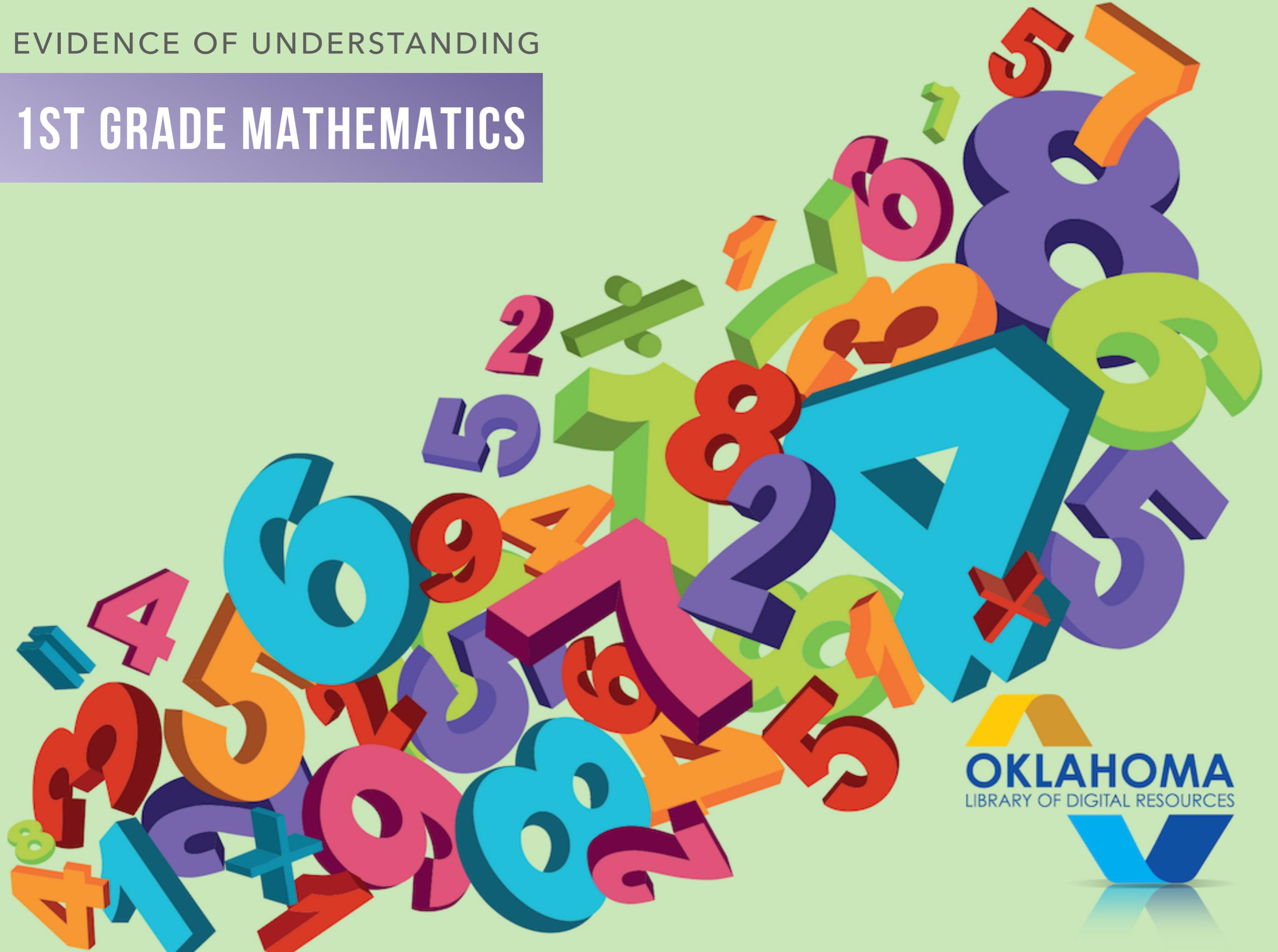


EVIDENCE OF UNDERSTANDING

1ST GRADE MATHEMATICS



The Oklahoma Library of Digital Resources is an innovative initiative to provide Oklahoma educators with high-quality, interactive teaching resources.

We appreciate our sponsors:



Thank you to the following educators for their work in curating digital resources:

Anne Beck, OSSBA
Andrea Brock, Moore Public Schools
Traci Brownen, Weatherford Public Schools
Amy Bruner, Broken Arrow Public Schools
Julie Copeland, Merritt Public Schools
Lauren Duke, Putnam City Public Schools
Paula Dyer, Putnam City Public Schools
Tonya Gaunt, Clinton Public Schools
Becky King, Woodward Public Schools
Julia Nail, Woodward Public Schools
Sarah Pepper, Merritt Public Schools
Kendra Rakes, Bartlesville Public Schools
Tawn Rundle, Merritt Public Schools
Heather Sparks, Mid-Del Public Schools
Laura Splawn, Merritt Public Schools

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GETTING TO KNOW OKLDR

WHO IS OSSBA?

The Oklahoma State School Boards Association (OSSBA) works to promote quality public education for the children of Oklahoma through training and information services to school board members. The Association is a leader among leaders in Oklahoma education and a visible presence in the local school districts and throughout the state.

The OSSBA was created in 1944 to provide support for local school board members with a variety of information, assistance, and representation services. OSSBA reaches every school board member through training opportunities. It creates and encouraged effective leaders to promote public education and cultivates productive alliances with governing bodies. OSSBA trains school board members to participate in an effective and supportive manner to provide direction for educational innovation and improves public perception of education in Oklahoma by sharing strategies and tools with our member school districts to focus on the success of Oklahoma public education.

OSSBA works with school boards to demonstrate the impact they have on student achievement. We work to provide meaningful two-way communication of advocacy, services, and training activities to local boards of education and their stakeholders. Other services we provide that have a direct impact on student achievement include strategic planning and superintendent searches. Our legal team provides free legal information to the school districts.

WHY OKLDR?

In the summer of 2016, OSSBA set out on a journey assist teachers in the integration of technology into their classrooms. The Oklahoma Library of Digital Resources (OKLDR) became a collection of digital content resources selected by Oklahoma educators to support the Oklahoma Academic Standards. The resources were curated by teachers from school districts across Oklahoma. Each collection contained a variety of learning resources, such as videos, apps, pdf documents, and websites, and are designed so that teachers can then build their lesson plans. The resources helped bridge the digital equity gap among students while helping schools make the most of limited resources.

After collaborating with educators, school and district leaders for a couple of years, OKLDR has been enhanced in the following ways:

- Resources are now an Open Education Resource (OER) “book” format, making it easier to use and accessible on multiple devices.
- Resources map to ESSA expectations for evidence of student understanding and students’ mastery of the academic standards.
- Tools are now agnostic and can be used on multiple devices.
- Lessons are now focused on student engagement through the use of technology. The first OKLDR version focused on teacher resources. **This is a major change.**
- To prioritize student learning, teacher resources are now located at the back of each book.

HOW TO USE THIS BOOK



The Oklahoma Academic Standards for this lesson are grouped together by key topics. Sometimes you will see only one standard, but other times you will see a grouping of standards.



Evidence of Understanding is the key. This is the concept you want your students to master that reinforces the standards. Mastery means deeper understanding, not just “skim the surface” learning.



Digital Tools are the recommended applications and/or tools for the lesson. Think of this element as the “supplies box.”



In Practice is a suggested activity to engage the students to demonstrate mastery of the standard. You will notice that this is just one suggested lesson, and sometimes there might be a second lesson. The suggested lesson, developed by Oklahoma teachers, is meant to give you a starting point. You might decide to use the lesson or it might give you an idea of something else you could do to teach the concept.

MOVING FORWARD

As you can see the OKLDR book has been designed to inspire educators to have students demonstrate their understanding of the Oklahoma Academic Standards through the use of technology as a productivity tool. While educators have limited time in the day to plan and research high quality content, this book is a jumping off point, with suggested peer-reviewed activities and resources.

While you might encounter extra white space in the book, it is intentional for growth. As you integrate the activities into your lessons, you are encouraged to send us student work samples that might be included in the book, as well as additional activities and resources that could be included in future revisions.

Next Steps:

- We would love to add samples of student work to the activities, so please send the work to: okldr@ossba.org.
- If you would like to be involved in future course creation, or know teachers who would like to be involved, please contact us at: okldr@ossba.org.
- See anything that needs to be changed or enhanced? Contact us at: okldr@ossba.org.

NUMBERS AND OPERATIONS

WHOLE NUMBERS



1.N.1.1 Recognize numbers to 20 without counting (subitize) the quantity of structured arrangements. Clarification statement: Subitizing is defined as instantly recognizing the quantity of a set without having to count. “Subitizing” is not a vocabulary word and is not meant for student discussion at this age.

1.N.1.2 Use concrete representations to describe whole numbers between 10 and 100 in terms of tens and ones.

1.N.1.3 Read, write, discuss, and represent whole numbers up to 100. Representations may include numerals, addition and subtraction, pictures, tally marks, number lines and manipulatives, such as bundles of sticks and base 10 blocks.

1.N.1.4 Count forward, with and without objects, from any given number up to 100 by 1s, 2s, 5s and 10s.

1.N.1.5 Find a number that is 10 more or 10 less than a given number up to 100.

1.N.1.6 Compare and order whole numbers from 0 to 100.

1.N.1.7 Use knowledge of number relationships to locate the position of a given whole number on an open number line up to 20.

1.N.1.8 Use objects to represent and use words to describe the relative size of numbers, such as more than, less than, and equal to.



Evidence of Understanding

Students will use a content application to read, write, discuss, represent, and count whole numbers up to 100.

Students will use objects to describe the size of numbers using a word processor. (More than, less than, and equal to).



Digital Tools

- *Word Processor* - Pages, Google Docs, Microsoft Word
- *Content Application* - Number Frames
- *Content Application* - ABCYA - Number Chart



In Practice

- Students will use the word processor application to create and count whole numbers. For example, students can use the word processor application to create tally marks and label the amount.
- Students will use Number Frames and ABCYA Number Chart to practice using ten frames with numbers and symbols.
- After some practice students will be able to create their own number frames using a word processor.
- Students will use a content application to practice counting numbers up to 120.
- After practicing students will use a word processor to demonstrate how to count 1 to 100.

SOLVE ADDITION AND SUBTRACTION



1.N.2.1 Represent and solve real-world and mathematical problems using addition and subtraction up to ten.

1.N.2.2 Determine if equations involving addition and subtraction are true.

1.N.2.3 Demonstrate fluency with basic addition facts and related subtraction facts up to 10.



Evidence of Understanding

Students will use a video editor application to practice showing how to solve real-world and mathematical problems using addition and subtraction.

Students will practice adding and subtracting using a content application.



Digital Tools

- *Video Editor* - Clips
- *Content Application* - ABCYA - Add and Subtract Word Problems (Molly Adds)
- *Word Processor* - Pages, Microsoft Word, Google Docs



In Practice

- Give all students a different amount of an object (ex: counters, tongue depressors, etc).
- Next, have students use a video editor to video themselves collaborating with others to find the sum of the manipulative they were given. Within the video students will explain their steps in solving the problem. This can also be used for practicing subtraction.
- Using ABCYA Add and Subtract Word Problems (Molly Adds) students will practice addition and subtraction word problems. Students will use a word processor application to write the number sentence out to solve the problem.

DEVELOP FOUNDATIONAL IDEAS FOR FRACTIONS



1.N.3.1 Partition a regular polygon using physical models and recognize when those parts are equal.

1.N.3.2 Partition (fair share) sets of objects into equal groupings.



Evidence of Understanding

Students will use a content application, digital portfolio, and video editor to practice using sets of objects in equal groupings.



Digital Tools

- *Content Application* - Geo Board
- *Digital Portfolio* - Seesaw
- *Video Editor* - Clips



In Practice

- Students will use a digital portfolio, and video editor to record themselves physically creating models of various polygons and describing how the parts can be equal.
- Students will use Geo Board to create models of different polygons.

IDENTIFY COINS AND THEIR VALUES



1.N.4.1 Identifying pennies, nickels, dimes, and quarters by name and value.

1.N.4.2 Write a number with the cent symbol to describe the value of a coin.

1.N.4.3 Determine the value of a collection of pennies, nickels, or dimes up to one dollar counting by ones, fives, or tens.



Evidence of Understanding

Students will use a content application and video editor to identify coins, as well as write and determine value of various coins.



Digital Tools

- *Video Editor - [Clips](#)*
- *Content Application - [Money The Math Learning Center](#)*



In Practice

- Students can use a video editor to record themselves identifying and labeling the value of the coins.
- Using Money The Math Learning Center students will choose different coins and label the value of the coins on the application.

ALGEBRAIC REASONING AND ALGEBRA

IDENTIFY PATTERNS



1.A.1.1 Identify, create, complete, and extend repeating, growing, and shrinking patterns with quantity, numbers, or shapes in a variety of real-world and mathematical contexts..



Evidence of Understanding

Students will identify, create, and complete patterns with quantity, numbers and shapes using a video editor and a content application.



Digital Tools

- *Video Editor - [Clips](#)*
- *Content Application - [Pattern Shapes - Math Learning Center](#)*



In Practice

- Students will use a video editor to create a video of patterns of various objects or symbols in the classroom.
- For additional practice, students will use Pattern Shapes Math Learning Center to identify, create and complete patterns of various shapes.

GEOMETRY AND MEASUREMENT

TWO AND THREE DIMENSIONAL SHAPES



1.GM.1.1 Identify trapezoids and hexagons by pointing to the shape when given the name.

1.GM.1.2 Compose and decompose larger shapes using smaller two-dimensional shapes.

1.GM.1.3 Compose structures with three-dimensional shapes.

1.GM.1.4 Recognize three-dimensional shapes such as cubes, cones, cylinders, and spheres.



Evidence of Understanding

Students will identify, compose and decompose various shapes using a word processor and digital portfolio.

Students will also practice composing three-dimensional shapes using a content application.



Digital Tools

- *Content Application - [Pattern Shapes - Math Learning Center](#)*
- *Word Processor - [Pages](#), [Microsoft Word](#), [Google Docs](#)*
- *Digital Portfolio - [Seesaw](#)*



In Practice

- Students will use a word processor to identify shapes.
- Using Pattern Shapes Math Learning Center students will compose and decompose larger shapes into smaller shapes and smaller shapes into larger shapes.
- Students will use a digital portfolio or video editor to create a video of themselves composing and decomposing three-dimensional shapes with manipulatives.

LENGTH AND VOLUME CAPACITY



1.GM.2.1 Use nonstandard and standard measuring tools to measure the length of objects to reinforce the continuous nature of linear measurement.

1.GM.2.2 Illustrate that the length of an object is the number of same-size units of length that, when laid end-to-end with no gaps or overlaps, reach from one end of the object to the other.

1.GM.2.3 Measure the same object/distance with units of two different lengths and describe how and why the measurements differ.

1.GM.2.4 Describe a length to the nearest whole unit using a number and a unit.

1.GM.2.5 Use standard and nonstandard tools to identify volume/capacity. Compare and sort containers that hold more, less, or the same amount.



Evidence of Understanding

Students will use a digital portfolio and video editor to show how to practice measuring objects using standard and nonstandard tools.



Digital Tools

- *Digital Portfolio* - Seesaw
- *Video Editor* - Clips



In Practice

- Students will use a digital portfolio or video editor to record themselves measuring various objects in the classroom with a ruler and other objects (ex: paperclips, crayons, etc).

TELL TIME



1.GM.3.1 Tell time to the hour and half hour (analog and digital).



Evidence of Understanding

Students will practice telling time to the hour and half hour using a word processor and digital portfolio.



Digital Tools

- *Sketch Application*- [Sketches School, Ibis](#)
- *Video Editor* - [Clips](#)



In Practice

- Students will use a sketch application to draw an analog clock with the numbers labeled.
- Students will practice telling and writing time (ex: 5:00, 9:30, etc).
- Provide students with a model analog clock, have them use a video editor to record themselves identify different times.

DATA AND PROBABILITY

CATEGORICAL AND NUMERICAL DATA



1.D.1.1 Collect, sort, and organize data in up to three categories using representations (e.g., tally marks, tables, Venn diagrams).

1.D.1.2 Use data to create picture and bar-type graphs to demonstrate one-to-one correspondence.

1.D.1.3 Draw conclusions from picture and bar-type graphs.



Evidence of Understanding

Students will collect, sort, and organize data in various categories, pictures, and bar graphs using a word processor.



Digital Tools

- *Word Processor* - Pages, Microsoft Word, Google Docs
- *Video Editor*- Clips



In Practice

- Students will use a word processor to create tally marks to organize data they collected (ex: age, favorite candy, etc).
- Using a video editor students will record themselves collecting data (ex: favorite fruit, sport, etc) from their peers.
- Students will then explain the results of their collected data with a bar graph they created.

RESOURCES

TEACHER

- [Flash Cards](#)
- [Number Line by Math Learning](#)
- [Flocabulary Addition and Subtraction](#)
- [Turtle Diary - Addition Bingo](#)
- [PBS Kids - Make the Cake](#)
- [ABCYA - Learning Coins](#)
- [Youtube - Money Song](#)
- [Turtle Diary - Adding Money](#)
- [Describing Patterns](#)
- [Turtle Diary](#)
- [3D Shapes](#)
- [Miss Giraffes Class - Composing Shapes](#)
- [Making New Shapes](#)
- [Length Strength](#)
- [ABCYA - Telling Time](#)
- [Sheppard Software - Menus Time](#)
- [Skill Builders - Telling Time](#)
- [TPT - Data and Graphing](#)
- [Teaching Tidbits - Ways to Teach Graphing](#)
- [Simplified Classroom](#)

STUDENT

- [Standard Measurement for Kids](#)
- [TPT - Elapsed Time Task Cards](#)
- [ABCYA - Measuring](#)
- [PBS Kids - Measure Up](#)
- [Telling Time with Minutes](#)
- [Khan Academy - Time Difference](#)
- [Khan Measurement and Data](#)
- [Juke Box - Frequency Tables](#)