This Pennsylvania Learns iTunes U course is designed to be a collection of resources to support teaching and learning in the kindergarten classroom. The content of this course is organized around the Kindergarten Mathematics Pennsylvania Core Instructional Framework. We believe that Pennsylvania teachers know what is needed to support their instructional design and delivery as well as what engages students in their own learning. For those reasons, the materials and resources provided in this course were curated by teachers. This course is not a curriculum. It is a collection of assets aligned to Pennsylvania Core Standards to support teaching and learning.
Welcome to the Kindergarten Mathematics Pennsylvania Learns iTunes U course. We are setting the stage for this course by providing you with background information about Pennsylvania Mathematics Core Standards and the instructional shifts that work hand-in-hand with the standards.

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<td>Pennsylvania Core Standards: The State Board approved the final Chapter 4 regulations on September 12, 2013. The Independent Regulatory Review Commission (IRRC) approved the final regulation on November 21, 2013. With publication of Chapter 4 in the Pennsylvania Bulletin, the new regulations took effect on March 1, 2014. As part of the new regulations, Pennsylvania’s Core Standards offer a set of rigorous, high-quality academic expectations in Mathematics that all students should master by the end of each grade level. The PA Core Standards are robust and relevant to the real world and reflect the knowledge and skills our young people need to succeed in life after high school, in both post-secondary education and a globally competitive workforce.</td>
<td>REVIEW the “Teacher Resources” and “Student Resources” section of the PA Core Implementation section of the SAS Portal.</td>
<td><a href="http://www.pdesas.org/Standard/PACore">http://www.pdesas.org/Standard/PACore</a></td>
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<td>About the Standards for Mathematical Practice and Content</td>
<td>The Standards for Mathematical Practice describe varieties of expertise that mathematics educators at all levels should seek to develop in their students. These practices rest on important “processes and proficiencies” with longstanding importance in mathematics education. The first of these are the NCTM process standards of problem solving, reasoning and proof, communication, representation, and connections. The second two are the strands of mathematical proficiency specified in the National Research Council’s report Adding It Up: This report explores how students in pre-K through 8th grade learn mathematics and highlights the importance of the inclusion of the following in teaching and learning: adaptive reasoning, strategic competence, conceptual understanding (comprehension of mathematical concepts, operations and relations), procedural fluency (skill in carrying out procedures flexibly, accurately, efficiently and appropriately), and productive disposition (habitual inclination to see mathematics as sensible, useful, and worthwhile, coupled with a belief in diligence and one’s own efficacy)</td>
<td>NCTM and The Hunt Institute have produced a series of videos to enhance understanding of the mathematics that students need to succeed in college, life, and careers. Beginning in the primary grades, the videos address the importance of developing a solid foundation for algebra, as well as laying the groundwork for calculus and other postsecondary mathematics coursework. The series also covers the Standards for Mathematical Practice elaborated in the PA Core Standards for Mathematics and examines why developing conceptual understanding requires a different approach to teaching and learning.</td>
<td><a href="https://itunes.apple.com/us/course/ccss-for-teachers-math-shifts/id679843407">https://itunes.apple.com/us/course/ccss-for-teachers-math-shifts/id679843407</a></td>
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<td>Standards for Mathematical Practice</td>
<td>The eight Standards of Mathematical Practice: 1 Make sense of problems and persevere in solving them. 2 Reason abstractly and quantitatively. 3 Construct viable arguments and critique the reasoning of others. 4 Model with mathematics. 5 Use appropriate tools strategically. 6 Attend to precision. 7 Look for and make use of structure. 8 Look for and express regularity in repeated reasoning. The Standards for Mathematical Practice describe ways in which developing student practitioners of the discipline of mathematics increasingly ought to engage with the subject matter as they grow in mathematical maturity and experience throughout the elementary, middle and high school years.</td>
<td>LEARN how the standards improve teaching, make learning more engaging, create shared expectations, and cultivate lifelong learning for students.</td>
<td><a href="https://itunes.apple.com/us/itunes-u/hunt-institute-ccss-series/id461816983?mt=10">https://itunes.apple.com/us/itunes-u/hunt-institute-ccss-series/id461816983?mt=10</a></td>
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<td>Standards for Mathematical Content</td>
<td>The Standards for Mathematical Content are a balanced combination of procedure and understanding. Expectations that begin with the word “understand” are often especially good opportunities to connect the practices to the content. Students who lack understanding of a topic may rely on procedures too heavily. Without a flexible base from which to work, they may be less likely to consider analogous problems, represent problems coherently, justify conclusions, apply the mathematics to practical situations, use technology mindfully to work with the mathematics, explain the mathematics accurately to other students, step back for an overview, or deviate from a known procedure to find a shortcut. In short, a lack of understanding effectively prevents a student from engaging in the mathematical practices. The content standards which set an expectation of understanding are potential “points of intersection” between the Standards for Mathematical Content and the Standards for Mathematical Practice. These points of intersection are intended to be weighted toward central and generative concepts in the school mathematics curriculum that most merit the time, resources, innovative energies, and focus necessary to qualitatively improve the curriculum, instruction, assessment, professional development, and student achievement in mathematics.</td>
<td>DEEPEN your understanding of the PA Core Standards shifts in mathematics. This course is intended to deepen your understanding of the PA Core Standards shifts in mathematics. It is designed to stimulate thinking around designing and delivering instruction matched to the Standards and how this may change your classroom practice. The content describes how the Standards differ from previous Standards and thoroughly explains the Shifts of focus, coherence and rigor.</td>
<td><a href="https://itunes.apple.com/us/course/ccss-for-teachers-math-shifts/id461816983?mt=10">https://itunes.apple.com/us/course/ccss-for-teachers-math-shifts/id461816983?mt=10</a></td>
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In this lesson, students compare amounts to find additional information and/or step-by-step form. To write numbers in a given number.

Students represent one number of objects based on the numeral given and count objects to match the amount. Students identify the number name refers to a quantity that is one larger.

For children This video teaches children how to write numbers for children |

Students understand that the last number said tells one and only one number name. It’s 4.99 to get all the songs continuously.

This lesson has student group options into categories, then copies from 1-MD.7

A sample of the app is free with limited uses. It’s 4.99 to get all the songs continuously.

The full app requires a password/username. Give students a number rack.

I CAN count the numbers with one-to-one correspondence. Give students a number rack.

I CAN count the numbers with one-to-one correspondence. Give students a number rack.

I CAN represent one number from 1 - 10 and use the corresponding number of objects to represent it using a ten frame.

I CAN compare the correct number of beads to a given numeral.

I CAN count the number of objects. Match the number to a corresponding group of objects.

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GRADE K MODULE 2
Module Title: Identify and Describe Shapes

About Module 2
In Module 2, students learn to identify and describe squares, circles, triangles, rectangles, hexagons, cubes, cones, cylinders and spheres. Students will use positional words to describe position of shapes. Module 2 activities engage students in developing an understanding of two and three-dimensional shapes. Kindergartners can often find shapes in their world but cannot identify them correctly by name. During this Module, students will learn to:

- 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, behind, and next to.
- Name shapes regardless of their orientations or overall size. Identify shapes as two-dimensional or three-dimensional.

Focus Standards in Module 2

CC.2.3.K.A.1: Identify and describe two- and three-dimensional shapes.

Standards for Mathematical Practice in Module 2
- MP 1: Make sense of problems and persevere in solving them.
- MP 2: Reason abstractly and quantitatively.
- MP 3: Construct viable arguments and critique the reasoning of others.
- MP 5: Use appropriate tools strategically.

In this lesson, students describe objects in the environment using names of shapes and describe the relative position of these objects using terms such as above, below, beside, in front, behind, and next to.

TEACHING to identify two-dimensional shapes.
This Part 1 of a two part lesson plan.
https://www.youtube.com/watch?v=2ubjcLczqSo

TEACHING to name shapes accurately regardless of orientation or size.
This is Part 2 of a two part lesson plan.
https://www.youtube.com/watch?v=ML-vdHCeZjI

TEACHING shape identification and the language to describe their position.
"Shapes the World with Me!" story reinforces understanding of relative positions of shapes to other objects and surroundings.

I CAN identify and name two-dimensional shapes.
Online activity to identify two-dimensional shapes.
http://www.illustrativemathematics.org/content-standards/K/G/A/tasks/standards/K/G/A/tasks/675

I CAN recognize shapes based on name.
This game directs students to locate shapes based on name.
http://www.illustrativemathematics.org/content-standards/K/G/A/tasks/standards/K/G/A/tasks/822

I CAN recognize shapes based on name.
The "Shape Monster" App is a demanding activity that assesses students' knowledge of identifying and the relationship of a cartoon character and its objects).

I CAN identify and name two-dimensional shapes.
When you open the app, choose What are Tiggly shapes.

I CAN recognize names of two-dimensional shapes.
A song that provides students the opportunity to recognize two-dimensional shapes.
https://youtube.be/675

TEACHING three-dimensional shapes.
Pause the video and have students describe objects in the environment using terms such as above, below, beside, in front, behind, and next to.
https://www.youtube.com/watch?v=cy1XmgjIgJ2rk

TEACHING shape identification and the language to describe their position in photographs.
Video details the relationship of a cartoon dog and cat to each other and other objects.
http://www.illustrativemathematics.org/content-standards/K/G/A/tasks/standards/K/G/A/tasks/166925011

I CAN use positional words to describe objects in their environment.
Activity that assesses relative position vocabulary.
https://www.youtube.com/watch?v=8lf_4dLcCn2

TEACHING two-dimensional shapes regardless of orientation.
Refer to page 18 of the unit for assignments.
http://www.illustrativemathematics.org/content-standards/K/G/A/tasks/standards/K/G/A/tasks/166916573

I CAN identify and name two-dimensional shapes regardless of orientation or size.
Online activity to identify two-dimensional shapes.
https://www.youtube.com/watch?v=5j4gZC2h

I CAN recognize names of two-dimensional shapes.
This is Part 2 of a two part lesson plan.
https://www.youtube.com/watch?v=8Lb25D0ehw0

This video introduces the differences between 2D and 3D shapes.
http://www.youtube.com/watch?v=8lf_4dLcCn2

I CAN sort two and three-dimensional shapes.
Students will use the iPad camera to take photographs throughout the classroom. Students then sort the photos using "Pic Collage" App to create a 2D collage and a 3D collage.
GRADE K MODULE 3

Module Title Message Assignment / Call to Action Content directions Resource / URL Info about the URL (published on the "i" button of a resource/url)

Module 3: Comparison with Length, Weight, and Numbers to 10

About Module 3
In Module 3, students begin to experiment with measurement, particularly with units and comparison of units. Students use different units to measure length, weight and capacity, and explore the measurable attributes of an object. Comparison begins with developing the meaning of the word "taller" in the context of "taller than". Students also practice comparing objects based on the terms "more" and "least" are abstract later in kindergarten because of their context. "1 is more than 0" is more abstract than "oh is taller than John." "1 more, 2 more, 3 more" lead into the addition fact fluency (+1, +2, +3). Comparing numbers leads to a study of the numbers that make up a number (e.g., "3 is less than 7" and later, "3 and 4 make 7"). This, in turn, leads naturally to discussions of adding, subtracting, and solving word problems in the real world.

Focus Standards in Module 3

- CC.K.4.A.1: Describe and compare measurable attributes of objects, such as length, weight, and capacity of every object.
- CC.K.4.A.4: Classify objects and count the number of objects in each category.

Important Standards in Module 3

- CC.2.1.K.A.3
- CC.2.4.K.A.1
- CC.2.4.K.A.4
- CC.2.4.K.A.5
- CC.2.4.K.A.6

Standards for Mathematical Practice in Module 3

- MP# 1: Make sense of problems and persevering in solving them.
- MP# 2: Reason abstractly and quantitatively.
- MP# 3: Constructing viable arguments.
- MP# 4: Modeling with mathematics.
- MP# 5: Using appropriate tools strategically.
- MP# 6: Attend to precision.
- MP# 7: Looking for and making use of structure.
- MP# 8: Looking for and expressing regularity in repeated reasoning.

ACCESS PA Standards Instructional Framework Module 3

Measurement, Data, and Probability: Measurable Attributes

In this lesson, students describe measurable attributes of objects such as length, weight, area, or capacity. TEACHING measurement in kindergarten.

- "6-Math Teaching Resources" is a website that contains links to activities, task cards, read alouds, and manipulatives useful in teaching measurement.
- "K-5 Math Teaching Resources" is a website that contains links to activities, task cards, read alouds, and manipulatives useful in teaching measurement.
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Measurement, Data, and Probability: Comparing Two Objects

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**GRADE K MODULE 4**

About Module 4: In Module 4, students use objects, fingers, mental images, drawings, sounds, acting out situations, verbal explanations, expressions, or equations to represent addition and subtraction situations. They will understand addition as putting together and adding to and subtraction as taking apart and taking from.

Focus Standards in Module 4:
- MP 1: Make sense of problems and persevere in solving them.
- MP 2: Reason abstractly and quantitatively.
- MP 3: Construct viable arguments and critique the reasoning of others.
- MP 5: Use appropriate tools strategically.

ACCESS PA Standards:
- CC.2.2.K.A.1: Extend concepts of adding together and taking apart to add and subtract within 10.
- CC.3.2.2.K.A.1: Extend concepts of adding together and taking apart to add and subtract within 10.
- CC.3.2.2.K.A.2: Extend concepts of adding together and taking apart to add and subtract within 10.
- CC.3.2.2.K.A.3: Extend concepts of adding together and taking apart to add and subtract within 10.

Standards for Mathematical Practice in Module 4:
- MP 1: Make sense of problems and persevere in solving them.
- MP 2: Reason abstractly and quantitatively.
- MP 3: Construct viable arguments and critique the reasoning of others.
- MP 5: Use appropriate tools strategically.

About IXL: Click on the "i" button beside each resource/url to find additional information and/or step by step instructions. Watch YouTube videos on ViewPure.com to eliminate ads.

**Addition and Subtraction**

In this lesson, students represent addition and subtraction with objects, fingers, mental images, drawings, sounds, acting out situations, verbal explanations, expressions, or equations.

**Content Directions**

TEACHING addition and subtraction vocabulary through a video.

- http://www.pdesas.org/module/cm/Cmap/View/816752/module_app/16752.html
- http://www.pdesas.org/module/cm/Cmap/View/816752/module_app/16752.html
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- http://www.pdesas.org/module/cm/Cmap/View/816752/module_app/16752.html

TEACHING addition by using manipulatives.

- http://www.pdesas.org/module/cm/Cmap/View/816752/module_app/16752.html
- http://www.pdesas.org/module/cm/Cmap/View/816752/module_app/16752.html
- http://www.pdesas.org/module/cm/Cmap/View/816752/module_app/16752.html

TEACHING subtraction by using manipulatives and number cubes.

- http://www.pdesas.org/module/cm/Cmap/View/816752/module_app/16752.html

MP# 5: Use appropriate tools strategically.

- http://www.pdesas.org/module/cm/Cmap/View/816752/module_app/16752.html
- http://www.pdesas.org/module/cm/Cmap/View/816752/module_app/16752.html
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Decompose Numbers to Make Ten or More than One Way

In this lesson, students decompose numbers less than or equal to 10 in more than one way by using objects or drawings, and record each decomposition by a drawing or equation.

**Content Directions**

TEACHING how to decompose the same number into different parts.

- http://www.pdesas.org/module/cm/Cmap/View/816752/module_app/16752.html
- http://www.pdesas.org/module/cm/Cmap/View/816752/module_app/16752.html
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- http://www.pdesas.org/module/cm/Cmap/View/816752/module_app/16752.html

TEACHING how to decompose 5 into different parts.

- http://www.pdesas.org/module/cm/Cmap/View/816752/module_app/16752.html
- http://www.pdesas.org/module/cm/Cmap/View/816752/module_app/16752.html
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- http://www.pdesas.org/module/cm/Cmap/View/816752/module_app/16752.html

TEACHING how to decompose 6 into different parts.

- http://www.pdesas.org/module/cm/Cmap/View/816752/module_app/16752.html
- http://www.pdesas.org/module/cm/Cmap/View/816752/module_app/16752.html
- http://www.pdesas.org/module/cm/Cmap/View/816752/module_app/16752.html
- http://www.pdesas.org/module/cm/Cmap/View/816752/module_app/16752.html

**Assignments/Call to Action**

- Complete lesson by watching the video and using objects to solve addition problems. It defines terms related to addition.
- TEACHING subtraction by using manipulatives and number cubes. Model a subtraction with number cubes.
- TEACHING subtraction within 10 by using number cubes. Choose the related vocabulary for students to model and then write the matching equation.
- TEACHING how to decompose the same number into different parts. Use the number chips to decompose a ten frame.
- I CAN create a number story and match a corresponding equation, then write the matching equation. Have them use number racks and number cubes.
- I CAN count pictures to solve addition problems. Choose up to 10.
- I CAN create a number story and match a corresponding equation, then write the matching equation. Have them use number racks and number cubes.
- I CAN use number racks to represent addition and subtraction of fireflies. Write an addition problem you have created.
- I CAN use number racks to represent addition and subtraction of fireflies. Draw an addition problem. Write a corresponding equation and use your iPad to make a video of you directing the addition problem you have created.
- I CAN use number racks to represent addition and subtraction of fireflies. Use pictures to solve subtraction problems. Choose up to 10.
- I CAN build an equation by looking at the given pictures. Has different levels of assistance/feedback from using pictures to solve problems to building equalities to match a specific skill rather than an entire mission.

**Resource/URL**

- ACCESS PA Standards:
- CC.2.2.K.A.1: Extend concepts of adding together and taking apart to add and subtract within 10.
- CC.3.2.2.K.A.1: Extend concepts of adding together and taking apart to add and subtract within 10.
- CC.3.2.2.K.A.2: Extend concepts of adding together and taking apart to add and subtract within 10.
- CC.3.2.2.K.A.3: Extend concepts of adding together and taking apart to add and subtract within 10.

- Standards for Mathematical Practice in Module 4:
- MP 1: Make sense of problems and persevere in solving them.
- MP 2: Reason abstractly and quantitatively.
- MP 3: Construct viable arguments and critique the reasoning of others.
- MP 5: Use appropriate tools strategically.

- About IXL:
- Click on the "i" button beside each resource/url to find additional information and/or step by step instructions. Watch YouTube videos on ViewPure.com to eliminate ads.

- **Addition and Subtraction**

  - In this lesson, students represent addition and subtraction with objects, fingers, mental images, drawings, sounds, acting out situations, verbal explanations, expressions, or equations.
  - TEACHING addition and subtraction vocabulary through a video.
  - TEACHING addition by using manipulatives.
  - TEACHING subtraction by using manipulatives and number cubes.
  - I CAN create a number story and match a corresponding equation, then write the matching equation.
  - I CAN use number racks to represent addition and subtraction of fireflies. Choose up to 10.
  - I CAN use number racks to represent addition and subtraction of fireflies. Write an addition problem you have created.
  - I CAN use number racks to represent addition and subtraction of fireflies. Use pictures to solve subtraction problems. Choose up to 10.
  - I CAN build an equation by looking at the given pictures. Has different levels of assistance/feedback from using pictures to solve problems to building equalities to match a specific skill rather than an entire mission.

- **Solving Word Problems**

  - In this lesson, students use objects, fingers, and drawings to solve addition and subtraction word problems.
  - TEACHING addition and subtraction within 10 by using number chips.
  - I CAN identify the number that goes with a given number to make a ten.
  - I CAN create a number story and match a corresponding equation, then write the matching equation. Have them use number racks and number cubes.
  - I CAN count pictures to solve addition problems. Choose up to 10.
  - I CAN use pictures to solve subtraction problems. Choose up to 10.
  - I CAN use pictures to solve subtraction problems.
  - I CAN use pictures to solve subtraction problems.
  - I CAN represent combinations of 5 using number chips.
  - I CAN represent combinations of 5 using number chips.
  - I CAN create a number story and match a corresponding equation, then write the matching equation.
  - I CAN use a ten frame app in the next lesson on decomposing numbers.

- **Decompose Numbers to Make Ten or More than One Way**

  - In this lesson, students decompose numbers less than or equal to 10 in more than one way by using objects or drawings, and record each decomposition by a drawing or equation.
  - TEACHING how to decompose the same number into different parts.
  - TEACHING how to decompose 5 into different parts.
  - TEACHING how to decompose 6 into different parts.
  - I CAN represent combinations of 5 using number chips.
  - I CAN represent combinations of 5 using number chips.
  - I CAN create a number story and match a corresponding equation, then write the matching equation.
  - I CAN use a ten frame app in the next lesson on decomposing numbers.

- **Making the Number 10**

  - In this lesson, students find the number that makes 10. for any number from 1 to 9, when added to the given number, by using objects or drawings, and record each decomposition by a drawing or equation.
  - I CAN find numbers that make a ten.
  - I CAN identify the number that goes with a given number to make a ten.
In Module 5, students explore numbers 10-20, which are paired as "10 together with a number from 0-9." For example, "12" is more than "11" in numbers 0-10, the role of 5 in numbers is shown in different configurations other than "5 and a number." In contrast, the number 10 is the breaking point that marks the transition from the "ones" to the "tens" in the place value system.

**Focus Standards in Module 5**
- CC.2.1.K.A.1 - Know number names and write and recite the count sequence.
- CC.2.1.K.B.1 - Use place value to compose and decompose numbers within 10 and 20.

**Important Standards in Module 5**
- CC.2.1.K.A.1 - Know number names and write and recite the count sequence.
- CC.2.1.K.B.2 - Apply one-to-one correspondence to count the number of objects in situations where order matters.
- CC.2.1.K.A.3 - Apply the concept of regrouping to compare numbers and quantities.

**Standards for Mathematical Practice in Module 5**
- MP# 1: Make sense of problems and persevere in solving them.
- MP# 2: Reason abstractly and quantitatively.
- MP# 4: Model with mathematics.
- MP# 7: Look for and make use of structure.
- MP# 8: Look for and express regularity in repeated reasoning.

**ACCESS PA Standard Instructional Framework: Module 5**
http://www.pdesas.org/module/cm/Cmap/View/16759

Click on the "i" button beside each resource to find additional information and/or step by step instructions. Watch YouTube videos at www.illustrativemathematics.org to eliminate ads.

**TEACHING numbers within 100 by tens.**

**Module Title:** Message Assignment / Call to Action Content Directions Resource / URL

**Info about the URL (published on the "i" button of a resource):**

**About Module 5**

10-20, Counting to 100 by 1 and 10

This lesson, students count forward beginning from a given number within the known sequence (instead of having to begin at 1). TEACHING counting in any sequence without beginning at number 1. "Missing Numbers: Vines" explores how to use numbers before and after a given numeral to determine the remaining sequence.

http://youtu.be/ 3NCsd8Cl6Hw

In this lesson, students name numerals 0–19. TEACHING how to recognize the numerals 11-20. "Pocket Chart Number and Number Words" App provides an interactive teaching tool for students. Students must match similar numbers.


In this lesson, students represent a number of objects with a written numeral 0–20. TEACHING recognition of number and written numbers. Read "Butler’s Unseated Counting Expedition" to reinforce the correspondence of number names to appropriate objects (counts up to 20). (SK 11)


In this lesson, students compare and decompose numbers 10 to 19 and record each composition or decomposition with a drawing or an equation. TEACHING how to compose and decompose numbers 11 to 19.

http://www.illustrativemathematics.org/content-standards/K/CC/A/2/tasks/1397

In this lesson, students count to 100 by ones and by tens. TEACHING counting within 100 by ones. TEACHING counting within 100 by tens.

https://www.illustrativemathematics.org/content-standards/K/CC/A/1/tasks/359


http://www.illustrativemathematics.org/content-standards/K/NBT/A/1/tasks/454

http://www.illustrativemathematics.org/content-standards/K/CC/A/2/tasks/1397

http://www.illustrativemathematics.org/content-standards/K/CC/A/2/tasks/359

http://www.illustrativemathematics.org/content-standards/K/CC/A/1/tasks/754

http://www.illustrativemathematics.org/content-standards/K/CC/A/1/tasks/359

http://www.illustrativemathematics.org/content-standards/K/CC/A/1/tasks/754
## Grade K Module 6

### Module Title Message Assignment / Call to Action Content note Resource / URL

**About Module 6**

In Module 6, students discover that shapes can be composed of smaller shapes. They begin to describe similarities and differences among shapes.

**Focus Standards for Module 6**

| CC.2.3.K.A.2 | Analyze, compare, create, and compose two- and three-dimensional shapes. |

**Important Standards for Module 6**

| CC.2.3.K.A.1 | Identify and describe two- and three-dimensional shapes. |

**Standards for Mathematical Practice in Module 6**

- MP 1. Make sense of problems and persevere in solving them.
- MP 2. Reason abstractly and quantitatively.
- MP 3. Construct viable arguments and critique the reasoning of others.
- MP 5. Use appropriate tools strategically.
- MP 6. Attend to precision.
- MP 7. Look for and make use of structure.

**ACCESS the PA Framework: Module 6**


Click on the "i" button beside each resource/url to find additional information and/or step by step instructions. Watch YouTube videos on ViewPure.com to eliminate ads.

### Geometry: Two and Three Dimensional Shapes

In this lesson, students use simple shapes to compose larger shapes.


- **TEACHING combining shapes to make other shapes.** [https://www.shapes-colors.com/support-resources.html](https://www.shapes-colors.com/support-resources.html)

- **TEACHING how simple two-dimensional shapes are combined to make larger shapes.** [https://www.khanacademy.org/math/geometry-topic/cc-early-math-geometry/comparing-shapes/v/shapes](https://www.khanacademy.org/math/geometry-topic/cc-early-math-geometry/comparing-shapes/v/shapes)

- **I CAN use shapes to make larger shapes and a larger picture.** [https://www.k-5mathteachingresources.com/support-resource/11-lower-grades/1012-on-the-triangle-frame/of.html](https://www.k-5mathteachingresources.com/support-resource/11-lower-grades/1012-on-the-triangle-frame/of.html)

- **TEACHING how to make a square using rubber bands shapes.** [https://www.youtube.com/watch?v=KMI1sN7h6hQ](https://www.youtube.com/watch?v=KMI1sN7h6hQ)

- **I CAN combine shapes to create larger shapes and depict real-world objects.** Part 1 - Students use "Pattern Shapes" App to explore geometry, creating their own designs or copying in outlines. Part 2 - Students will take a screen shot of their new shape. [https://itunes.apple.com/us/app/pattern-shapes/id445066279?mt=8](https://itunes.apple.com/us/app/pattern-shapes/id445066279?mt=8)

- **I CAN describe how I combine simple shapes into a larger one.** Students will build their chosen shape from the previous lesson into the Show Me App. They will then describe how they used smaller shapes to create a larger one. [https://www.k-5mathteachingresources.com/support-resource/11-lower-grades/1012-on-the-triangle-frame/118e.html](https://www.k-5mathteachingresources.com/support-resource/11-lower-grades/1012-on-the-triangle-frame/118e.html)

### Geometry: Comparing Two and Three Dimensional Shapes

**TEACHING comparison of shapes.** [https://illuminations.nctm.org/Activity.aspx?id=2117](https://illuminations.nctm.org/Activity.aspx?id=2117)


**I CAN identify shapes as the same and/or different based on features.** [https://www.shinyshapes.com/shiny-applet.html](https://www.shinyshapes.com/shiny-applet.html)

**I CAN use comparison to sort shapes.** Use the web activity to sort rules for shape sorting. [https://www.shinyshapes.com/shiny-applet.html](https://www.shinyshapes.com/shiny-applet.html)

**I CAN name and identify two-dimensional shapes.** Choose the grid to determine shapes based on their attributes. [https://www.shinyshapes.com/shiny-applet.html](https://www.shinyshapes.com/shiny-applet.html)

**I CAN use comparison to sort shapes.** [https://www.shinyshapes.com/shiny-applet.html](https://www.shinyshapes.com/shiny-applet.html)

**I CAN name and identify two-dimensional shapes.** [https://www.shinyshapes.com/shiny-applet.html](https://www.shinyshapes.com/shiny-applet.html)

**I CAN create shapes and use them to make new shapes.** [https://www.shinyshapes.com/shiny-applet.html](https://www.shinyshapes.com/shiny-applet.html)

**I CAN use shapes to build and create new shapes.** [https://www.shinyshapes.com/shiny-applet.html](https://www.shinyshapes.com/shiny-applet.html)

**I CAN describe my shape and its attributes.** Take a screenshot of your shape, import it into the Shiny Shapes App and describe its attributes. [https://www.shinyshapes.com/shiny-applet.html](https://www.shinyshapes.com/shiny-applet.html)

**TEACHING using shapes to build and create new shapes.** [https://www.shinyshapes.com/shiny-applet.html](https://www.shinyshapes.com/shiny-applet.html)

**I CAN create shapes through the use of touch and drawing.** [https://www.shinyshapes.com/shiny-applet.html](https://www.shinyshapes.com/shiny-applet.html)

**I CAN create shapes to build and create new shapes.** [https://www.shinyshapes.com/shiny-applet.html](https://www.shinyshapes.com/shiny-applet.html)

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