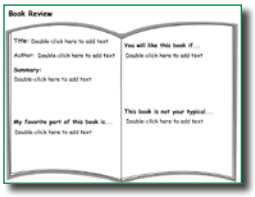
Select the Project button, choose New, go to the Activities area, open Language Arts folder, open Parts of Speech folder, open Prefixes activity

Writing

Text Types and Purposes

1. Write opinion pieces on topics or texts, supporting a point of view with reasons.

Book Review



Have students choose one of the books they have read and enjoyed to share with others. In Pixie, have each student open the Book template. Have them type a sentence explaining what the book is about on the left and type a sentence telling what they liked about the book on the right. Have them use Pixie's paint tools to illustrate their favorite parts of the book.

Students can also create postcards or trading cards to tell other students about books in the library. Have each student create a page in Pixie that includes a text description and an illustration of their favorite scene of a story. Print out the pages as postcards (four to a page) or comics (six to a page), laminate them, and share them with other students at your school to help them choose books when they visit the library. Students can also use Pixie to create Book Talk videos or podcasts (see the Book Talk lesson).

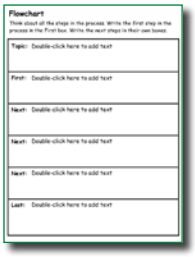
Select the Project button, choose New, go to the Activities area, open the Language Arts folder, Open the Reading folder, Open the Comprehension folder, open the Book Review activity

Writing

Text Types and Purposes

2. Write informative/explanatory texts to examine a topic and convey ideas and information clearly.

The Very Best Way to Get to School



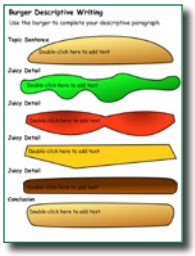
Ask students learn how to write informative texts, focus on the structure of their writing more than on the content. Ask your students to enumerate their ideal way to get to school. Will they take the bus, or hire a Ferrari-owning race car driver? Have each student use the "Flowchart" activity to plan out the necessary steps.

Once their steps and ideas have been added to the flowchart, have them use the "Booklet" activity (Activities>Templates>Booklet) to write in complete sentences and design a 4-page booklet. Encourage them to use order words (first, after, next, and finally) in their writing. Have students click the Print button and choose Booklet. Then, have them fold the printed sheet and share their books with peers and family.

Select the Project button, choose New, go to the Activities area, open the Language Arts folder, open the Writing folder, open the Flow Chart activity

3. Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.

Descriptive Writing - Burger Style



Have students develop a personal narrative about something that occurred recently, such as a family event or a trip to the zoo. A familiar event should help them easily determine sequence as well as remember specific details to make their writing descriptive. Have each student plan their writing using the "Burger Writing" activity in Pixie. In this simple diagram, students start with the topic and brainstorm juicy details that make their stories tasty and interesting.

After the introduction and conclusion (the buns that hold the piece together) and the juicy details have been outlined, have students write and illustrate each idea on a separate page in Pixie. Print out the pages as a comic or publish them to HTML to create interactive online books.

Select the Project button, choose New, go to the Activities area, open Language Arts folder, open Writing folder, open Burger Writing activity

Writing

Production and Distribution of Writing

6. With guidance and support from adults, use technology to produce and publish writing (using keyboarding skills) as well as to interact and collaborate with others.

Animal Interview Podcasts

"The curriculum at Krieger Schechter Day School requires students to use different modalities as they learn. We begin projects with a task or guiding question, and students then work together as they read, write, illustrate and discuss the objectives. After completing a unit on owls during a larger unit about endangered species, third-grade students were challenged to 'interview an owl.'

After watching several sample interviews, students decided what elements are involved in an interview. We discussed perspective, style, and question- and answer-length, and students determined a structure for a good interview.

Students worked with a partner to research a chosen owl and together wrote the introduction, questions, answers, and ending for their interviews. We typed the interviews into a word processing program and used Pixie to illustrate a detailed picture reflecting the information discussed in their interview. Students recorded the interview by reading their written description, with one child acting as the interviewer and one child acting as the owl, and then combined their slides to create a movie.

The best part of this project was watching the students read, process, analyze, and apply information through writing and creating detailed illustrations for their interview. My classroom was loud, noisy, and bustling for the eight sessions it took to complete. At the end of the project, the students agreed that this all-encompassing project was a motivating and exciting way to learn."

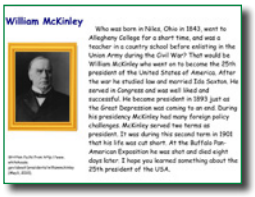
Amanda Levine,
Baltimore, MD

Writing

Research to Build and Present Knowledge

7. Conduct short research projects that build knowledge about a topic.

Presidential Research Reports



"In a recent third-grade American History curriculum unit at Copper Hill Elementary, students used Pixie to present their presidential research reports. After learning how to take notes and research with the librarian in our media center, students worked with their classroom teacher to use their notes to compose the life story of one of the presidents of the United States of America. Students typed their compositions into Pixie, inserted a photo from Pics4Learning, and recorded an introduction to their work.

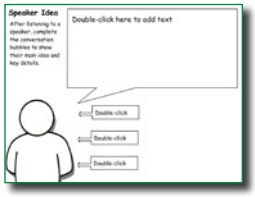
School administrators and parents had the pleasure of attending the final presentation by the third graders. As the students took their place in front of the screen showing the biography and president's portrait, Pixie played their voices introducing the report. They finished the presentation by reading the rest of the biography."

Diane Cook,
Ringoes, NJ

Speaking & Listening
Comprehension and Collaboration

2. Determine the main ideas and supporting details of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.

Our Expert Visitor



It is important to connect the learning that goes on inside the classroom with the work and lives of people outside of it. One common way we make this connection is by inviting "experts" to our classes to share knowledge and information as it relates to their job or personal history. Encourage students to take notes about what they are hearing.

After a guest visits, have students complete the "Speaker Idea" activity in Pixie to summarize the information they learned. Have students print out their pages and use them to discuss the visit with another peer or share with the entire class.

Select the Project button, choose New, go to the Activities area, open Language Arts folder, open Reading folder, open the Comprehension folder, open the Speaker Idea activity

Speaking & Listening
Presentation of Knowledge and Ideas

4. Report on a topic or text, tell a story, or recount an experience with appropriate facts and relevant, descriptive details, speaking clearly at an understandable pace.

Class Memory Book

At the end of the school year, let students know that they will create a page for their class memory book. You might choose to have each student recount a favorite event, or brainstorm as a class a list of things that happened over the year and assign an event to each student as their topic for the class memory book.

Ask each student to write about the event, use the Paint tools and stickers to add appropriate illustrations, and the click the Record button to record their description of the event. Combine all of the students' pages into one class book and publish it. Click the Project button on the toolbar, choose Export, and select Movie to create a video, or choose HTML to export an interactive electronic book. You can post the product on your classroom web site or burn it to a CD or DVD for students to take home.

Select the Project button, choose New, go to the Activities area, open the Templates folder, open the Memory Book activity

Speaking & Listening

Presentation of Knowledge and Ideas

5. Create engaging audio recordings of stories or poems that demonstrate fluid reading at an understandable pace; add visual displays when appropriate to emphasize or enhance certain facts or details.

Our Preferred Poetry Podcast!

Poetry is a great way to learn to read aloud with intonation, cadence, and expression, especially when the poems are silly and written for kids! Collect your class's favorite poems or give students time to explore the poems at www.gigglepoetry.com. Have each student select a poem they want to read and illustrate.

Have students copy and paste the text from gigglepoetry.com onto a blank Pixie page. Have them use the Paint tools and Stickers to add illustrations that support the content of the poem. Click the record button to record the student reading the poem with intonation and inflection.

Have each student publish their file as a podcast to post online. You can also have them save the files individually and use the Import Pages feature to combine all student work into a class book of favorite poems. Publish it as a video to watch or as HTML so you can post an interactive poetry book on your classroom web site.

Language

Vocabulary Acquisition and Use

4. Determine or clarify the meaning of unknown and multiple-meaning word and phrases based on grade 3 reading and content, choosing flexibly from a range of strategies.

Vocabulary Trading Cards

As you read to the class or as students are reading independently, have students raise their hand to let you know they encounter an unfamiliar word. Have them ask the rest of the class if anyone can help share the meaning of the word. Keep a list of these new words and post it where all students can see and add to it.

At the end of the week or unit, ask students to choose a word from the list and create a vocabulary trading card to teach others about the word. Students should define the word so that other students can understand the meaning, use it in a sentence with the same context as the unit you are studying, and draw a picture that helps describe the meaning. Have students print enough copies of their page using the Postcard style (4 to a page with the Repeat Page option checked) to cut out and distribute to the rest of the class.

Select the Project button, choose New, go to the Activities area, open the Language Arts folder, open the Vocabulary folder, open the green Vocabulary activity

Language

Vocabulary Acquisition and Use

5. Demonstrate understanding of figurative language, word relationships and nuances in word meanings.

Create an Idiom Dictionary

Some idioms, like "All bark and no bite," are easy to understand due to the obvious figurative connection, but others aren't quite so easy and require cultural or historical knowledge (i.e. that attorney is an ambulance chaser). Assign each student an idiom and have them use Pixie to create dictionary entries that explain their idiom with text, illustration, and narration.

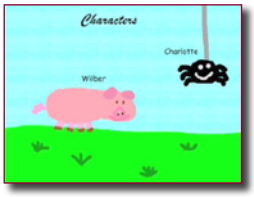
Once the pages are created, you can print them as trading cards or postcards to share with the class. Since printed projects won't include narration, you may also want to create a podcast. Click the Project button and use the Import Pages option to combine all your students' work in one Pixie file. Export a podcast so students can explore the idioms at their own pace.

Select the Project button, choose New, go to the Activities area, open the Language Arts folder, open the Writing folder, open the Idiom activity

Language Arts Lesson

While individual activities can be used to address specific language standards, you can also create engaging lessons that address multiple standards in one project.

Digital Book Talks



Students explore character, plot, and theme as they develop a trailer to promote a book they have read.

Engage

Getting students to read isn't always easy. Choose one of your favorite books and share it with your students in a way you think will get them excited about reading it. Then, tell why it was your favorite book.

Ask students what gets them excited about reading. Is it the characters? Is it the setting, an exciting plot, interesting themes, or a personal connection with the story?

Let your students know they will be using Pixie to create a booktalk in the form of a movie trailer to promote one of their favorite books.

First, have students determine which book they want to promote. Then, have them answer the following questions: Have I read another book by the same author? Did I like it as much as this book? What genre is this book? Is this book part of a series? Do I have a personal connection to this book?

To better advertise their book, students need to be able to identify the theme. Themes are the fundamental and often universal ideas explored in a literary work. They are BIG ideas, like friendship, love, and courage. For example, when a character stands up for a friend in a story, we can infer from their actions that friendship and courage are themes in the story. Common themes your students can look for in their books include friendship, love, cooperation, courage, loyalty, determination, fairness, anger, and being different.

As a class, explore how authors use themes to guide their writing. Ask students to reread important parts of the book and take notes as they analyze the book's characters, setting, and plot to determine the theme. The actions of the main character are a great place to look for the theme.

To gather information students can use to develop their booktalk, use graphic organizers like thought webs and the 5 W's to show the central theme of the book as well as events in the story that relate to the theme.

Create

Next, have students prepare a script for their booktalk. An exciting script should include:

- An interesting hook.
- A vivid description of an event that supports the theme.
- The title and name of the author at the conclusion.
- A call to action.

Remind students that showing the story is more effective than trying to retell the story. As they write the script, have them think of the booktalk as a movie trailer. Their goal is to leave the viewer with a compelling reason to check out that book!

To transform the script into a video, it is helpful to have a storyboard or map of each student's vision. The storyboard should include information about which portion of the script each scene will include and

what images and sound files will be used to support it. When the storyboard is complete, have students begin gathering images, music, and sound effects to support their vision.

Have students use Pixie to build their booktalks. They can use images from Pics4Learning or create their own images using the paint tools. They should record their script and, add sound effects or background music to match the tone and purpose of the booktalk.

Share

Share the book trailers with the rest of the class or play them on the morning announcements to encourage others to read the books. The librarian may choose to show the trailers in the library as other classes come in for their scheduled library time. If your district or community has public access television, try to get your students' booktalks aired. This is a great way to encourage the entire community to read!

Common Core Standards

RL 2. Recount stories, including fables, folktales, and myths from diverse cultures; determine the central message, lesson, or moral and explain how it is conveyed through key details in the text.

RL 3. Describe characters in a story (e.g., their traits, motivations, or feelings) and explain how their actions contribute to the sequence of events.

RL 5. Refer to parts of stories, dramas, and poems when writing or speaking about a text, using terms such as chapter, scene, and stanza; describe how each successive part builds on earlier sections.

RL 6. Distinguish their own point of view from that of the narrator or those of the characters.

RFS 4. Read with sufficient accuracy and fluency to support comprehension.

W 1. Write opinion pieces on topics or texts, supporting a point of view with reasons.

W 4. With guidance and support from adults, produce writing in which the development and organization are appropriate to task and purpose. (Grade-specific expectations for writing types are defined in standards 1–3 above.)

W 5. With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing.

LS 2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

SL 4. Report on a topic or text, tell a story, or recount an experience with appropriate facts and relevant, descriptive details, speaking clearly at an understandable pace.

L 1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.

L 2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

L 3. Use knowledge of language and its conventions when writing, speaking, reading, or listening.

Grade 3 Mathematics

Operations & Algebraic Thinking

Represent and solve problems involving multiplication and division.

3. Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.

Now That's a Problem

Read Bunches and Bunches of Bunnies by Louise Mathews to your students. This book explains the concept of multiplication using pictures. Work as a class to brainstorm everyday objects that work for multiplication word problems.

Have each student brainstorm a word problem and then use Pixie to write out the word problem and add illustrations that show the multiplication. For example, "Mr. Brown has 5 rose bushes in his garden. If he can sell each rose for $3, how many roses does each plant need to produce for him to make $90?"

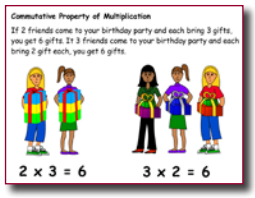
Have each student duplicate their first page to show how they would solve the equation mentioned in the word problem. The second page should demonstrate how to solve the problem with an equation and by highlighting the array in the image.

Operations & Algebraic Thinking

Understand properties of multiplication and the relationship between multiplication and division.

5. Apply properties of operations as strategies to multiply and divide. (Commutative property of multiplication, Associative property of multiplication, Distributive property)

Student-created Instructional Videos



Talk to students about the commutative, associative, and distributive properties of multiplication and how these can be applied to problems to make them easier to solve. For example, the distributive property means you can multiply a number by breaking the number into parts, like tens and ones, multiplying the parts separately, and adding the products.

Have students work to develop multi-page projects in Pixie that introduce a property of multiplication or division and demonstrate how it can be used as a strategy to solve sample operations.

As Katy Hammack, a teacher in Santee, California shares, "Students enjoy building tutorials by themselves or in small teams, first planning on paper and then creating the final product in Pixie. Some students prefer to stick with the basics, while others inject their own personality into their tutorials."

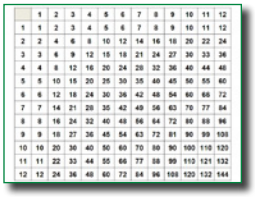
Having students create their own tutorials provides them with an opportunity to demonstrate their knowledge while helping their peers. If you are looking to implement flipped classroom strategies, you can use these tutorials as homework, review, and for differentiation.

Operations & Algebraic Thinking

Solve problems involving the four operations, and identify and explain patterns in arithmetic.

9. Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.

Multiplication Patterns



While many students can simply memorize the multiplication tables, others need to see and understand the underlying patterns to be able to apply this knowledge to fractions. Have each student open the "Multiplication Chart" activity in Pixie. Look at the numbers in the 5 column. See if students identify that the product always ends with a 0 or a 5. Then, work with students to see if you can determine a simple rule (like even and odd) for this pattern.

Let students explore the multiplication chart on their own. Encourage them to look diagonally as well as horizontally and vertically. What other patterns can they find? How do 0 and 1 work?

Click the Project button, click the Activities, open the Math folder, open the Templates folder, open the Multiplication Chart activity

Number & Operations: Fractions

Develop understanding of fractions as numbers.

1. Understand a fraction 1/b as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a/b as the quantity formed by a parts of size 1/b.

Real World Fractions

When represented only by numbers, fractions can be scary. This is why most people introduce fractions with mathematics manipulatives or familiar objects like chocolate bars. After exploring how to identify and create basic fractions using a chocolate bar or another manipulative, assess your students' understanding using various Pixie Fractions activities.

As your students start to identify fractions in the world around them, group students into small teams and assign them each a basic fraction. Have the team work together to create a poster that shares examples of their fraction in the real world.

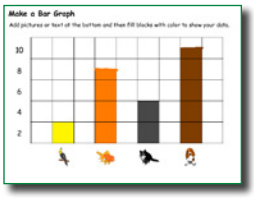
Select the Project button, choose New, go to the Activities area, open Math folder, open Numbers and operations folder,

Measurement & Data

Represent and interpret data.

3. Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step "how many more" and "how many less" problems using information presented in scaled bar graphs. For example, draw a bar graph in which each square in the bar graph might represent 5 pets.

Favorite Bar Graphs



Have students use the "Make a Graph" activity as the basis for their own data collection. Have small teams of students choose a topic (like favorite food, sports, or pets) and have them survey the members of their team and other class teams.

Team members should determine the largest number of respondents in any category so they can select units of measurement for the graph. Teams can then work together to record their data by filling in each square with a solid color using the paint bucket or by adding stickers to each square to create a pictograph.

Select the Project button, choose New, go to the Activities area, open the Math folder, open the Templates folder,

Measurement & Data

Geometric Measurement: Understand concepts of area and relate area to multiplication and to addition.

6. Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units).

Find the Area

Finding the area of various geometric figures is a simple and useful mathematical operation that often proves useful in the real world, such as determining how much carpet to buy to re-carpet a room in your house. Work with students to develop foundations in determining area using the "Find the Area activity". Project the activity where all students can see and work together to count the squares. Continue by having students work individually to assess their understanding.

Have students use the grid activity to design a new playground. Then, have them fill in squares to estimate the area each part of the playground will occupy.

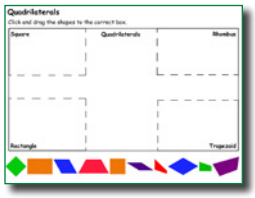
Select the Project button, choose New, go to the Activities area, open Math folder, open the Measurement folder,

Geometry

Reason with shapes and their attributes.

1. Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.

Quadrilaterals



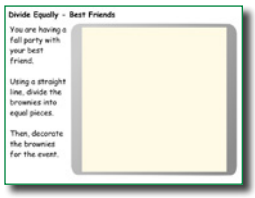
Talk about shapes in different sizes and categories. Any 4-sided, 2-dimensional shape with straight sides is a quadrilateral. There are special types of quadrilaterals, like the rhombus and the rectangle. Use this activity to practice understanding of the different types of quadrilaterals.

After students complete the activity, have them add a text box or record their voice to share the rule for what makes each type of quadrilateral different from the others.

Select the Project button, choose New, go to the Activities area, open Math folder, open Geometry, open the

2. Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. For example, partition a shape into 4 parts with equal area, and describe the area of each part as 1/4 of the area of the shape.

It's a Party!



We all know how important it is to get the biggest piece of dessert! But what do you do to avoid conflict when you are the host? Divide equally! Ask your class to describe the meaning of the word equal. What does equal mean when you talk about shapes in math? To assess your students' understanding of equal, have them complete the multi-page "Divide Equally" activity in Pixie.

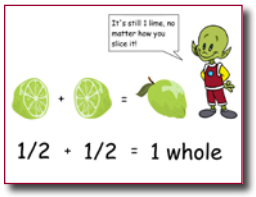
Once they have the hang of dividing equally, ask your students to draw a picture of equal parts and then write a story to support the illustration. You can use the "Sentence Strip" activity as a template, or have them add a new page to the "Divide Equally" activity.

Select the Project button, choose New, go to the Activities area, open Math folder, open Geometry, open the

Math Lesson

While individual activities can be used to address specific mathematics standards, you can also create engaging lessons that address multiple standards in one project.

Fantastic Fractions



Students will use Pixie to demonstrate the concept of fractions and how fractions are written in mathematical terms.

Engage

Discuss the concept of fractions with your students. Help them understand the concept of less than 1, but greater than 0. Provide everyday examples of fractions, such as slices of pizza, orange segments, or squares of a chocolate bar. You can have students work along with you as you read The Hershey's Milk Chocolate Bar Fractions Book by Jerry Pallotta and Rob Bolster.

Show how you can divide one object into many objects and how this translates into a written fraction. For example, when 1 chocolate bar is separated into 4 pieces, each piece equals ¼ of the chocolate bar.

Have students work with their parents, or other family members, to brainstorm a list of foods and household objects that can easily be divided into fractions. Have students share their ideas as you create a master list of objects. Have students bring objects to school and work as a class to discuss how each whole object can be divided into pieces that represent fractions.

Create

Let students know that they will work in teams to demonstrate how to divide a whole into fractions. Divide students into small groups of 3–5. Have each team choose an object from the list the class brainstormed.

Have each team create a storyboard that demonstrates how they will divide their object into different fractions. Their storyboards should demonstrate how they will show the object as a whole, how it will be divided into fractions, and how these fractional parts will be labeled. This will help you evaluate for comprehension before they begin working.

Team should determine which pages in the project each team members will create. Once each student has finished their assigned page, combine them together into a team project using the Project>Import Pages option. You can also have students work as a team on the same project using Pixie's collaboration features.

Share

Celebrate their success by having each team share its presentation with the rest of the class or to another class learning fractions. As they present, ask team members to share what they learned about fractions as they built their project. You may also want to share the completed files as videos or HTML on your web site or during school video announcements.

Common Core Standards

NOF 1. Understand a fraction 1/b as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a/b as the quantity formed by a parts of size 1/b.

NOF 3. Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size.

G 2. Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole.

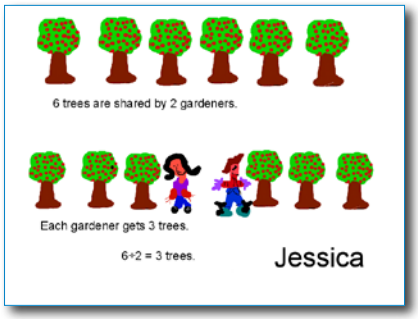
Meeting Common Core Standards with Pixie®

Grade 4

What is Pixie?

Pixie is software fourth-grade students can use to write, paint pictures, and tell stories. Pixie provides a fun way for students to explore and respond to curriculum topics related to the Common Core Standards.

Students can add text to a Pixie page to practice their writing, draw using the paint tools, record narration for stories, and more. Students can share their work as a printed page, comic book, or even as a video.



Using Pixie with Fourth-Grade Students

In fourth-grade, a student's ability and understanding are growing rapidly. Expanding curiosity and the ability to find answers on their own allow students to be more independent learners. While encouraging this independent learning, be sure to remain involved in their work and offer ideas, suggestions, and lots of praise.

Pixie Use Improves Student Test Scores

During the 2010-2011 school year, independent research firm SEG Measurement conducted a study of approximately 1,000 third, fourth, and fifth grade students across five states to examine the effectiveness of Pixie in Reading Comprehension and Mathematics. Findings showed students participating in the treatment group demonstrated an additional half-year's growth over students in the control group on a nationally recognized standardized test.

Read the report at: **www.tech4learning.com/pixie/research**

Contents

Grade 4 Language Arts

Grade 4 Mathematics

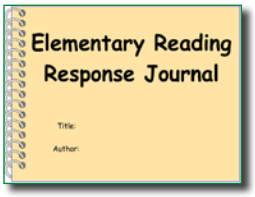
Grade 4 Language Arts

Reading: Literature

Key Ideas and Details

2. Determine a theme of a story, drama, or poem from details in the text; summarize the text.

Reading Response Journal



As students are working through leveled readers, have them use Pixie's "Reading Response Journal 3-5" activity to explore details in a story that hint at the theme. This activity includes opportunities for summarizing events, sharing how text made a student feel, and opportunities to compare and make predictions.

Most reading series are organized by themes, making it easy to compare texts with a common theme and explore how different authors address the same theme. Using Pixie's Compare activity (Activities>Graphic Organizers>Templates) can also help students identify ways that different stories approach a theme.

Select the Project button, choose New, go to the Activities area, open the Language Arts folder, open Reading folder, open Literature folder, Reading Response Journal 3-5

3. Describe in depth a character, setting, or event in a story or drama, drawing on specific details in the text (e.g., a character's thoughts, words, or actions).

Character Scrapbook

To begin, work with your class to brainstorm traits of the main character of a story you are reading. Project the "Character Description" activity in Pixie on an interactive whiteboard and work together to add details. Be sure to support the "what" details they identify with relevant examples from the text.

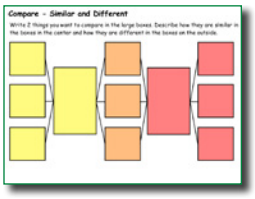
Next, students can demonstrate their understanding by creating a digital scrapbook for a character. The "Character Scrapbook" activity includes pages for students to write journal entries about important events from the main character's perspective, a picture page to show important events, a souvenirs page to share objects and explanations of why they are important to the main character, and a page for them to write a letter from the main character to a secondary character about a problem in the story and the secondary character's response.

Select the Project button, choose New, go to the Activities area, open the Language Arts folder, open the Reading folder, open the Comprehension folder, open the Character Scrapbook activity

Reading: Literature
Craft and Structure

6. Compare and contrast the point of view from which different stories are narrated, including the difference between first- and third-person narrations.

First or Third Person?



Read a traditional version of the ***Three Little Pigs*** story to your students. Then read Jon Scieszka's ***The True Story of the Three Little Pigs***. Not only is the Scieszka version told in the first person, it is told from the perspective of the wolf! Talk with your students about the point of view shared in a story. How do first-person and third-person writing affect how you perceive point of view?

Have students complete the "Compare" activity in Pixie to find similarities and differences in the two stories. After they have worked individually, work together as a class to complete the activity. Project the activity so that everyone can see, or open it on an interactive whiteboard. What details did not match between the stories? Was something left out of the first-person version? Did this help to better frame the point of view of the wolf? Does point of view affect how we perceive events in a story? Might an author use point of view to show us the parts of a story they want us to believe?

Select the Project button, choose New, go to the Activities area, open the Templates folder, open the Graphic Organizers folder, open the Compare activity

Reading: Literature
Integration of Knowledge and Ideas

7. Make connections between the text of a story or drama and a visual or oral presentation of the text, identifying where each version reflects specific descriptions and directions in the text.

Pictures and Silent Movies

Chris Van Allsburg's books, like ***Jumanji*** and ***Zathura,*** are as well known for their illustrations as they are for their stories. Share one of his books with your class, and do a picture walk with your students. Ask students to share what they think happens on each page. Open the "Key Ideas" activity in Pixie and project it so that students can see it. Work as a class to enter information about what they think they can know about characters, setting, and events using only the pictures in the book.

Next, have the students use Pixie to create a "silent movie" of a favorite children's story using only images. Present the silent movies to the rest of the class. Ask students to guess the story, and then try to identify what happens in each scene. Then, have students record audio to retell the story in their movie. How do written words or audio files improve the communication of the story? How do the images continue to enhance the story?

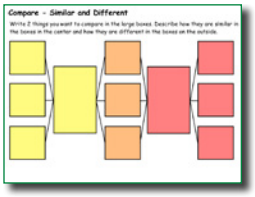
Select the Project button, choose New, go to the Activities area, open the Language Arts folder, open the Reading folder, open the Comprehension folder, open the Key Ideas activity

Reading: Literature

Integration of Knowledge and Ideas

9. Compare and contrast the treatment of similar themes and topics (e.g., opposition of good and evil) and patterns of events (e.g., the quest) in stories, myths, and traditional literature from different cultures.

Compare



Group students into teams of two. Have each member of the team read a different version of a story with similar themes, such as ***Cinderella*** and ***Ella Enchanted*** or one title from the Harry Potter series and one from the Charlie Bone series. Have one student open the "Compare" activity in Pixie and share it so the second student can join.

Have each pair of students create a page for character, one for setting, and a third for plot. Instruct them to draw a line down the middle of each page. Have each student summarize the information from their story on one side of the page. After they have read their partner's work and edited their own text to clarify their ideas, have the students work together to complete the comparison diagram on the first page.

Select the Project button, choose New, go to the Activities area, open the Templates folder, open the Graphic Organizers folder, open the Compare activity

Reading: Informational Text

Key Ideas and Details

2. Determine the main idea of a text and explain how it is supported by key details; summarize the text.

Explore Main Idea

Have your students think about the main idea as an umbrella that covers all of the content and holds it together. Share a couple of different nonfiction books related to a science or social studies topic you are studying.

Look at the cover picture and title. What is the main idea? Now explore the titles, pictures, and text inside the book. How are they organized? Project a copy of Pixie's "Main Idea Umbrella" activity for students to see. Work together to add text to describe the main idea of one section of the book, as well as key details from each paragraph in that section.

Have students complete the "Main Idea Umbrella" activity on a nonfiction topic they will be exploring in their writing workshop. This will help them collect information for their writing. You can also have students create a page that illustrates the main idea using clip art, the text tool, and the paint tools.

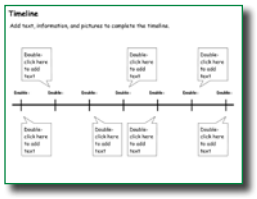
Select the Project button, choose New, go to the Activities area, open the Language Arts folder, open the Reading Folder,

Reading: Informational Text

Key Ideas and Details

3. Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.

Thanksgiving on Thursday



Before the Thanksgiving holiday, read the Magic Tree House book ***Thanksgiving on Thursday*** by Mary Pope Osborne. Talk with your students about Jack and Annie's adventure. What facts about Thanksgiving does the adventure share? What else do your students know about Thanksgiving? Use Pixie as a class to complete a timeline about the events students can remember about this holiday. Use the ***Magic Tree House Research Guide: Pilgrims*** to learn more facts and details.

Let your students know that the entire class will create a Thanksgiving timeline project. Have students choose one event from the class timeline that they will research and share in the class timeline. Have each student research their event, and create a page in Pixie with text, illustrations, and voice narration to share information and facts about each important part of the Thanksgiving story. Use the Import Pages function to combine everyone's work into one Pixie file you can publish as a class timeline.

Select the Project button, choose New, go to the Activities area, open the Templates folder, open the Graphic Organizers folder, open the Timeline activity

Reading: Informational Text

Craft and Structure

4. Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a grade 4 topic or subject area.

Vocabulary Trading Cards

Students are more eager to learn new vocabulary when they get some choice in the matter. As you are exploring nonfiction on a topic in your classroom, ask your students to keep track of new words they encounter. Give them the definitions or have them look up the meaning of each word on their list.

At the end of the week or unit, ask students to choose their favorite new word and create a trading card to teach the meaning to other students. Students should define the word so that other students can understand its meaning, use it in a sentence with the same context as the unit you are studying, and draw a picture that helps depict the meaning. Have students print enough copies of their page using the Postcard style (four to a page with the Repeat Page option selected) to cut out and distribute to the rest of the class.

Select the Project button, choose New, go to the Activities area, open the Language Arts folder, open the Vocabulary folder, open the Vocabulary Trading Card activity

Reading: Informational Text

Craft and Structure

6. Compare and contrast a firsthand and secondhand account of the same event or topic; describe the differences in focus and the information provided.

A Digital Journal

"As my students and I explored Colonial Times in our history studies, I often found that they didn't really comprehend what it must have been like to leave family, friends, and community and start over. So this year, as part of our study, my class read the journal of German Schoolmaster, Gottlieb Middelberger, in which he shares his first-person account of the treacherous journey across the Atlantic Ocean to the New World in 1750.

Although we had discussed the perils of the journey, up until this time students had only read about the journey through secondary sources both in print and online. After reading his account, students used Pixie to create a digital version of his journal. It wasn't until students used Pixie to write and illustrate the risks taken by passengers and crew making the journey and record the author's words to go with each picture that they truly comprehended the significance of the sacrifices that people were willing to make for a chance at a new life in the Americas."

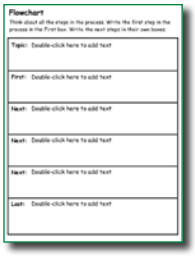
Gillian Ryan
Santee, CA

Writing

Text Types and Purposes

2. Write informative/explanatory texts to examine a topic and convey ideas and information clearly.

Your Very Own eHow



Television loves DIY (Do It Yourself) programming. There are entire channels devoted to cooking, decorating, and building. The eHow do-it-yourself web site features videos and articles on how to do just about everything. Fourth-grade students are getting more and more capable, and many of them have already found passions like soccer, woodworking, sewing, and more. Have your students choose one of their favorite pastimes and create a how-to video using Pixie. As they begin to think about what they want to share, have them brainstorm ideas using the "Flowchart" activity.

Once their steps and ideas have been added to the flow chart, have them create a page in Pixie for each step someone needs to complete in order to sew a skirt, complete a great corner kick, or bake a great chocolate cake. Encourage them to use order words (first, after, next, and finally) in their writing and add supporting illustrations to each page. They should record their voice explaining each step and then export the project (Project button, Export) as a podcast or video file they can share online.

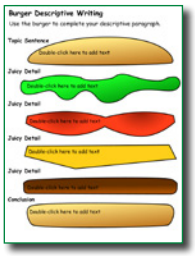
Select the Project button, choose New, go to the Activities area, open the Language Arts folder, open the Writing folder, open the Flow Chart activity

Writing

Text Types and Purposes

3. Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.

Descriptive Writing - Burger Style



Have students develop a personal narrative about something that occurred recently, such as a family event or a trip to the zoo. Choosing a familiar event will help them determine sequence as well as remember specific details to make their writing descriptive. Have each student plan out their writing using the "Burger Writing" activity in Pixie. In this simple diagram, students start with the topic and brainstorm "juicy details" that make their story tasty and interesting.

After the introduction and conclusion (the top and bottom buns that hold the story together) and the juicy details have been outlined, have students write and illustrate each idea on a separate page in Pixie. Print out the pages as a comic or publish them as HTML to create interactive online books.

Select the Project button, choose New, go to the Activities area, open the Language Arts folder, open Writing folder, open Burger Writing activity

Writing

Production and Distribution of Writing

6. With some guidance and support from adults, use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of one page in a single sitting.

Why Do People?

"To coincide with a 'Fabulous Florida, Past and Present' theme week at our school, fourth graders came to the lab and created Pixie projects in response to the question, 'Why do people come to Florida?' Students were introduced to Pixie and were encouraged to incorporate copyright-free images from Pics4Learning and the Florida Digital Warehouse, create their own illustrations with the paint tools, and utilize the stickers provided in Pixie.

Their classroom teacher, Mrs. Woodall, had students write a rough draft, which they brought to the lab to guide their work in Pixie. They recorded narration and exported their pages as informational videos. The student projects were posted on our school web site and published in time for our Florida museum display, where they received rave reviews.

The students were enthusiastic, on task, motivated, and thorough."

Jeanne Rogers
New Port Richey, FL

Writing

Research to Build and Present Knowledge

7. Conduct short research projects that build knowledge through investigation of different aspects of a topic.

Research with Graphic Organizers

Fourth graders are independent learners and generally want to learn more about topics they enjoy. Have students conduct research on a person in history you are studying, or if you have the support, let them research a famous sports star or musician. A student-driven project will require more assistance to find appropriate informational materials, but often results in increased engagement.

Have students take notes as they complete their research using the Fact or Opinion organizers in Pixie. Rather than writing a research report, ask students to create a two-page presentation in Pixie. The first page should include at least three facts they have found in their research. The next page should include their personal opinions about the subject using opinion words they found in their research such as: feel, believe, always, never, most, best, and worst.

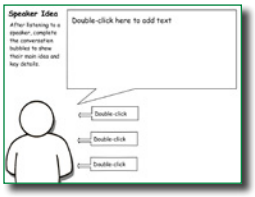
Select the Project button, choose New, go to the Activities area, open the Templates folder, open the Graphic Organizers folder, open the Fact or Opinion activity

Speaking & Listening

Comprehension and Collaboration

2. Paraphrase portions of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.

Our Expert Visitor



It is important to connect the learning that goes on inside the classroom with the work and lives of people outside of it. One common way to make this connection is by inviting "experts" into our classes to share knowledge and information as it relates to their job or personal history. Encourage students to take notes about what they are hearing.

After a guest visit, have students complete the "Speaker Idea" activity in Pixie to summarize the information they learned. Have students print out their pages and use them to discuss the visit with a classmate or share with the entire class.

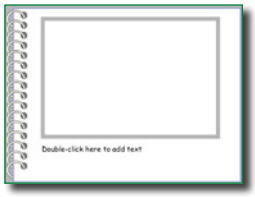
Select the Project button, choose New, go to the Activities area, open the Language Arts folder, open Reading folder, open the Comprehension folder, open the Speaker Idea activity

Speaking & Listening

Presentation of Knowledge and Ideas

4.Report on a topic or text, tell a story, or recount an experience in an organized manner, using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.

Class Memory Book



At the end of the school year, let students know that they will create a page for their class memory book. You might choose to have each student recount a favorite event, or brainstorm a list of things that happened over the year and assign the events to different students to capture for the class memory book.

Ask each student to write about the event, use the Paint tools and stickers to add appropriate illustrations, and the click the Record button to record their description of the event. Combine all of the students pages into one class book and publish it. Click the Project button on the toolbar, choose Export, and select Movie to create a full-size video, or choose HTML to export an interactive electronic book. You can post the exported projects on your classroom web site or burn them to a CD or DVD for students to take home.

Select the Project button, choose New, go to the Activities area, open the Templates folder, open the Memory Book activity

5. Add audio recordings and visual displays to presentations when appropriate to enhance the development of main ideas or themes.

Field Trip Fun

Field trips are one of the most enjoyable and memorable events of the school year. Teachers often have students craft thank you notes to practice letter writing. Add a modern spin on this by creating a class thank you video!

Use the Import Pages function to combine everyone's work into one Pixie file. Then, export the work as a video or podcast and post it to your website. Share a link to the thank you project with family, community, and staff from the site you visited.

Have each student create a page in Pixie that includes text, photographs, and illustrations about one specific highlight of the trip. Then, have them record a brief thank you to further personalize their note.

Language

Conventions of Standard English

I. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.

Prepositions Stories

"I sat down with my plan book and Teacher's Editions for my combined fourth- and fifth-grade class and noticed a couple of language arts lessons on prepositions for both grades. As a former kindergarten teacher, prepositions always remind me of the book ***Rosie's Walk*** by Pat Hutchins. After creating several digital stories this year with my students, I thought my students might like to create a preposition story using Pixie! It turned out to be one of the most fun and creative projects that my students created all year. Who knew prepositions could be so fun?

I started by reading ***Rosie's Walk*** to my students. They giggled at the story as the blundering fox followed the oblivious hen throughout the farm. As a class we recalled all the places Rosie went—around the pond and over the haystack, which led perfectly into a discussion on prepositions and how we use them in our writing. Normally during this discussion, half the class starts counting the holes in the ceiling tiles or planning ahead to their recess games. However, upon mentioning that they would be making a digital preposition story using Pixie, eyes brightened, ears perked up, and I had their attention.

We identified the prepositions in the story and brainstormed many more. Working in small groups, the students were given a list of prepositions and a storyboard. They began by coming up with a character and setting. After a little encouragement, they came up with catchy character names like Tyler the Tiger and Yacka the Alpaca. They wrote eight prepositional phrases on the storyboard with quick sketches for the illustrations.

Using Pixie, students created a title slide, a slide for the beginning of the story, a slide for each prepositional phrase, and an ending slide using stickers and original drawings. They enjoyed creating pictures with their creatures going up, over, around, and through. For each slide, the students recorded their voices to tell the story. With a few guidelines from me and many options in Pixie, the students used their creativity and developed fabulous Preposition Digital Stories!"

Gillian Ryan
Santee, CA

Language

Vocabulary Acquisition and Use

4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 4 reading and content, choosing flexibly from a range of strategies.

Vocabulary Trading Cards

As you read to the class or when students are reading independently, have students raise their hands to let you know when they encounter an unfamiliar word. Have them ask the rest of the class if anyone can help share the meaning of the word. Keep a list of the new words the class encounters and post it where all students can both see it and add to it.

At the end of the week or unit, ask students to choose their favorite word from the list and create a vocabulary trading card to teach others about the word. Students should define the word so that other students can understand its meaning, use it in a sentence with the same context as the unit you are studying, and draw a picture that helps describe the meaning. Have students print enough copies of their page using the Postcard style (four to a page with the Repeat Page option selected) to cut out and distribute to the rest of the class.

Select the Project button, choose New, go to the Activities area, open the Language Arts folder, open the Vocabulary folder, open the Vocabulary Trading Card activity

5. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.

Create an Idiom Dictionary

Some idioms are easy to understand (e.g., All bark and no bite) due to the obvious figurative connection, but others aren't quite so easy and require cultural or historical knowledge (e.g., that attorney is an ambulance chaser). Assign each student an idiom and have them use Pixie to create dictionary entries that explain their idiom with text, illustration, and narration.

Once the pages are created, you can print them as trading cards or postcards to share with the class. Since printed projects won't include narration, you may also want to create a podcast. Click the Project button and use the Import Pages option to combine all your students' work in one Pixie project and create a podcast that students can watch on an iPod or on your web site so they can explore the idioms at their own pace.

Select the Project button, choose New, go to the Activities area, open the Language Arts folder, open the Writing folder, open the Idiom activity

Vocabulary

Vocabulary Acquisition and Use

6. Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal precise actions, emotions, or states of being (e.g., quizzed, whined, stammered) and that are basic to a particular topic (e.g., wildlife, conservation, and endangered when discussing animal preservation).

Cool Word Vocabulary

Depending on the level of your students, distribute vocabulary words to each student or to small teams. Have each student or group write a definition for the term and brainstorm synonyms and antonyms for it.

Review the definitions, synonyms, and antonyms with your students and ask them to brainstorm ideas for pictures that provide a visual clue to each word's meaning. Have students use a digital camera to take pictures of those clues or explore the Pics4Learning collection of photographs under the Pixie Project menu.

Have students print enough copies of their page using the Postcard style (4 to a page with the Repeat Page option selected) to cut out and distribute to the rest of the class. You may also want to print the page in color at full-size to make it part of a word wall or classroom vocabulary list. You can also use Pixie's Import Pages function to collect all pages into one file and run as a slide show students can watch when they arrive at class in the morning.

Have students open their images in Pixie and use the Text tool to type the vocabulary term on the page. Choose a thick font (like Arial Black or Impact) and a large size. Position the text over the image and click the Cool Word button located near the color palette . This option uses the image as the fill for the text!

Have your students move the completed Cool Word to the top of the page and use the extra space to add a definition and a sentence that uses the word in context.

Language Arts Lesson

While individual activities can be used to address specific language standards, you can also create engaging lessons that address multiple standards in one project.

Persuasive and Presidential Writing

Students will use Pixie to create a presentation to persuade the National Park Service to add another president to Mt. Rushmore.

Engage

Mt. Rushmore, sculpted between 1927 and 1941 by Gutzon Borglum with the assistance of over 400 local workers, is one of the most notable American treasures. But the mountain still has a bit more room! In this project, you will research a U.S. President and create a presentation to persuade the National Park Service to add another face to Mt. Rushmore.

As a class, work together to create a list of the qualities of the Presidents already on Mt. Rushmore. Let students know that it is their task to identify a president they feel has these qualities and should be added to Mt. Rushmore. They will craft a persuasive argument and then develop a persuasive presentation to convince others to add this president to the monument.

Give students some time to think about the president they think should be added. You may want to assign a bit of research about several lesser-known presidents before having them choose, or ask them to survey family and friends for their opinions.

Have students choose the president they think should be added to Mt. Rushmore. You might have them complete a KWL worksheet to help them identify what they already know about this president, as well as identify topics that they will need to research.

Create

The goal of persuasive writing is to convince others to agree with our facts, share our values, accept our arguments and conclusions, and adopt our way of thinking. Discuss elements of persuasive writing with your students, so they are ready to establish facts, provide examples, prioritize arguments, craft an emotional appeal, state conclusions, and communicate logically.

Have each student use his or her research to write a persuasive essay about why their president should be carved alongside the four existing presidents on Mt. Rushmore. Have students share their rough drafts with a classmate before editing and submitting their finished written arguments.

Discuss the structure of the Pixie project with your students. Like their persuasive essay, the first page should contain a position statement, such as "The New Mt. Rushmore should include President_____ because..."

The rest of the project should include three pages that present arguments why this president should be added to Mt. Rushmore and a final page that restates the position and summarizes the argument. The presentation should include supporting images and illustrations, as well as narration that summarizes the argument.

Share

Have students share their persuasive presentations with the rest of the class using the Show option on the Pixie toolbar. They can mute the audio if they would like to summarize live instead of playing their recorded narration. As a class, discuss the effective elements of each argument. At the end, can the class choose just one new President?

Language Arts Lesson (continued)

Common Core Standards

RI 1. Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.

RI 4. Determine the meaning of general academic and domain-specific words or phrases in a text relevant to a grade 4 topic or subject area.

RI 7. Interpret information presented visually, orally, or quantitatively (e.g., in charts, graphs, diagrams, time lines, animations, or interactive elements on Web pages) and explain how the information contributes to an understanding of the text in which it appears.

RI 9. Integrate information from two texts on the same topic in order to write or speak about the subject knowledgeably.

RF 4. Read with sufficient accuracy and fluency to support comprehension.

W 2. Write informative/explanatory texts to examine a topic and convey ideas and information clearly.

W 4. Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience.

W 5. With guidance and support from peers and adults, develop and strengthen writing as needed by planning, revising, and editing.

W 6. With some guidance and support from adults, use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; demonstrate sufficient command of keyboarding skills to type a minimum of one page in a single sitting.

W 7. Conduct short research projects that build knowledge through investigation of different aspects of a topic.

W 8. Recall relevant information from experiences or gather relevant information from print and digital sources; take notes and categorize information, and provide a list of sources.

W 9. Draw evidence from literary or informational texts to support analysis, reflection, and research.

SL 2. Paraphrase portions of a text read aloud or information presented in diverse media and formats, including visually, quantitatively, and orally.

SL 4. Report on a topic or text, tell a story, or recount an experience in an organized manner, using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.

L 1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.

L 2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

L 3. Use knowledge of language and its conventions when writing, speaking, reading, or listening.

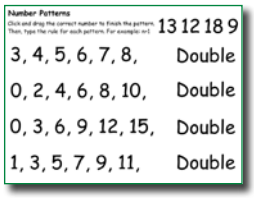
Grade 4 Mathematics

Operations & Algebraic Thinking

Generate and analyze patterns.

5. Generate a number or shape pattern that follows a given rule. Identify apparent features of the pattern that were not explicit in the rule itself. For example, given the rule "Add 3" and the starting number 1, generate terms in the resulting sequence and observe that the terms appear to alternate between odd and even numbers.

Pattern Rules



Developing their own patterns helps elementary students build concrete understandings of patterns and their rules. Students can easily use objects in Pixie's Stickers library to create and extend patterns.

To begin, have each student use Pixie to create a visual pattern. Use the Project>Import Pages option to combine all student patterns into one file. Click the Show button to present the project to the entire class. Ask students to guess which shape will come next. How do they know? Work as a class to determine the rule for each visual pattern.

Open the "Patterns - Numbers" activity so the entire class can see. Students can easily extend the pattern, but teach them how to write the rule, with 'n' representing the position in the sequence (for example, n+1). Ask teams of students to extend the remaining sequences and share the rule that helps determine the next number.

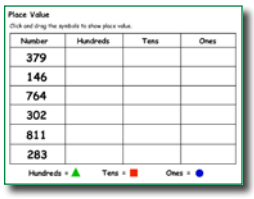
Select the Project button, choose New, go to the Activities area, open the Math folder, open the Algebra folder, open the Patterns folder, open the Patterns-Numbers activity

Number & Operations in Base Ten

Generalize place value understanding for multi-digit whole numbers.

1. Recognize that in a multi-digit whole number, a digit in one place represents ten times what it represents in the place to its right. For example, recognize that 700 ÷ 70 = 10 by applying concepts of place value and division.

Game - What Number is It?



Place value is the value of a digit depending on its position in the number, such as ones, tens, hundreds, and thousands places. Open the "Place Value – Hundreds" activity and work as a whole class to add the correct number of shapes to each column to indicate the number of hundreds, tens, and ones.

In a computer lab, or at a center in your classroom, have students create three-digit numbers using the Base Ten blocks in the Stickers library (Math>Base Ten). Have each student save to a common location. Then, click the Project button and choose Import Pages to combine all of their work into one file. Click the View Full Screen button at the bottom of the window to present to the class. Display each page for a given number of seconds and ask the students to write down the numbers they see.

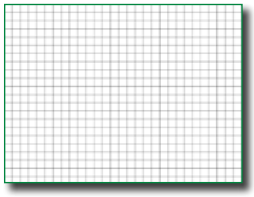
Select the Project button, choose New, go to the Activities area, open the Math folder, open the Numbers and Operations folder, open the Numbers folder, open the Place Value - Hundreds activity

Number & Operations in Base Ten

Use place value understanding and properties of operations to perform multi-digit arithmetic.

5. Multiply a whole number of up to four digits by a one-digit whole number, and multiply two two-digit numbers, using strategies based on place value and the properties of operations. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

Multiplying with Arrays



Using arrays helps students visualize mathematical equations, making them more concrete and easier to understand. The patterns in arrays also build foundations for patterns in algebra. Open Pixie's "Grid - XSmall" activity so all students can see it and work together to develop an array that represents a simple multiplication equation, such as 15x11.

Assign each student a different multiplication equation. Have students open the medium-sized grid template in Pixie (Activities>Math >Templates >Grid – Medium) and use the Paint Bucket Fill tool to create an area model. When the first model is complete, ask students to duplicate the page and adjust the colors in their model to show different ways to factor the number.

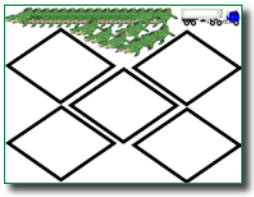
Select the Project button, choose New, go to the Activities area, open the Math folder, open the Templates folder,

Number & Operations: Fractions

Use place value understanding and properties of operations to perform multidigit arithmetic.

6. Find whole-number quotients and remainders with up to four-digit dividends and one-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

Visualizing Remainder



"Using clip art to demonstrate grouping and sets was one of the first ways I integrated technology into my teaching, so when the fourth-grade teachers at the Bullis School asked for some help with division and remainders, I knew just what to do.

Many students who were good with fact families couldn't extend their skill to division problems that have no 'non facts' that did not have a matching multiplication fact (for example 9/3 vs. 10/3) and struggled with the concept of the remainder.

I use Pixie to develop a series of Division Zoo activities, each of which included 24 animals and two to ten cages. Students had to drag animals into cages so that each cage contained the same number of animals. Each page also included a picture of a truck, allowing students to move 'spare' animals into the truck for shipment to another zoo. When they were finished, students wrote out math equations to represent the objects on each page.

The lesson reinforced the concept of division into equal groups and that a remainder happens when you have an amount left over that is too small to fit into one of the groups. Some students rushed into spreading out their animals and wound up with equations that did not match their manipulative work, providing instant feedback that demonstrated which students were struggling.

Later in the year, students used Pixie to develop word problems involving the interpretation of a remainder. As they worked in Pixie, students could divide stickers and then look at the problem to see if they needed more items (i.e. enough cars to carry a group of people) or if they had items they could not use (i.e. extra ingredients that would not be enough to bake an additional pie). Working with clip art really helped students see the remainder as the 'left over' amount.

Using Stickers as graphic manipulatives and typing equations and answers into text objects made Pixie an invaluable tool in exploring the world of division."

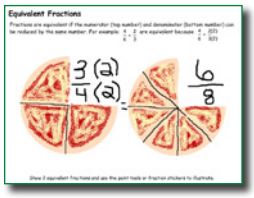
N. Gordon
Potomac, MD

Number & Operations: Fractions

Extend understanding of fraction equivalence and ordering.

1. Explain why a fraction a/b is equivalent to a fraction (n × a)/(n × b) by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions.

Equivalent Fractions



Fractions are equivalent if the numerator (top number) and denominator (bottom number) can be reduced, or multiplied, by the SAME number. This is why you can double each of the ingredients for a batch of cookies to feed twice as many people, but still create the same cookie, since each ingredient is still the same fraction of the whole as it was before. After demonstrating how to produce equivalent fractions to your students, have students use the "Equivalent Fractions" activity to demonstrate their understanding.

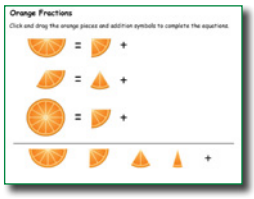
By pairing numeric representations of equivalent fractions with a visual model of the same thing, students will learn that they need to copy and paste the model some number of times to create the equivalent. This will help cement their understanding of the concept.

Select the Project button, choose New, go to the Activities area, open the Math folder, open the Numbers and operations folder, open the Fractions folder, open the Equivalent Fractions activity

Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.

3. Understand a fraction a/b with a , I as a sum of fractions I/b.

Orange Fractions



When represented only by numbers, fractions can be scary. This is why most people introduce fractions with manipulatives. The same holds true as students begin to learn to add fractions. Open the "Orange Fractions" activity with your students.

Work with your students to first determine what the denominator in the equation should be by counting how many segments would be in a whole orange. Since adding fractions requires a common denominator, working with only orange segments that are equal means they can focus on adding the segments (numerators) to produce the correct sums.

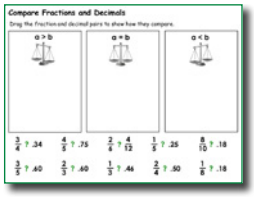
Select the Project button, choose New, go to the Activities area, open the Math folder, open the Numbers and operations folder, open the Fractions folder, open the Orange Fractions activity

Number & Operations: Fractions

Understand decimal notation for fractions, and compare decimal fractions.

7. Compare two decimals to hundredths by reasoning about their size. Recognize that comparisons are valid only when the two decimals refer to the same whole. Record the results of comparisons with the symbols >, =, or <, and justify the conclusions, e.g., by using a visual model.

Fractions and Decimals



Show four quarters to your students. How much does this total? Ask students if they can guess where the name "quarter" comes from. Represent 100 cents as $1.00. Then, show students that the decimal representation of a quarter is .25. Ask your students if they know the decimal equivalent of some common fractions (a half-dollar is another great example).

Show your students how to convert from a fraction to a decimal by dividing the numerator by the denominator. This might also be a good time to revisit how to round numbers as well.

To assess your students' ability to convert basic fractions to decimals, round to the nearest hundredth, and compare values, have them complete the "Fractions and Decimals" activity in Pixie. After completing, see if students have found any shortcuts to help them assess comparative value before they convert the fraction and compare decimal against decimal.

Select the Project button, choose New, go to the Activities area, open the Math folder, open the Numbers and Operations folder, open the Fractions folder, open the Fractions and Decimals activity

Measurement & Data

Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.

1. Know relative sizes of measurement units within one system of units including km, m, cm; kg, g; lb, oz.; l, ml; hr, min, sec. Within a single system of measurement, express measurements in a larger unit in terms of a smaller unit. Record measurement equivalents in a two-column table.

Converting Chart Data

Introduce the various units within both systems of measurement (standard and metric). Have each student in your class use the "Ten Frame" activity in Pixie (Activities>Math>Templates>Ten Frame) to develop their own conversion charts for converting liquid measurements, time, and distance within these systems. If you are working with limited time or a range of ability, group students together and have them complete one conversion chart to share with the class.

To assess students' ability to work with the charts and begin converting on their own, have them complete the "Running Chart" activity. After converting meters and kilometers, and minutes and seconds, work as a class to brainstorm other real-world activities that might require conversion within the same measurement system such as liquid measurements in recipes, the time it takes to complete a task, and distance travelled.

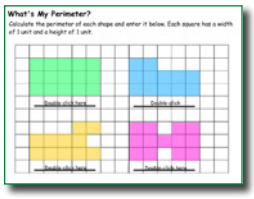
Select the Project button, choose New, go to the Activities area, open the Math folder, open the Measurement folder, open the Running Chart activity

Measurement & Data

Solve problems involving measurement and conversion of measurements from a larger unit to a smaller unit.

3. Apply the area and perimeter formulas for rectangles in real world and mathematical problems. For example, find the width of a rectangular room given the area of the flooring and the length, by viewing the area formula as a multiplication equation with an unknown factor.

Finding Perimeter



Perimeter is the total length around the outside of a 2-dimensional shape. Students can find the perimeter of a shape by counting similar units, but this can be time consuming. To help them understand how knowing formulas can make their life easier, have them complete the Perimeter activity in Pixie.

In this activity, students first count to determine perimeter. Then, they work to rearrange complex shapes into rectangles so they can apply the 2x +2y formula to find the perimeter. This helps them begin to learn to break down complex shapes into simple ones to determine perimeter and area as their mathematical expertise grows.

You can assess students' ability to determine its perimeter, as well as work with formulas, by having them apply what they know to story problems and real world examples. The last page of the "Perimeter" activity asks them to create flower beds that have a perimeter of 64. Once students have completed this part of the activity, ask them to add a new page to the file to create another shape or space and show how they can determine perimeter.

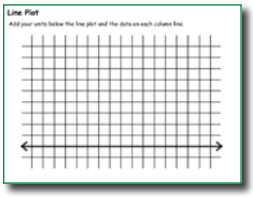
Select the Project button, choose New, go to the Activities area, open the Math folder, open the Measurement folder, open the Perimeter activity

Measurement & Data

Represent and interpret data.

4. Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Solve problems involving addition and subtraction of fractions by using information presented in line plots. For example, from a line plot find and interpret the difference in length between the longest and shortest specimens in an insect collection.

Whose Cookie is the Biggest?



Bring in several bags of cookies that are all about two to three inches in diameter. Group students together in teams of 3-5 students and ask each team to collect at least four different sized cookies. When they have their set of cookies, ask students to measure each cookie to the nearest $^1/_8$ of an inch using a standard ruler. Then, have each team open the "Line Plot" activity and place units along the line at the bottom at $^1/_8$ increments from the largest to the smallest cookie size.

Walk around the room to monitor each team's progress. Using their line plot, ask students to identify the largest cookie, the smallest cookie, the two cookies closest in size, and the two cookies that have the largest size difference. Ask students to share their finding with the entire class, describing the size differences in eighths of an inch.

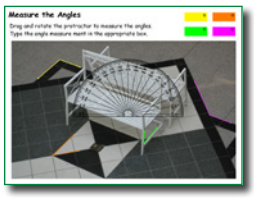
Select the Project button, choose New, go to the Activities area, open the Math folder, open the Templates folder, open the Line Plot activity

Measurement & Data

Geometric measurement: understand concepts of angle and measure angles.

6. Measure angles in whole-number degrees using a protractor. Sketch angles of specified measure.

Measure Angles



Students in fourth grade are familiar with how to measure objects using a ruler. Explain to them how intersecting lines are measured using a protractor to determine the angle between the rays. To give students practice measuring different angles, have them use the protractor in the "Measure Angles" activity in Pixie.

As students are measuring angles and recording their findings in the colored boxes, you can move around the room to assess individual ability and answer questions. You may need to demonstrate to the entire group how to rotate the protractor using the rotation handle so that one of the angle rays is at 0°.

Select the Project button, choose New, go to the Activities area, open the Math folder, open the Measurement folder, open the Measure Angles activity

Geometry

Draw and identify lines and angles, and classify shapes by properties of their lines and angles.

1. Draw points, lines, line segments, rays, angles (right, acute, obtuse), and perpendicular and parallel lines. Identify these in two-dimensional figures.

Angles All Around Us

Introduce different types of angles (acute, obtuse, and right) to your students. Once you think students understand the different types of angles, have them showcase their knowledge using a digital camera and the paint tools in Pixie.

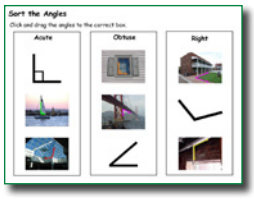
Have students work in small teams to locate and capture images around your school (or online) that contain both an acute and obtuse angle. Have students download the pictures to the computer and open them in Pixie. Instruct students to use the arrow shape in the Pixie Shapes tool to identify the angles in their picture. They should also add text captions to each angle to note whether the angle is acute or obtuse.

Initially students find it difficult to find both angles in the same picture. But it doesn't take long for them to discover that when they find one angle, they often find its supplement. Give bonus points to students who also locate a right angle in the same picture.

After students have printed their work, hang them up around the room as visual examples of acute and obtuse angles.

2. Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines, or the presence or absence of angles of a specified size. Recognize right triangles as a category, and identify right triangles.

Identifying Angles and Geometric Shapes



To assess student understanding of the definition of different types of angles (acute, obtuse, and right), have students each complete the "Sort the Angles" activity. You may want to have them work in a lab situation so that you can walk around the room to assess progress and correct misconceptions.

You may also want to have students complete the "Geometric Shapes" activity (Activities>Math>Geometry>Geometric Shapes). In this activity, students use the Paint tools to draw examples of geometric shapes such as a rhombus, octagon, obtuse angle, and intersecting lines.

Select the Project button, choose New, go to the Activities area, open the Math folder, open the Geometry folder, open the Sort the Angles activity

Geometry

Draw and identify lines and angles, and classify shapes by properties of their lines and angles.

3. Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.

Line Symmetry

Open the "Symmetry – Line" activity in Pixie on your interactive whiteboard. After looking at the images on the page, ask your students if they can tell you what symmetry means. Ask students to use the Line tool in Pixie to draw the line of symmetry on each image in the activity.

To practice and assess their skills, you can have students complete some of the other line symmetry activities. For example, you can have students identify lines of symmetry in flags from around the world and paint a butterfly so that the wings display color symmetry.

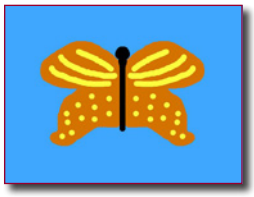
As students gain comfort and expertise identifying symmetry and lines of symmetry in existing objects, you can challenge them with some of the more open-ended activities in the Exploring Line Symmetry lesson.

Select the Project button, choose New, go to the Activities area, open the Math folder, open the Geometry folder, open the Symmetry – Line activity

Math Lesson

Pixie also makes it easy to implement open-ended lessons that engage students in the Common Core Standards.

Exploring Line Symmetry



Students will use Pixie to create original artwork and manipulate images to demonstrate understanding of line symmetry.

Engage

Write the word "symmetry" on the board. Ask your students if they can tell you what it means. Share some examples of real-world objects that are symmetrical. See if you can get students to define what makes these images symmetrical.

To help students grasp the concept of symmetry, distribute square handheld mirrors and have them practice making symmetry by holding the mirrors up to various objects. Explain that this is called bilateral, or line, symmetry because the symmetry is along one axis.

Go back to the example images of symmetry and ask students to identify the line of symmetry in each image.

Create

Activity 1: Symmetry in the World Around Us

To give students a chance to practice and apply their skills, divide them into teams of three or four. Have each student use a digital camera to take a picture of a symmetrical object. If you do not have a digital camera, students can find images in the Pixie stickers library or at Pics4Learning.com.

Help each team transfer their images to the computer. Students should open the images in Pixie and use the Line tool to draw the line, or lines, of symmetry on each image.

Activity 2: Mirror Symmetry with Faces

Though our faces exhibit symmetry, they are not perfectly symmetrical. You can have students use Pixie to show how one side of their face is slightly different from the other.

Have students pair up to take a front view photograph of each other's faces. In Pixie, have them open the image as a sticker and resize it. Have the students glue the image to the background, select half of their face with the Rectangle Selector tool, and use the copy, paste, and flip buttons to show true symmetry with their faces. Students should do this for both sides of their face, resulting in a total of three images.

Activity 3: Painting Symmetrical Objects

Butterflies are common symmetrical objects. Share a couple of images of butterflies and have students talk about their symmetry. Make sure they can identify the line of symmetry that runs directly through the body of the butterfly.

Have students use Pixie to paint a butterfly with a vertical body and one wing. Then, have them use the same technique they used for their faces to create a complete butterfly by selecting half the butterfly, copying and pasting the selection, flipping it and moving it into position.

Next, test students' ability to think symmetrically by having them use the mirroring feature of the Paintbrush tool to draw another butterfly. Have students choose the Paintbrush tool, click the Symmetry radio button to On, and click the mirroring option on the left.

Starting in the middle of the canvas, have them paint one wing; the other wing will paint at the same time. Remind them to click the Undo button if they need to try again.

Math Lesson (continued)

Share

There are multiple ways in which students can share their work with these activities. Ask students to add narration to their Pixie pages to check for understanding of symmetry and share the projects as videos. Students can also export their symmetry activities as an online storybook using the Share feature, giving an oral explanation of symmetry while presenting their work to the class. Finally, students can add text to their images and print them out to make a book of symmetry.

Common Core Standards

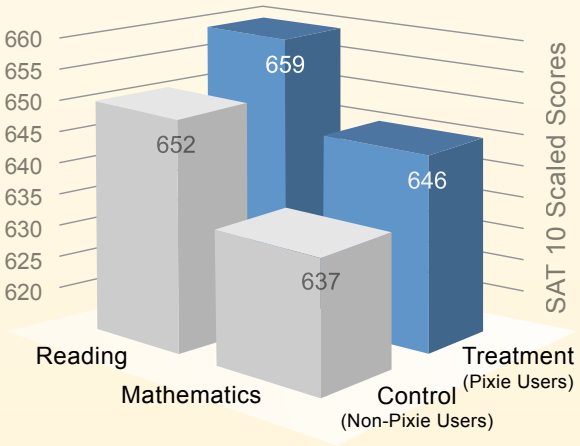
G 3. Recognize a line of symmetry for a two-dimensional figure as a line across the figure such that the figure can be folded along the line into matching parts. Identify line-symmetric figures and draw lines of symmetry.

SEG Measurement

Improving Student Learning Through Creative Collaboration:

A study on the impact of Tech4Learning's Pixie Software on Student Achievement

During the 2010-2011 school year (between January and June 2011), SEG Measurement conducted a national study with approximately 1,000 3rd, 4th, and 5th grade students, in 38 classrooms, in California, Georgia, Ohio, South Carolina, and Texas. Students who used Pixie showed meaningful growth in Reading Comprehension and Mathematics during the course of the study. Students in the Treatment Group classes increased their SAT 10 scores between 14-15 points, or about one years' worth of growth. More significantly, Treatment Group students enrolled in classrooms using Pixie showed about one half year's more of growth in Reading Comprehension and Mathematics than the Control Group students enrolled in classes not using Pixie. The Pixie users finished the year with scores that were 7 scale-score points higher in Reading Comprehension and 9 scale-score points higher in Mathematics on the SAT 10 assessments. The study also found that Pixie is equally effective for boys and girls and for students of different ethnic backgrounds.



The findings of this study provide substantial support for the effectiveness of Pixie in improving student Reading Comprehension and Mathematics skills.

Find the complete Executive Summary, insights into Pixie's development, and more at:

www.tech4learning.com/pixie/research

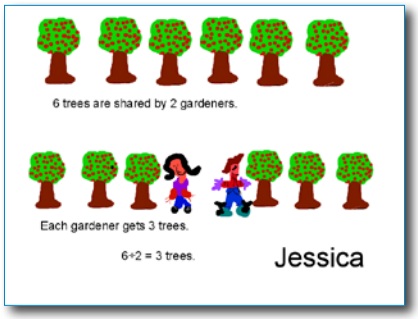
Meeting Common Core Standards with Pixie®

Grade 5

What is Pixie?

Pixie is software fifth-grade students can use to write, paint pictures, and tell stories. Pixie provides a fun way for students to explore and respond to curriculum topics related to the Common Core Standards.

Students can add text to a Pixie page to practice their writing, draw using the paint tools, record narration for stories, and more. Students can share their work as a printed page, comic book, or even as a video.



Using Pixie with Fifth-Grade Students

In fifth grade, students are transitioning from thinking like a child to thinking like an adult. They are capable of dealing with conflict and complexity, and should be asked to create products for use by other people that challenge their abilities. Work in Pixie should involve lots of writing and creativity as they explore the new boundaries of their thinking.

Pixie Use Improves Student Test Scores

During the 2010-2011 school year, independent research firm SEG Measurement conducted a study of approximately 1,000 third, fourth, and fifth grade students across five states to examine the effectiveness of Pixie in Reading Comprehension and Mathematics. Findings showed students participating in the treatment group demonstrated an additional half-year's growth over students in the control group on a nationally recognized standardized test.

Read the report at: **www.tech4learning.com/pixie/research**

Contents

Grade 5 Language Arts

Grade 5 Mathematics

Grade 5 Language Arts

Reading: Literature

Key Ideas and Details

2. Determine a theme of a story, drama, or poem from details in the text, including how characters in a story or drama respond to challenges or how the speaker in a poem reflects upon a topic; summarize the text.

Character Scrapbook

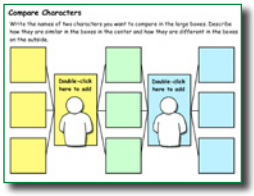
To begin, work with your class to brainstorm traits of the main character of a story you are reading. Project the "Character Description" activity in Pixie on an interactive whiteboard and work together to add details. Be sure that when students share a "what" detail, they also support the detail using relevant examples from the text.

Then, to demonstrate their understanding, have students create a digital scrapbook for this person. The "Character Scrapbook" activity includes pages for students to write journal entries about important events from the main character's perspective, a picture page to show important events, a souvenirs page to share objects and explanations of why they are important to the main character, and a page for students to write a letter from the main character to a secondary character about a problem in the story and the secondary character's written response.

Select the Project button, choose New, go to the Activities area, open the Language Arts folder, open the Reading folder, open the Comprehension folder, open the Character Scrapbook activity

3. Compare and contrast two or more characters, settings, or events in a story or drama, drawing on specific details in the text (e.g., how characters interact).

Character Description



Read Natalie Babbitt's ***Tuck Everlasting*** with your students. As a class, discuss the benefits and drawbacks of immortality. You may even want to have students discuss this topic before and after reading the story. Have your students use Pixie's "Compare Characters 3-5" activity to choose three main points (such as family, life, choices) and compare Winnie Foster and Jessie Tuck, drawing on specific details from the text.

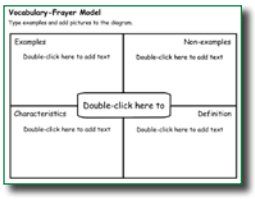
To extend their work, have students choose one aspect of their comparison and illustrate Pixie pages and record audio to create an interview with these two characters.

Select the Project button, choose New, go to the Activities area, open the Language Arts folder, open the Reading folder, open the Literature folder, open the Compare Characters 3-5 activity

Reading: Literature
Craft and Structure

4. Determine the meaning of words and phrases as they are used in a text, including figurative language such as metaphors and similes.

Figurative Language



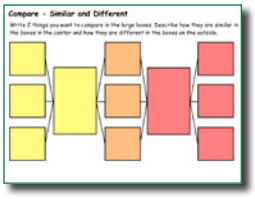
Work with your class to brainstorm or collect examples of both metaphors and similes they have encountered in their reading. Have students use the "Vocabulary-Frayer Model" activity for vocabulary to practice identifying what a phrase means as well as what it does not mean.

You might also encourage students to create trading cards for each phrase to trade with one another. Have students print enough copies of their page using the Postcard style (4 to a page with the Repeat Page option checked) to cut out and distribute to the rest of the class.

Select the Project button, choose New, go to the Activities area, open the Language Arts folder, open the Vocabulary folder, open the Vocabulary–Frayer Model activity

6. Describe how a narrator's or speaker's point of view influences how events are described.

First or Third Person?



Read a traditional version of the ***Three Little Pigs*** story to your students. Then read Jon Scieszka's ***The True Story of the Three Little Pigs***. Not only is the Scieszka version told in the first person, it is told from the perspective of the wolf! Talk with your students about the point of view shared in a story. How do first-person and third-person writing affect how you perceive point of view?

Have students complete the "Compare" activity in Pixie to find similarities and differences in the two stories. After they have worked individually, work together as a class to complete the activity. Project it so that everyone can see, or open it on an interactive whiteboard. What details did not match between the stories? Was something left out of the first-person version? Did this help to better frame the point of view of the wolf? Does point of view affect how we perceive events in a story? How can an author use point of view to give us the perspective on events they want us to believe?

Click the Project button, click Activities , open the Templates folder, open the Graphic Organizers folder, open the Compare activity

Reading: Literature

Craft and Structure

7. Analyze how visual and multimedia elements contribute to the meaning, tone, or beauty of a text (e.g., graphic novel, multimedia presentation of fiction, folktale, myth, poem).

Making Graphic Novels

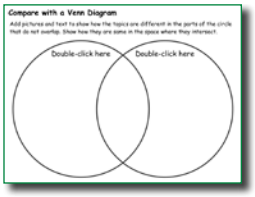
With declining interest in traditional literature and the advent of easy-to-use multimedia tools, our notion of what a book looks like is expanding. Share a graphic novel with your students, or a novel such as ***The Invention of Hugo Cabret***. Talk about how the pictures support the story, replace words, and attract the reader. Ask questions like: How do the pictures help the reader make inferences? How do they influence emotion and meaning?

Have each student choose a folktale or myth you have been studying and convert it into a graphic novel to share with the class and in the school library. Students can use Pixie's paint tools to create their own characters and backgrounds, or they can find images in the Stickers library. They can use Pixie's text bubble options to transform text into onomatopoeic sound effects, conversations, and thoughts.

When the pages are complete, click the Print button and choose one of the multi-up formats to print the work in the form of a graphic novel. Have students trade their graphic novels with another student for feedback. Have students make edits to the pictures and text, and print again. Use cardboard or book binding kits to add structure to the books and share them in the school media center.

9. Compare and contrast stories in the same genre (e.g., mysteries and adventure stories) on their approaches to similar themes and topics.

Explore Main Idea



Read ***Sammy Keyes and the Hotel Thief*** by Wendelin Van Draanen and ***A Caribbean Mystery*** by Agatha Christie. Hold a general discussion about the similarities and differences in the stories, then open the "Venn-2" activity where everyone can see and complete it together.

Have each student choose one theme or element to compare, such as character or setting, and create a Pixie page that includes additional textual and visual information about the elements in each story. Use the Import Pages function to combine everyone's work into one Pixie file. Then, present the completed project back to the class and let each student lead the discussion when their page is presented.

Click the Open button, click Activities, open the Templates folder, open the Graphic Organizer folder, open the Venn-2 activity

Reading: Informational Text

Key Ideas and Details

2. Determine two or more main ideas of a text and explain how they are supported by key details; summarize the text.

Explore the Main Idea

Have your students think about the main idea as an umbrella that covers an entire section of content and holds it together. Share a couple of different nonfiction books related to a science or social studies topic you are studying.

Look at the cover picture and title. What is the main idea? Now explore the titles, pictures, and text inside the book. How are they organized? Project a copy of Pixie's "Main Idea Umbrella" activity for students to see. Work together to add text to describe the main idea of one section of the book, as well as key details from each paragraph in that section. Have students complete their own "Main Idea Umbrella" activity on a nonfiction topic they will be exploring in their writing workshop. This will help them collect information for their writing.

Click the View All Pages button at the bottom of the Pixie window to see a thumbnail view of each page in the project. To duplicate the umbrella for a new idea, click a page to select it and click the Duplicate button on the toolbar. You can also have students click the Add Page button to add pages they can use to illustrate each main idea using clip art, the text tool, and the paint tools.

Select the Project button, choose New, go to the Activities area, open the Language Arts folder, open the Reading Folder, open the Comprehension folder, open the Main Idea Umbrella activity

Reading: Informational Text

Craft and Structure

4. Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 5 topic or subject area.

Vocabulary Trading Cards

Students are more eager to learn new vocabulary when they get some choice in the matter. As you are exploring nonfiction on a topic in your classroom, ask your students to keep track of new words they encounter. Give them a definition or have them look up the meaning of each word on their list.

At the end of the week or unit, ask students to choose their favorite new word and create a trading card to teach the meaning to other students. Students should define the word so that other students can understand the meaning, use it in a sentence with the same context as the unit you are studying, and draw a picture that helps describe the meaning. Have students print enough copies of their page using the Postcard style (four to a page with the Repeat Page option selected) to cut out and distribute to the rest of the class.

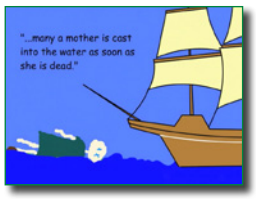
Select the Project button, choose New, go to the Activities area, open the Language Arts folder, open the Vocabulary folder, open the Vocabulary Trading Card activity

Reading: Informational Text

Craft and Structure

6. Analyze multiple accounts of the same event or topic, noting important similarities and differences in the point of view they represent.

A Digital Journal



"As my students and I explored Colonial Times in our history studies, I often found that they didn't really comprehend what it must have been like to leave family, friends, and community and start over. So this year, as part of our study, my class read the journal of German Schoolmaster, Gottlieb Middelberger, in which he shares his first-person account of the treacherous journey across the Atlantic Ocean to the New World in 1750.

Although we had discussed the perils of the journey, up until this time students had only read about the journey through secondary sources both in print and online. After reading his account, students used Pixie to create a digital version of his journal. It wasn't until students used Pixie to write and illustrate the risks taken by passengers and crew making the journey and record the author's words to go with each picture that they truly comprehended the significance of the sacrifices that people were willing to make for a chance at a new life in the Americas."

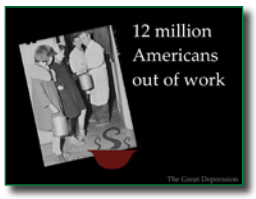
Gillian Ryan
Santee, CA

Reading: Informational Text

Integration of Knowledge and Ideas

9. Integrate information from several texts on the same topic in order to write or speak about the subject knowledgeably.

Historical Documentaries



While writing research reports isn't generally viewed as fun, creating a digital documentary can bring life and enthusiasm to this process in your classroom. Many students have probably seen documentaries on the History Channel, and you may even have shown one of Ken Burns' documentaries on the Civil War. Kids love being the expert, and developing a multimedia product allows them to demonstrate their command of the content as well as their skills combining images, text, narration, and music.

You can use this project to explore specific aspects of a topic, such as causes of the Great Depression or the desert ecosystem. Have students first complete research on the topic, then organize their ideas into a storyboard to show the general content and ideas they want to share on each page. Then have students craft specific text or narration for each page and explore images they can add to support their ideas.

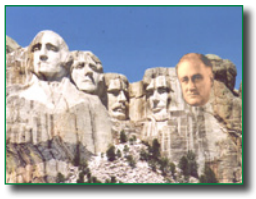
Have students build each page, or scene, of their videos in Pixie by adding images they have located or creating their own illustrations. Students can use the Record feature to add narration to each page. Before they export their pages as a movie, have them click the View All Pages button at the bottom of the Pixie window and verify the order of their scenes, adjust the timing, and even add background music using the Options panel. Click the Project button, choose Export, and select one of the movie formats to save the file as a video documentary to share with the class, other students in the media center as a research resource, and even with parents and the community at open house.

Writing

Text Types and Purposes

1.Write opinion pieces on topics or texts, supporting a point of view with reasons and information.

Persuasive and Presidential Writing



The goal of persuasive writing is to convince others to accept our conclusions based on the way we present facts and ideas. Discuss elements of persuasive writing with your students to prepare them to establish facts, provide examples, prioritize arguments, craft an emotional appeal, state conclusions, and communicate logically.

Your students have probably seen images of Mt. Rushmore and know some facts about the four U.S. Presidents honored there. Work as a class to brainstorm qualities that make a great leader. Ask a few students to share the name of another President they think should be added and why.

Challenge your students to create a persuasive presentation or document that argues for this President to be added to Mt. Rushmore. Give students a list of past Presidents and some time to talk with family and friends. Then, have students make a choice, craft a written persuasive argument, and use Pixie to create a presentation to convince others.

As students share their persuasive presentations with the rest of the class, discuss the effectiveness of the elements of each argument.

2. Write informative/explanatory texts to examine a topic and convey ideas and information clearly.

Your Very Own eHow


Flowchart

Topic: Double-click here to add text

First: Double-click here to add text

Next: Double-click here to add text

Next: Double-click here to add text

Next: Double-click here to add text

Last: Double-click here to add text

Television loves DIY (Do It Yourself) programming. There are entire channels devoted to cooking, decorating , and building. The eHow DIY web site features videos and articles on how to do just about everything. Fifth-grade students are getting more and more capable and many of them have already found passions like soccer, woodworking, sewing, and more. Have your students choose one of their favorite pastimes and create a how-to video using Pixie. As they begin to think about what they want to share, have them brainstorm ideas using the "Flowchart" activity.

Once their steps and ideas have been added to the flow chart, have your students create a page in Pixie for each step one must complete in order to sew a skirt, complete a great corner kick, or bake a decadent chocolate cake. Encourage them to use order words (first, after, next, and finally) in their writing and add supporting illustrations to each page. They should record their voice explaining each step. When they are finished, students can click the Project button, choose Export, and select a movie format to save their project as a podcast or video file they can share online.

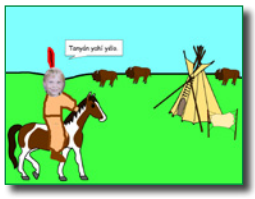
Select the Project button, choose New, go to the Activities area, open the Language Arts folder, open the Writing folder, open the Flowchart activity

Writing

Text Types and Purposes

3. Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.

Docudramas



In a docudrama, students act as if they are living in a specific time period or experiencing an event by creating a first-person digital story. Bernajean Porter (www.digitales.us) suggests using docudramas to make facts come alive for both student video creators and those who view their work.

Choose a time period you are studying and work with your class to create a list of people, places, careers, and events. Have students choose a topic and think about what perspective they would like to use to analyze the events. Have students use the "Character Description" activity in Pixie to start to identify the background, personality, and characteristics of the person they will use to tell their story.

Once their character description is complete, have students begin researching the people and events of the period. This will help them focus on relevant facts and ideas to share. You may want to have students use the graphic organizers in the Activities>Templates folder to create timelines, develop fact and opinion charts, and identify descriptive five W's details.

Have students build the pages, or scenes, of their videos in Pixie by adding images they have located or creating their own illustrations. They can use the Record feature to add narration to each page. Students can click the Project button, choose Export, and select a movie format to save the file as a video you can post to a web site of resources for this topic that you can share with other students.

Click the Project button, click Activities , open the Language Arts folder, open the Reading Folder, open the Comprehension folder, open the Character Description activity

Writing

Production and Distribution of Writing

4.Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience. (Grade-specific expectations for writing types are defined in standards 1–3 above.)

Creative Project Work

"As a problem-based learning consultant, I was called on to challenge fifth graders to think critically about the cultures of Native Americans. I knew that to engage students and make learning meaningful, students must research, collect information, synthesize, and create for an authentic purpose or audience.

From the moment the students were presented with the task of creating websites for fifth-grade classrooms at a neighboring elementary school, they were engaged and enthused. Knowing other students were relying on their projects put them in the driver's seat and helped the students take responsibility for and ownership of their learning.

As students worked, engagement and enthusiasm continued to flourish. Students quickly learned how to add images, text, clip art, sound, and more. Students took off running, collaborating and sharing with peers. Every project was unique, reflecting the personality of its creator.

When asked about the project, fifth grader Shyanne S. commented, 'I like creating projects rather than taking tests. When I create something, it sticks in my brain!'"

Susan Trebilcock
Clinton Township, MI

Writing

Research to Build and Present Knowledge

7. Conduct short research projects that use several sources to build knowledge through investigation of different aspects of a topic.

Research with Graphic Organizers

To teach effective research strategies and information literacy, let students choose the topic or problem they want to research. Even if they choose a famous sports star or musician, they will learn the process of asking questions, determining where they can find answers, actually locating and assessing those resources, and then using and applying the information in a research report.

After students have chosen the topic, problem, or person they want to research, have them brainstorm a list of questions on the subject. Have students take notes as they complete their research using the "Fact or Opinion" activity in Pixie.

Once research has been completed, ask students to create a two-page presentation in Pixie. The first page should include at least three facts they found in their research. The next page should include the student's opinion about the subject using opinion words they found in their research, such as feel, believe, always, never, most, best, and worst.

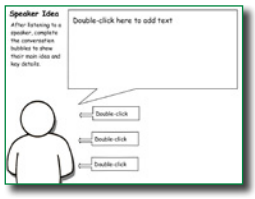
Select the Project button, choose New, go to the Activities area, open the Templates folder, open the Graphic Organizers folder, open the Fact or Opinion activity

Speaking and Listening

Comprehension and Collaboration

3. Summarize the points a speaker makes and explain how each claim is supported by reasons and evidence.

Our Expert Visitor



It is important to connect the learning that goes on inside the classroom with the work and lives of people outside of it. One common way we make this connection is by inviting "experts" to our classes to share knowledge and information as it relates to their job or personal history. Encourage students to take notes about what they are hearing.

After a guest visit, have students complete the "Speaker Idea" activity in Pixie to summarize the information they learned. Have students print out their pages and use them to discuss the visit with another peer or share with the entire class.

Select the Project button, choose New, go to the Activities area, open the Language Arts folder, open Reading folder, open the Comprehension folder, open the Speaker Idea activity

Speaking & Listening

Presentation of Knowledge and Ideas

4. Report on a topic or text or present an opinion, sequencing ideas logically and using appropriate facts and relevant, descriptive details to support main ideas or themes; speak clearly at an understandable pace.

Storytelling Podcasts

"As a gifted and talented facilitator, I promote high-ability students sharing directed work, original art, and writing using a technological approach. In the fall of 2008, I attended a Pixie demonstration and from then on this creative software became the new territory explored by my gifted students.

Inspired by a state contest, a group of three students created a podcast entitled Storytelling Pizzazz. They composed a script to include a broadcast introduction, some 'did you knows,' and a storytelling theater that focused on an adaptation of Aesop's fable 'The Lion and the Mouse.'

We now consistently create storytelling podcasts in my writer's workshop. Each week we cover a different storytelling topic and share what we learned that week. Students love to create 'did you knows,' jokes, poems, and scripts. Watching their faces light up as they hear their own voice narrations is a reward within itself.

I truly believe that effective communication will help students become effective citizens in the world around them. Developing a podcast helps my students learn to be persistent, to think with and learn from others, and to be imaginative. Storytelling is a great way to communicate and is also fun!"

Trish Finley
Omaha, NE

5. Include multimedia components (e.g., graphics, sound) and visual displays in presentations when appropriate to enhance the development of main ideas or themes.

Field Trip Fun

Field trips are one of the most enjoyable and memorable events of the school year. Teachers often have students craft thank-you notes to practice letter writing. Add a modern spin on this by creating a class thank-you video!

Use the Import Pages function to combine everyone's work into one Pixie file. Then, export the work as a video or podcast and post it to your website. Share a link to the thank-you project with family, community, and staff from the site you visited.

Have each student create a page in Pixie that includes text, photographs, and illustrations about one specific highlight of the trip. Then, have them record a brief thank you to further personalize their note.

Language

Conventions of Standard English

I. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.

Preposition Stories

"I sat down with my plan book and Teacher's Editions for my combined fourth and fifth-grade class and noticed a couple of language arts lessons on prepositions for both grades. As a former kindergarten teacher, prepositions always remind me of the book Rosie's Walk by Pat Hutchins. After creating several digital stories this year with my students, I thought my students might like to create a preposition story using Pixie! It turned out to be one of the most fun and creative projects that my students created all year. Who knew prepositions could be so fun?

I started by reading Rosie's Walk to my students. They giggled at the story as the blundering fox followed the oblivious hen throughout the farm. As a class we recalled all the places Rosie went—around the pond and over the haystack, which led perfectly into a discussion on prepositions and how we use them in our writing. Normally during this discussion, half the class starts counting the holes in the ceiling tiles or planning ahead to their recess games. However, upon mentioning that they would be making a digital preposition story using Pixie, eyes brightened, ears perked up, and I had their attention.

We identified the prepositions in the story and brainstormed many more. Working in small groups, the students were given a list of prepositions and a storyboard. They began by coming up with a character and setting. After a little encouragement, they came up with catchy character names like Tyler the Tiger and Yacka the Alpaca. They wrote eight prepositional phrases on the storyboard with quick sketches for the illustrations.

Using Pixie, students created a title slide, a slide for the beginning of the story, a slide for each prepositional phrase, and an ending slide using stickers and original drawings. They enjoyed creating pictures with their creatures going up, over, around, and through. For each slide, the students recorded their voices to tell the story. With a few guidelines from me and many options in Pixie, the students used their creativity and developed fabulous Preposition Digital Stories!"

Gillian Ryan
Santee, California

Language

Vocabulary Acquisition and Use

4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 5 reading and content, choosing flexibly from a range of strategies.

Vocabulary Trading Cards

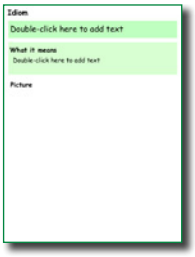
As you read to the class or when students are reading independently, have students raise their hand to let you know when they encounter an unfamiliar word. Have them ask the rest of the class if anyone can help share the meaning of the word. Keep a list of these and post it where all students can both see it and add to it.

At the end of the week or unit, ask students to choose their favorite word from the list and create a vocabulary trading card to teach others about the word. Students should define the word so that other students can understand its meaning, use it in a sentence with the same context as the unit you are studying, and draw a picture that helps describe the meaning. Have students print enough copies of their page using the Postcard style (4 to a page with the Repeat Page option checked) to cut out and distribute to the rest of the class.

Select the Project button, choose New, go to the Activities area, open the Language Arts folder, open the Vocabulary folder, open the green Vocabulary activity

5. Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.

Create an Idiom Dictionary



Some idioms are easy to understand (i.e. All bark and no bite) due to the obvious figurative connection, but others aren't quite so easy and require cultural or historical knowledge (i.e. That attorney is an ambulance chaser). Assign each student an idiom and have them use Pixie to create a dictionary page that explains the idiom with text, illustration, and narration.

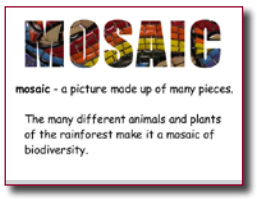
Once each student has created an idiom page, you can print them as trading cards or postcards to share with the class. If your students have included narration explaining the use of the idiom, click the Project button and use the Import Pages feature to combine all of the pages and create a podcast that students can review on an iPod, a movie they can watch on your web site, or an interactive HTML presentation they can explore at their own pace.

Select the Project button, choose New, go to the Activities area, open the Language Arts folder, open the Writing folder, open the Idiom activity

Language Arts Lesson

While individual activities can be used to address specific language arts standards, you can also create engaging lessons that address multiple standards in one project.

Cool Word Vocabulary



Students will use Pixie's Cool Word feature to create visual vocabulary cards.

Engage

Let your students know they are going to create their own set of visual vocabulary trading cards for a unit vocabulary list. Share a sample you have created in Pixie or visit the Inside Story web site to print some examples at no charge.

Share the vocabulary list with your students. As a class, explore the meaning and spelling of each word. Provide definitions or have students research definitions on their own. Have students practice their fluency by writing sentences that contain the word. You may also want to find examples in the texts the students are currently reading.

Work together to explore the sentences students have written for key words that can help you determine the meaning of the word. This models the strategy of using the context of a sentence to help decode unfamiliar vocabulary terms.

Create

Depending on the level of your students, distribute vocabulary words to each student or divide them into small teams and assign terms. Each student, or team, should write or locate a definition for their vocabulary word and brainstorm synonyms and antonyms. Next, have them write a sentence that uses the word in context.

Looking back at their definition and sentence, have students brainstorm ideas for pictures that represent the meaning of the word or provide a visual clue to its meaning. Have students use a digital camera to capture their favorite image idea or search the Web to locate an appropriate image. Encourage them to use the copyright-friendly images at Pics4Learning.com.

Have students open their images in Pixie and use the Text tool to type the vocabulary term on the page. Be sure they choose a bold font and use a large font size.

Then, have them use the Cool Word tool to use the image as the fill for the vocabulary word! Once this is complete, there should still be room on the page to add a definition, sentence, and even synonyms and antonyms.

Share

Print the Pixie page so that multiple copies print on the same sheet of paper. Pixie includes options for 4, 6, 9, and 12 copies on a page. How many you choose to print will be determined by the age of your students and the amount of text information they have included on the page. Have students cut out the cards and trade them with the rest of the class so every student has a complete set.

You may also want to print the pages full-size in color to include on a word wall or classroom vocabulary list. You can also use Pixie's Import Pages function to collect all of the finished terms into one project that you can run as a slide show students can watch when they arrive at class in the morning.

Language Arts Lesson (continued)

Common Core Standards

RL 4. Determine the meaning of words and phrases as they are used in a text, including figurative language such as metaphors and similes.

RL 10. By the end of the year, read and comprehend literature, including stories, dramas, and poetry, at the high end of the grades 4–5 text complexity band independently and proficiently

RIT 4. Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 5 topic or subject area.

RIT 10. By the end of the year, read and comprehend informational texts, including history/social studies, science, and technical texts, at the high end of the grades 4–5 text complexity band independently and proficiently.

RFS 2. Read with sufficient accuracy and fluency to support comprehension.

W 4. Produce clear and coherent writing in which the development and organization are appropriate to task, purpose, and audience.

SL 5. Include multimedia components (e.g., graphics, sound) and visual displays in presentations when appropriate to enhance the development of main ideas or themes.

L 2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

L 3. Use knowledge of language and its conventions when writing, speaking, reading, or listening.

L 6. Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases, including those that signal contrast, addition, and other logical relationships

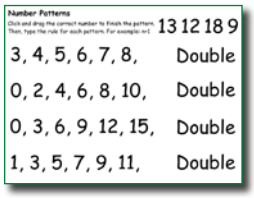
Grade 5 Mathematics

Operations & Algebraic Thinking

Analyze patterns and relationships.

3. Generate two numerical patterns using two given rules. Identify apparent relationships between corresponding terms. Form ordered pairs consisting of corresponding terms from the two patterns, and graph the ordered pairs on a coordinate plane. For example, given the rule "Add 3" and the starting number 0, and given the rule "Add 6" and the starting number 0, generate terms in the resulting sequences, and observe that the terms in one sequence are twice the corresponding terms in the other sequence. Explain informally why this is so.

Pattern Rules



Developing their own patterns helps elementary student build concrete understandings of patterns and their rules. Students can easily use objects in Pixie's Sticker library to create and extend patterns.

To begin, have each student use Pixie to create a visual pattern. Click the Project button and use the Import Pages option to combine all student patterns into one file. Click the Show button to present the project to the entire class. Ask students to guess which shape will come next. How do they know? Work as a class to determine the rule for each visual pattern.

Open the "Patterns - Numbers" activity so the entire class can see it. Teach students how to write the rule for extending the pattern, with 'n' representing the position in the sequence (for example, n+1). Ask teams of students to extend the remaining sequences and share the rule that helps determine the next number.

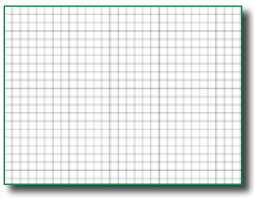
Select the Project button, choose New, go to the Activities area, open the Math folder, open the Algebra folder, open the Patterns folder, open the Patterns-Numbers activity

Numbers & Operations in Base Ten

Perform operations with multi-digit whole numbers and with decimals to hundredths.

6. Find whole-number quotients of whole numbers with up to four-digit dividends and two-digit divisors, using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Illustrate and explain the calculation by using equations, rectangular arrays, and/or area models.

Multiplying Decimals



Using arrays helps students visualize mathematical equations, making them more concrete and easier to understand. The patterns in arrays also build foundations for patterns in algebra. Open Pixie's "Grid - XSmall" activity so all students can see it and work together to develop an array that represents a simple multiplication equation, such as 15 x 11.

Assign each student a different multiplication equation. Have students open the medium-sized grid template in Pixie (Activities>Math>Templates>Grid – Medium) and use the paint bucket to create an area model. When the first model is complete, ask students to duplicate the page and adjust the colors in their model to show different ways to factor the number.

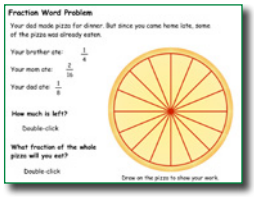
Select the Project button, choose New, go to the Activities area, open the Math folder, open the Templates folder, open the Grid - XSmall activity

Numbers & Operations in Fractions

Use equivalent fractions as a strategy to add and subtract fractions.

2. Solve word problems involving addition and subtraction of fractions referring to the same whole, including cases of unlike denominators, e.g., by using visual fraction models or equations to represent the problem. Use benchmark fractions and number sense of fractions to estimate mentally and assess the reasonableness of answers.

Fraction Word Problems – Add and Compare



Word problems allow students to apply what they've learned in math class to real-world situations, but solving them is often difficult for many students. Word problems challenge students to apply math calculations, helping you identify misconceptions. Before you begin working with word problems that include fractions, share some strategies for breaking down word problems as well as strategies for visualizing them.

Open the "Word Problems 1" activity and explore the first problem together. Look at the illustration. Ask students if they have other ways of drawing or labeling the problem. Have students work individually to solve the fraction word problems on the next couple of pages of this activity. As they are working, walk around the room to answer questions and support students.

The last page of the activity asks students to create and illustrate a fraction word problem of their own. You can use this activity to assess their level of sophistication with adding and subtracting fractions. Once students complete their word problems, you may want to add them all to one Pixie project by clicking the Project button and choosing Import Pages. You might print copies of the finished project in booklet form or use the full-screen option to display the results and lead a class discussion.

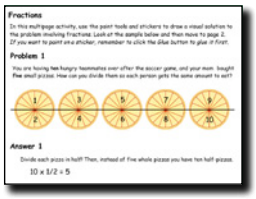
Select the Project button, choose New, go to the Activities area, open the Math folder, open the Number and Operations folder,

Numbers & Operations in Fractions

Apply and extend previous understandings of multiplication and division to multiply and divide fractions.

6. Solve real world problems involving multiplication of fractions and mixed numbers, e.g., by using visual fraction models or equations to represent the problem.

Fraction Word Problems – Divide and Compare



Before you begin working with word problems that include fractions, share some strategies for breaking down word problems as well as strategies for visualizing them. Open the "Word Problems 2" activity and explore the first problem together. Look at the illustration. Ask students if they have other ways of drawing or labeling the problem.

Have students work individually to solve the fraction word problems on the next couple of pages of this activity. As they are working, walk around the room to answer questions and support students. The last page of the activity asks students to create and illustrate a fraction word problem of their own. You can use this activity to assess their level of sophistication with adding and subtracting fractions. When students are finished, click the Project button and choose Import Pages to collect all of the word problems in a single Pixie document you can print as a booklet or use to lead a class discussion.

Select the Project button, choose New, go to the Activities area, open the Math folder, open the Number and Operations folder, open the Fractions folder, and open the Word Problems 2 activity

Measurement & Data

Convert like measurement units within a given measurement system.

I. Convert among different-sized standard measurement units within a given measurement system (e.g., convert 5 cm to 0.05 m), and use these conversions in solving multi-step, real world problems.

Converting Chart Data

Introduce the various units within both systems of measurement (standard and metric). Have each student in your class use the "Ten Frame" activity template in Pixie (Activities>Math>Templates>Ten Frame) to develop their own conversion charts for converting liquid measurements, time, and distance within these systems. If you are working with limited time or a range of ability, group students together and have them complete one conversion chart to share with the class.

To assess students' ability to work with the charts and begin converting on their own, have them complete the "Running Chart" activity in Pixie. After converting meters and kilometers, and minutes and seconds, work as a class to brainstorm other real-world activities that might require conversion within the same measurement system, such as liquid measurement in recipes, the time it takes to complete a task, and the distance travelled on a trip.

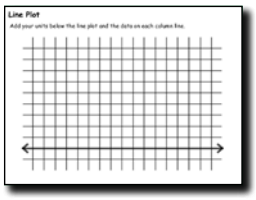
Select the Project button, choose New, go to the Activities area, open the Math folder, open the Measurement folder, open the Running Chart activity

Measurement & Data

Represent and interpret data.

2. Make a line plot to display a data set of measurements in fractions of a unit (1/2, 1/4, 1/8). Use operations on fractions for this grade to solve problems involving information presented in line plots. For example, given different measurements of liquid in identical beakers, find the amount of liquid each beaker would contain if the total amount in all the beakers were redistributed equally.

Whose Cookie is the Biggest?



Bring in several bags of cookies that are all about two to three inches in diameter. Group students together in teams of 3-5 and ask each team to collect at least four different sized cookies. When they have their set of cookies, ask students to measure each cookie to the nearest eighth of an inch using a standard ruler. Then, have each team open the "Line Plot" activity and add units to the line at the bottom in $^1/_8$" increments.

Have the teams plot the size of each cookie on their chart and walk around the room to monitor each team's progress. Using their line plot, ask students to identify the largest cookie, the smallest cookie, the two cookies closest in size, and the two cookies that have the largest size difference. Ask students to share their finding with the entire class, describing the size differences in eighths of an inch.

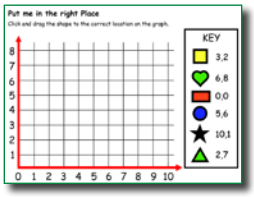
Select the Project button, choose New, go to the Activities area, open the Math folder, open the Templates folder, open the Line Plot activity

Geometry:

Graph points on the coordinate plane to solve real-world and mathematical problems.

I. Use a pair of perpendicular number lines, called axes, to define a coordinate system, with the intersection of the lines (the origin) arranged to coincide with the 0 on each line and a given point in the plane located by using an ordered pair of numbers, called its coordinates. Understand that the first number indicates how far to travel from the origin in the direction of one axis, and the second number indicates how far to travel in the direction of the second axis, with the convention that the names of the two axes and the coordinates correspond (e.g., x-axis and x-coordinate, y-axis and y-coordinate).

Coordinate Grid



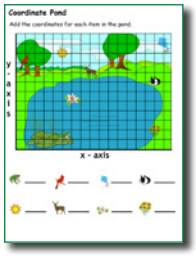
Open the "Coordinate Plane" Pixie activity (Activities>Math>Templates) and work with your students to label the x axis and the y axis as well as add units to each axis. Then, give students a set of coordinates, like (7, 3). Explain that the location is notated by (x, y) and help them plot the point on the graph. Practice plotting additional coordinates with your students as well as showing them a plotted point and asking them for the coordinates.

To help you assess student understanding of how to plot points on a coordinate plane, have each student complete the Coordinate 1 and Coordinate 2 activities. When they are finished, they should add their name using the Options panel and print them for you to evaluate.

Click the Open button, click Activities, open the Math folder, open the Geometry folder, open the Coordinate I and Coordinate 2 activities

2. Represent real world and mathematical problems by graphing points in the first quadrant of the coordinate plane, and interpret coordinate values of points in the context of the situation.

Coordinate Pond



Once students learn how to use a coordinate plane, have them practice what they have learned by moving them toward more concrete applications. Use the "Coordinate Pond" activity in Pixie to evaluate their understanding. In this activity, students must add units to both axes and mark coordinates for the objects in the scene.

Once students successfully complete this activity, have them apply their skills to create a coordinate map of their classroom and plot the locations of key objects. First, have them use Pixie's paint tools to create an aerial view of the classroom. Then, add the Coordinate Quadrant sticker (Stickers>Math>Measurement) over their drawing and create a key to find their desk, the door, reading center, computers, and more.

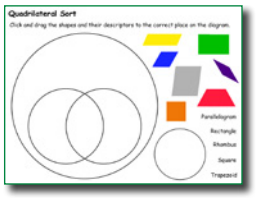
Click the Open button, click Activities, open the Math folder, open the Geometry folder, open the Coordinate Pond activity

Geometry:

Classify two-dimensional figures into categories based on their properties.

4. Classify two-dimensional figures in a hierarchy based on properties.

Sort Quadrilaterals



Open the "Quadrilaterals Sort" activity in Pixie so that all students in the class can see it. Work with the class to correctly categorize squares, rectangles, trapezoids, and rhombuses (rhombi). Have students articulate the specific attributes of each shape, making sure that they identify properties of the vertices (angle size), as well as properties of the edges.

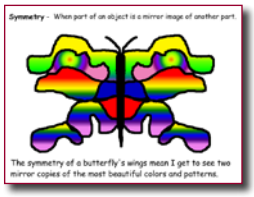
When you think students can understand the differences in each of these shapes, have them work individually to complete the "Quadrilateral Sort" activity. When they are finished, talk with your students about how this activity was organized differently. Work with students to articulate how this activity shows a hierarchy of quadrilateral attributes.

Click the Open button, click Activities, open the Math folder, open the Geometry folder, open the Quadrilateral Sort activity

Math Lesson

As students get older, the language of math also gets more complex and when students take a standardized math test, they often encounter unfamiliar terminology. This project is designed to help them by specifically addressing the academic language they may encounter.

Math Terminology



Students will learn academic vocabulary by creating an illustrated math dictionary in Pixie.

Engage

Remind students that thousands of words and expressions pertain to math and that they can often use prefix, suffix, and context clues to determine the meaning of words. For example, if they don't the meaning of octagon, they can use their knowledge that an octopus has eight legs to determine that an octagon is a shape with eight sides.

Discuss the symbols used in mathematics and how they can be included as math words. For example, x is a symbol used to mean multiply and used in equations to represent a variable.

Work with your class to create a word wall of math terms they already know. In small groups, have students brainstorm basic math terminology. Have them write the math terms on one index card and the definitions on a separate index card. Use the index cards as a matching game for students to practice the basic terms. Post the words and definitions together to complete the math word wall.

Bring math-related objects to class to help students come up with even more terms they know. You might share geometric shapes, formulas, manipulatives, and measuring tools, such as a liter container, meter stick, tangrams, graph paper, and number lines.

As you describe each object, use terminology that is both familiar and unfamiliar to the students. Ask students to write down words that are unfamiliar to them. Make sure to include geometry words, formula words, measurement words, number sense words, and logic and probability words. When you're finished, review the unfamiliar words with your students and have them create additional cards for the word wall.

Create

Provide students with a list of the math terms appropriate to fifth grade. Depending on the size of your class or the ELA level of your students, distribute terms to individual students or small teams to create an illustrated dictionary of math terms.

Share an example that includes the elements that each dictionary page should feature, such as a title including the term, the definition, the word used in a sentence, and an image depicting the term.

Before working on the computer, have each student, or team, write three sentences for their assigned terms:

1: ___ is for _____. (for example: A is for area).

2: The definition of the math term.

3: A sentence that describes the image they selected and uses the math term in context.

Next, have students or team members, create, capture, or locate an image that helps define or depict each term. They can use the paint tools in Pixie to draw their

own images, use a digital camera to capture images they find in the world around them, or search for images in the Stickers library.

If students are having a hard time finding a picture, have them share their definition and sentence with other students in the class. Work together to brainstorm similar words and more descriptive sentences to help determine key words they can use to search for images.

As they create and collect images and save them into their project folder, make sure students name the images with the name of the term. This will help them locate the images later and make it easier to put the book in order.

Use the Import Pages feature to combine individual student pages. Go to the View menu and choose Full Screen to present the file as a slide show, or export the project as a video, PDF, Flash animation, or HTML storybook to share online.

Share

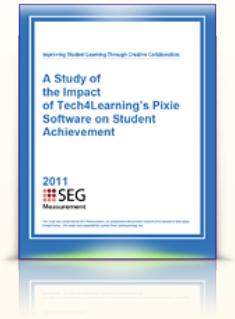
When the dictionary is finished, each team should present their illustrated dictionary to the rest of the class, or if it was a class project, display it for everyone to see. This will help everyone review all of the new terminology, or academic vocabulary.

If students worked in teams, you may want to combine the best terms from each team's project to create a whole class project. Print out each page in the project at comic or trading card size and have students swap so each student winds up with a complete collection of terms.

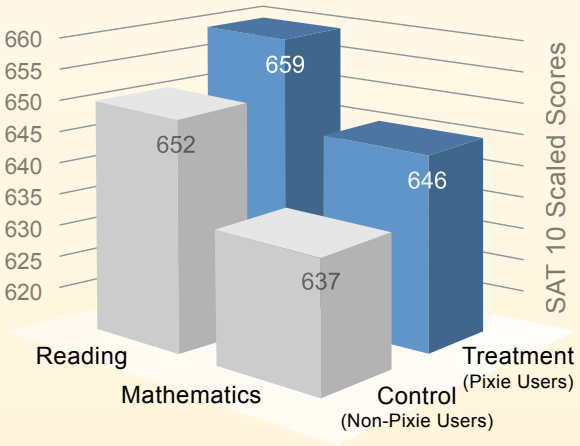
SEG Measurement

Improving Student Learning Through Creative Collaboration:

A study on the impact of Tech4Learning's Pixie Software on Student Achievement



During the 2010-2011 school year (between January and June 2011), SEG Measurement conducted a national study with approximately 1,000 3rd, 4th, and 5th grade students, in 38 classrooms, in California, Georgia, Ohio, South Carolina, and Texas. Students who used Pixie showed meaningful growth in Reading Comprehension and Mathematics during the course of the study. Students in the Treatment Group classes increased their SAT 10 scores between 14-15 points, or about one years' worth of growth. More significantly, Treatment Group students enrolled in classrooms using Pixie showed about one half year's more of growth in Reading Comprehension and Mathematics than the Control Group students enrolled in classes not using Pixie. The Pixie users finished the year with scores that were 7 scale-score points higher in Reading Comprehension and 9 scale-score points higher in Mathematics on the SAT 10 assessments. The study also found that Pixie is equally effective for boys and girls and for students of different ethnic backgrounds.



The findings of this study provide substantial support for the effectiveness of Pixie in improving student Reading Comprehension and Mathematics skills.

Find the complete Executive Summary, insights into Pixie's development, and more at:

www.tech4learning.com/pixie/research