

Navigating This Program

Once you have logged into the digital program, you can launch a guided tour with helpful navigation tips.

Unit & Sub-Unit Resources

Each unit includes a range of resources designed to support teachers in thinking through the progression of mathematics that students will engage with over the course of the unit. These resources can support teachers in their unit planning, as well as choices they make in response to students' thinking, strengths, and needs that arise over the course of the unit.

Unit at a Glance

Investigate and Explore

- Explore: Shapes Challenge** (Optional) Launch the unit with a non-routine task to investigate the question, "Which shapes can we use?"
- Investigate: 2D Shape Town** (Optional) Invite students to use pattern blocks and their understanding of shapes to create buildings they see in their community. See more information on the next page. Use anytime in this grade after Unit 3. (Intervention, Extension, and Investigation Resources)

Sub-Unit 1

1 Explore: Shapes Challenge

Which shapes can we use?

Compare and describe shapes used in representations of a community resource.

Building Toward K.G.4, K.G.2, K.G.6
SMP.3, SMP.7

2 What We Know About Shapes

Developing Language to Describe Shapes

Look for and describe shapes in illustrations.

K.G.4
SMP.7

3 Which Shapes Match?

Matching Shapes of Different Sizes and Orientations

Identify matching shapes regardless of size or orientation.

K.G.4
SMP.3, SMP.6, SMP.7

4 Comparing Shapes

Describing and Comparing Shapes

Compare two-dimensional shapes by describing their sides and corners.

K.G.4
SMP.3, SMP.6, SMP.7

Assess and Respond

9 Polytopia's Annual Kite Festival

Sorting Shapes into Subcategories

Sort shapes into given categories and subcategories based on their attributes and classifications.

K.MD.3, K.G.2, K.G.4
SMP.6, SMP.7

10 Points and Lines

Drawing Shapes and Describing Their Attributes

Apply an understanding of the attributes of shapes to describe and draw shapes.

K.G.1, K.G.2, K.G.4, K.G.5
SMP.6

11 Shapes Are Everywhere

Describing and Naming Shapes in the Environment

Name shapes in the environment and describe their attributes.

K.G.1, K.G.2, K.G.4, K.G.5
SMP.2, SMP.4

A Quiz: Sub-Unit 1

Learn about your students' understanding of the concepts and skills so far in this unit.

K.G.2, K.G.4
SMP.7

Assess and Respond

16 Quilts From Around the World

Exploring Shapes in Art

Compose larger shapes to represent places in students' communities and ask mathematical questions.

K.G.5, K.G.1, K.G.2, K.G.4, K.G.6
SMP.4, SMP.6

A End-of-Unit Assessment

Learn about your students' understanding of the concepts and skills in the unit.

K.CC.3, K.G.1, K.G.2, K.G.4, K.G.6, K.MD.2
SMP.4, SMP.6, SMP.7

Kindergarten Unit 3 151B Unit at a Glance

All lessons can be taught using the Student Edition while the teacher projects Presentation Screens. We recommend students use devices to interact with some lessons, as indicated with

Pacing: 18 days | Short on time? See pacing considerations below.

16 Lessons: 60 min each | Sub-Unit Quiz: 20 min | End-of-Unit Assessment: 45 min

Sub-Unit 2

5 So Much Sorting

Sorting Images of Objects and Shapes

Sort shapes into given categories by describing and comparing their attributes.

K.MD.3, K.CC.1, K.G.4
SMP.2, SMP.7

6 What's That Shape Called?

Identifying Circles and Triangles

Identify and describe circles and triangles to develop an understanding of their attributes.

K.G.2, K.CC.4, K.CC.5, K.G.4, K.MD.3
SMP.2, SMP.3, SMP.6, SMP.7

7 Another Shape

Identifying Rectangles and Comparing Their Lengths

Identify and describe rectangles to develop an understanding of their attributes and compare the lengths of rectangles.

K.MD.1, K.CC.4, K.G.2, K.G.4, K.MD.2, K.MD.3
SMP.2, SMP.7

8 Building Shapes With Straws

Building Shapes and Comparing Side Lengths

Build and describe shapes and compare the lengths of 2 objects.

K.MD.2, K.CC.1, K.G.2, K.G.4, K.G.5, K.MD.1, K.MD.3
SMP.6, SMP.7

Assess and Respond

12 Putting Shapes Together

Composing Simple Shapes to Form Larger Shapes

Compose simple shapes to form larger shapes and describe them using geometric language.

K.G.6, K.CC.5, K.CC.6
SMP.3, SMP.6, SMP.7

13 Pieces of a Puzzle

Using Geometric Motions to Compose Shapes

Use shape attributes to identify shapes that are the same, regardless of orientation, within a larger composite shape.

K.G.2, K.CC.3, K.CC.5, K.CC.6, K.G.6
SMP.7

14 Different Designs

Fanning Larger Shapes in Different Ways

Use different simple shapes to compose the same shape and describe the location of the simple shapes.

K.G.6, K.CC.3, K.CC.5, K.CC.6, K.G.4
SMP.7

15 Thinking About Location

Using Positional Words to Describe the Location of Shapes

Collect and develop language to describe the relative position of shapes.

K.G.1, K.G.6
SMP.4, SMP.6, SMP.7

Investigate: 2D Shape Town
(Intervention, Extension, and Investigation Resources)
(Optional) Use anytime after Unit 3. Students explore important buildings and shapes they see in communities and use what they know about shapes to create community buildings using pattern blocks.

Why? In order to ...

Recognize shapes in the real world (GD2)

K.G.1, K.CC.5, K.CC.6, K.G.2, K.G.5, K.G.6
SMP.2, SMP.4, SMP.7

How? Students will ...

Look for structure in buildings around their community (SMP.7)

What? While ...

Using pattern blocks to construct, describe, and compare objects (CC1, CC2, CC4)

Pacing Considerations

Lesson 1: This lesson can be omitted. It is an exploration that helps students engage in the unit, but is not essential for meeting required standards. If omitted, read and discuss the Unit Story prior to Lesson 2.

Lessons 9 and 10: These lessons can be condensed into 1 lesson with a split focus on drawing shapes and searching for shapes in students' communities.

Kindergarten Unit 3 151C Unit at a Glance

Every unit has a **Unit at a Glance** page which shows teachers everything they need to know to get started planning out their upcoming unit.

While all lessons can be taught using the Student Edition as the teacher projects Presentation Screens, we recommend students use **devices** to interact with some lessons.

Each grade is accompanied by two course-level **investigations**. These investigations can be used after the content standards have been addressed for corresponding units.

Teachers are provided with thoughtful **pacing considerations** for how they can adjust the pacing of the unit as needed without compromising unit learning goals.

Unit Overview pages

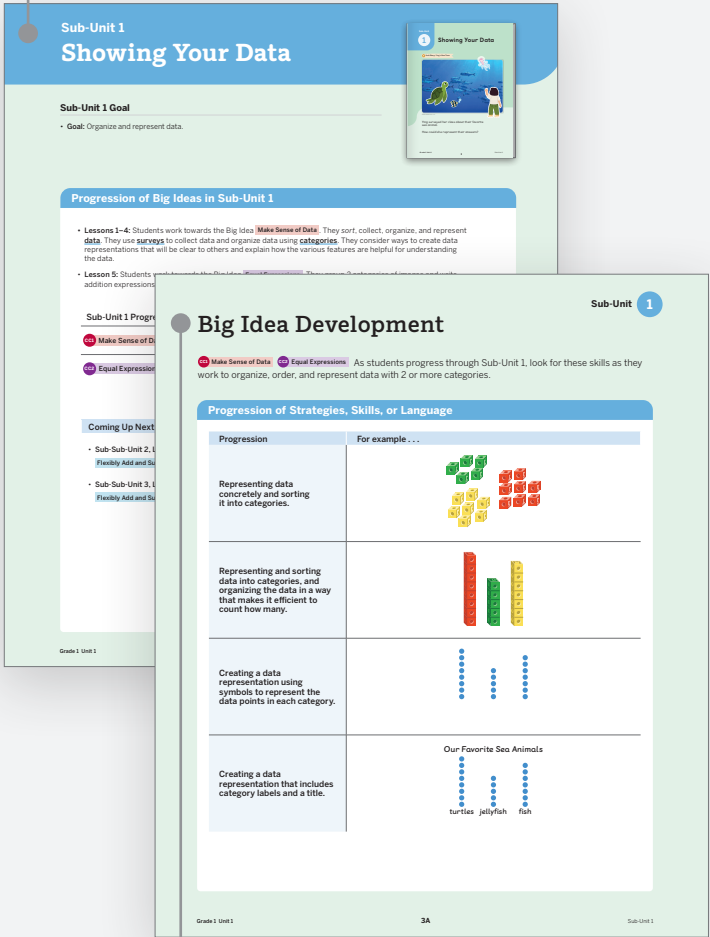
Teachers will find a comprehensive set of resources for each unit, including an overview of the math of the unit, a visual summary of the Unit at a Glance, a preview of each of the unit assessments, and unit guidance for differentiation, Centers, accessibility, language development, materials, technology, and connections to future learning. Each Unit Overview also includes a professional development activity and a Unit Story that provides an engaging narrative to frame students' explorations throughout the unit.

Kindergarten

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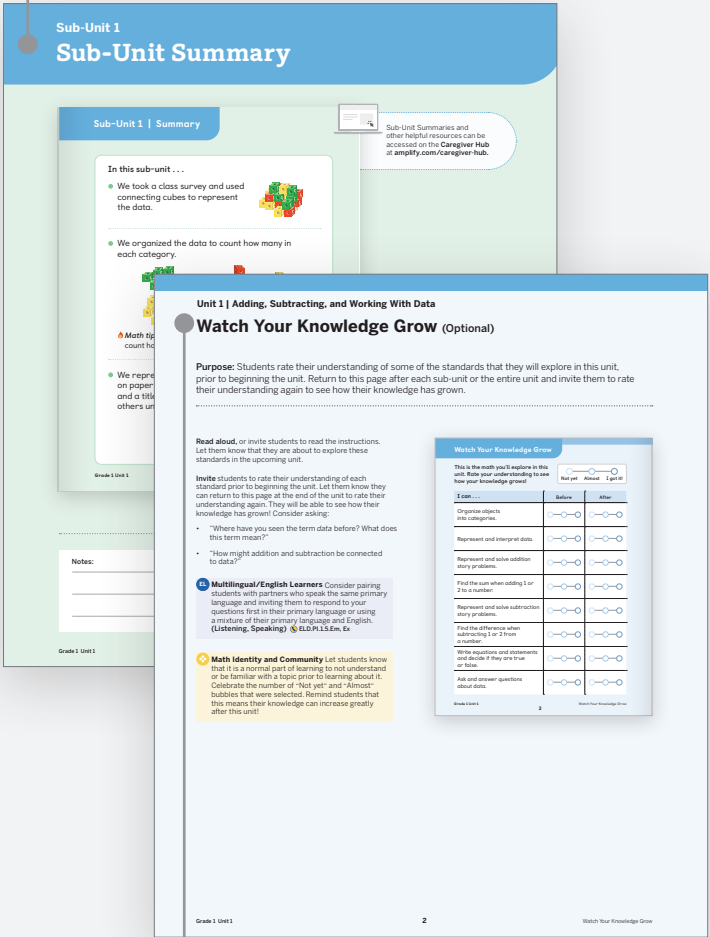
Navigating This Program

The **Sub-Unit Overview** clearly shows the goals and student-facing essential questions for the sub-unit. The progression of the development of the **Big Ideas** and their connections are provided for each sub-unit.



The **Big Idea Development** page illustrates for teachers the progression of strategies, skills, or language that students engage in as they work toward the Big Ideas in that sub-unit.

The **Summary** page clearly illustrates what students learned in the sub-unit, which aids teachers as they provide opportunities for practice and assessment of sub-unit topics.



The mathematical concepts of the unit are presented in student-friendly language on the **Watch Your Knowledge Grow** page, allowing students to monitor their own progress.

Sub-Unit Overview pages

The lessons within each unit are grouped into sub-units that address a related group of concepts. Each sub-unit starts and ends with pages that focus on the key ideas of the sub-unit.

Navigating This Program

Lesson Supports

Throughout this Teacher Edition, lesson guidance for teachers is organized clearly and consistently so that they have all of the information they need at their fingertips.

The **content goals** and **language goals** are clearly stated at the beginning of each lesson and aligned to the Big Ideas.

Each lesson clearly identifies the **Driver of Investigation** (Why), **Standard for Mathematical Practice** (How), and **Content Connection** (What) of focus.

In the **Connections and Coherence** section, teachers will find prior learning that has built to the math in this lesson, as well as future learning that this lesson is helping build to.

The **Integrating Rigor in Student Thinking** section explains how students develop conceptual understanding, procedural fluency, and application in this lesson.

Teachers can quickly visualize the **Big Ideas** engaged in each lesson, as well as the connections between those Big Ideas.

Unit 1
Lesson
2

Shapes Ying Saw

Sorting and Representing Shapes

Let's sort picture cards and show how many.

Today's Big Ideas

Focus on the Big Ideas

- Today's Goals** **MS** **Make Sense of Data**
 - 1. Goal:** Sort images into 3 categories and represent the amounts in each category.
 - 2. Language Goal:** Describe what is included in a data representation that shows how images were sorted. (**Speaking and Listening**)
- D1** **Why? In order to...** **MS** **How? Students will...** **CC** **What? While...**
 - Understand and explain how to categorize and represent data (D1)**
 - Create a model that clearly represents the number of shapes in different categories (SMP.4)**
 - Sorting, categorizing, and representing a collection of shapes (CCI)**

Vocabulary

New Vocabulary

category.

Review Vocabulary

sort

CA CCSSM

Addressing

1.MD.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 another.

Mathematical Practices: SMP.4, SMP.6

Building On

K.MD.3

CA ELD Standards: ELD.PI.1.1, ELD.PI.1.6, ELD.PI.1.5

Building Math Identity

I can be all of me in math class.

In the story, Ying realized that she likes her town. What is the best thing about where you live?

Invite students to reflect on this question as they complete this lesson.

Grade 1 Unit 1 Lesson 2

6A

Shapes Ying Saw

Lesson Overview

This introductory page orients teachers to the topic, standards, and key learning goals of the lesson, including any new vocabulary terms that will be introduced.

The **time frame** and suggested **student grouping** is listed for each part of the lesson.

Materials needed for each activity are listed within each tile with an icon.

The screen icon is used to show which **Presentation Screens** or **Digital Student Screens** align to each instructional moment.

Lesson at a Glance

60 min

CA CCSSM: 1.MD.4, SMP.4, SMP.6

Warm-Up Whole Class 10 min Students are introduced to the Notice and Wonder routine, in which there is no single correct answer. It provides an opportunity for students to share mathematical curiosity about objects and images, and it allows their language to be heard.	Activity 1 Pairs 15 min Students sort shape cards into 3 categories and share how many are in each category. They explain how they sorted, and they discuss other possible ways to organize their sort. Note: The Student Edition is not required for this activity. Materials: Activity 1 PDF, Graphic Organizer PDF, Three Column Table (optional) Additional Prep: Cut out: Activity 1 PDF	Activity 2 Pairs 15 min Students create a representation of their sorts from Activity 1 using pictures, symbols, numbers, or words. Students share and compare their representations and consider features of other students' representations that show clear ways to share information. Materials: sorted cards from the Activity 1 PDF
Synthesis Whole Class 5 min Students review and reflect on the importance of creating mathematical representations that are clear for others to understand.	Show What You Know (optional) Independent 5 min Students demonstrate their understanding by counting the amount in each category. Materials: Show What You Know PDF	Center Pairs 15 min Students are introduced to the Center, Shake and Spill, Stage 2, in which they take turns shaking and spilling counters. They compare the number of red and yellow counters using comparative language.

Math Language Development
Multilingual / English Learners
 Consider using the scaffolds from the Math Language Development Resources with Activity 2 to support math language acquisition for your students.

Emerging
 Students collaborate with you to create and compare representations using their primary language and the provided support to share their thinking. Guiding questions are provided for you to ask students to share short responses.

Expanding
 Students collaborate with a partner to create and compare representations using the provided support to share their thinking. Guiding questions are provided for you to ask students to share responses using simple phrases.

Bridging
 Students work independently or collaborate with a partner to create and compare representations using the provided support as needed. Guiding questions are provided for you to ask students to share responses using longer phrases or complete sentences.

Quickly preview the **English Learner proficiency-levelled supports** for this lesson. Refer to the *Math Language Development Resources* book for more information.

The daily **Center Time** or **Center Choice Time** is summarized for ease of preparation.

Whole Class | 10 min

Warm-Up Notice and Wonder

Purpose: Students examine an image of Ying at the lake to activate their prior knowledge about the shapes in the image.

What do you notice? What do you wonder?

1 Launch
 Display the image.
 Use the **Notice and Wonder** routine.
Say, "You will use a routine called **Think-Pair-Share**. First, I will ask you a question and you will have time to think about your response independently. Next, you will pair up to share your thinking. Then some students will share their thinking with the whole class."
 Use the **Think-Pair-Share** routine. Ask:

- "What do you notice? What do you wonder?"
- "What shapes do you see in the picture of Ying at the lake?"

2 Connect
 Record students' responses as they share.

Students might say . . .
 ELD.PI.1.1.Em, Ex, Br
 I notice there are lots of boats.
 I notice there are some trees.
 I notice that Ying and her family are having a picnic.
 I wonder what food they have.
 I wonder why they aren't wearing swimsuits.
 I wonder how many boats there are.

Examples of what **students might say** in response to the Warm-Up prompt are provided to help teachers prepare to facilitate the conversation.

Lesson at a Glance

The Lesson at a Glance page describes the purpose of the Warm-Up, Activities, Synthesis, and Show What You Know. Teachers will find suggested timing for each part of the lesson, as well as guidance on whether students should work individually, in pairs, in small groups, or with the whole class.

The page also lists which Student Edition pages, Presentation Screens, or Digital Student Screens can be used with each part of the lesson, as well as any hands-on materials that may be needed.

Warm-Up

Every Amplify Desmos Math California lesson begins with a whole-class Warm-Up, an invitational Instructional Routine intended to provide a social moment at the start of the lesson in which every student has an opportunity to contribute. Some Warm-Ups build fluency or highlight a strategy that may be helpful in the current lesson. Other Warm-Ups act as an invitation into the math of the lesson. The Warm-Up for the first lesson of each unit introduces the Unit Story for the unit.

Navigating This Program

The **Purpose** of each activity is highlighted here, as well as suggestions for the **student grouping**, **time frame**, and **screen pacing** for the activity.

Teachers are provided with thoughtful **Short on time?** suggestions for how they can adjust their facilitation of the lesson as needed without compromising lesson goals.

Each lesson notes the corresponding **Teacher Presentation Screens** or related **Student Edition** pages also available to support the lesson.

For every activity, teachers will see the **corresponding student digital screens** or **Student Edition pages**, based on the recommended lesson modality.

Activity 1 Sorting Shape Cards

Purpose: Students sort shape cards into categories, explain how they sorted, and tell how many are in each category to prepare to represent their data in the next activity.

1 Launch

Say, "Today, you will sort the shapes Ying saw at the lake into categories."

Define category as "a group of objects that are alike in some way."

Read aloud Problems 1 and 2.

Provide access to the Graphic Organizer PDF, *Three-Column Table*.

Note: Students should keep their cards sorted for Activity 2.

2 Monitor

If students need help getting started . . .

- Ask, "Which 2 shapes could be sorted together?"
- Ask, "What tools could help you sort the cards into 3 categories?"

MLR1: Stronger and Clearer Each Time **ELD.PI.1.5.Em, Ex, Br**

After students complete Problem 2, have pairs meet with 1 or 2 other pairs to share responses. Encourage listeners to ask clarifying questions using stems, such as:

- "What do you mean by . . .?"
- "Can you tell me more about . . .?"
- "How did you come up with that category?"

Have students revise their verbal responses based on the feedback they receive.

3 Connect

Invite students to share the categories they used to sort and how they organized their work.

Ask, "What different ways did you see other students organizing their work and keeping track of the categories?"

Say, "Discuss with your partner whether you could organize your work in a new way." Have pairs discuss for 1 minute before organizing their shapes in a new way, if they choose to do so.

Key Takeaway: Say, "Objects, such as shapes, can be organized into categories."

Presentation Screens

Lesson 2 Activity 1

Materials

Lesson Resources:

- Distribute one set of pre-cut cards from the Activity 1 PDF to each pair.
- Provide students with access to the Graphic Organizer PDF, *Three-Column Table* (optional).

Short on time? Consider having students share with another pair instead of displaying their work for discussion.

Student Edition

Unit 1 Lesson 2

Shapes Ying Saw

Let's sort picture cards and show how many.

Warm-Up eyes on teacher!

Activity 1 Sorting Shape Cards

Hands-On

- Sort** **Answers may vary.**
Sort the shapes that Ying saw at the lake into 3 categories.
- Discuss** **Oral activity: No writing expected.**
Explain to another pair how you sorted the shapes. Tell how many are in each category. **ELD.PI.1.5.Em, Ex, Br**

• We sorted the shapes by _____

• This category has _____

D Differentiation | Teacher Moves

Look for students who . . .	For example . . .	Provide support . . .
Almost there Sort the shape cards and describe 2 categories.	I sorted the shapes into curves and no curves.	Support Ask, "What tool could help you sort the shapes into 3 categories?"
Sort the shape cards and describe 3 categories.	I sorted by color. or I sorted the shapes into curves, curve and straight, and only straight.	Stretch Ask, "How could you organize the shapes to help you count how many in each category?"

In the **Launch, Monitor, Connect** guidance, teachers will find ways to help students get started, suggested facilitation moves, and discussion questions.

Math language development and English Learner supports are noted at point of use. Refer to the *Math Language Development Resources* for proficiency-level support.

The **Key Takeaway** is called out to highlight the learning goal of the activity and provide teachers with an example of how to frame the big idea of the activity for students.

The guidance for every activity includes a **Differentiation Teacher Moves** table to support teachers in meeting the needs of all students during the activity. This table can help teachers anticipate the ways students may approach the activity, and provides prompts that they can use during the lesson to **Support**, **Strengthen**, and **Stretch** individual students in their thinking.

Activities

Each lesson includes one or two activities. These activities are the heart of each lesson. Students notice, wonder, explore, calculate, predict, measure, explain their thinking, settle disputes, create challenges for their classmates, and more.

Guidance is provided to help teachers Launch, Monitor, and Connect students' thinking over the course of each activity. Teachers will also find suggestions for pacing, facilitation moves, discussion questions, examples of early student thinking, and ideas for students who may enjoy a challenge, as well as opportunities to build and develop the math community in their classroom.

Each **Lesson Practice** begins with a **Summary** of the big ideas in the lesson, often including a worked example. Students can highlight parts of the summary or share it with a caregiver or classmate.

Whole Class

5 min

Presentation Screen

Lesson 2 Synthesis

Synthesis

Lesson Takeaway: Objects can be organized into **categories** and represented with pictures, symbols, numbers, or words to make information clear for others to understand.

Ask: "What makes a representation clear and organized?" Play the animation.

Say: "Sharing mathematical work with others can give you ideas about how to make your own work clearer."

Formalize vocabulary: A **category** is a group of objects that are alike in some way.

(optional) Consider using the **Frayer Model** routine with the word **category**. [ELD.PI.1.6-Em, Ex, Br](#)

Refer to the **Math Language Development Resources** for a description of this routine and for more vocabulary support.

Invite students to refer to the **Summary** during Practice or anytime during the year.

Show What You Know (Optional)

Independent | 5 min

Show What You Know PDF

Today's Goals

- Goal:** Sort images into 3 categories and represent the amounts in each category.
 - In the *Show What You Know*, students represent how many shapes are in each category.
- Language Goal:** Describe what is included in a data representation that shows how images were sorted. (**Speaking and Listening**)

D Differentiation See the last page of the lesson for differentiation and Math Language Development support.

Grade 1 Unit 1 Lesson 2

8A

Synthesis | Show What You Know

Lessons conclude with an opportunity for students to reflect on the main learning goals and “show what they know.” This is a great way for both students and teachers to access a formative check for understanding. The Show What You Know is optional in Kindergarten–Grade 1.

Practice Independent

Provide students with sufficient practice to build and reinforce their conceptual understanding, fluency, and application of mathematical topics including connections to assessment practice, and ongoing spiral review.

Students using print

Summary 1.01

Objects can be organized into categories and represented with pictures, symbols, numbers, or words to make information clear for others to understand.

category: A group of objects that are alike in some way.

Practice 1.02

You'll play this Center:

Shake and Spill [Step 1](#)

Let's compare.

Practice 1.02

Practice 1.02 Name _____

Jada and Priya sorted their stickers into 2 categories. Use the image for Problems 1 and 2.

Sample response shows: **They sorted by shape.**

- How did they sort the stickers?

Category 1

Category 2
- How many stickers are in each category?

Category 1: _____ stickers

Category 2: _____ stickers
- Draw each shape in the category where it belongs.

Draw

Category 1

Category 2

Practice 1.03

Spiral Review

For Problems 4–6, write the number that shows how many dots.

4.

5.

6.

For Problems 7–9, write the number that shows how many cubes.

7.

8.

9.

Practice Problem Item Analysis

Problem(s)	DOK	CA CCSSM
On-Lesson		
1, 3	2	1.MD.4, SMP.6
2	1	1.MD.4, SMP.6
Spiral Review		
Fluency	4–9	1, K.OC.5

Need more Practice?

Additional practice can be found in the **Practice Resources**, **Investigation Resources**, and **online resources** (Item banks, Boost Personalized Learning, and Fluency Practice).

Grade 1 Unit 1 Lesson 2

8–10

Practice

A **Practice Problem Item Analysis** table breaks down the problems by type, Depth of Knowledge (DOK), and corresponding standards.

Synthesis

The Synthesis is an opportunity for the teacher and students to pull all the learning of the lesson together into a lesson takeaway. Students engage in a facilitated discussion to consolidate and refine their ideas about the learning goals, and the teacher synthesizes students’ learning.

Lesson Practice

Daily practice problems for the day’s lesson are included in the print Student Edition, including Fluency and Spiral Review.

Stretch lists challenge opportunities for students who are ready to extend their learning.

Professional Learning callouts feature questions and prompts designed to help teachers reflect on how students' thinking developed over the course of the lesson.

A **Differentiation** table suggests specific teacher moves and resources to support students' understanding based on their responses to assessment problems.