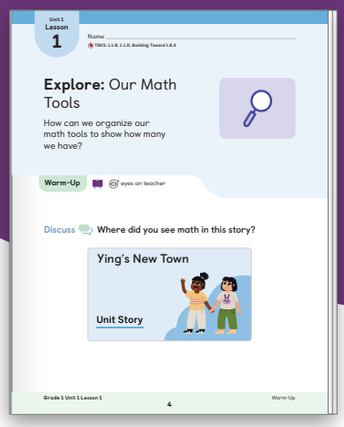
Unit 1
Lesson
1

Student Edition pages, Manipulatives, and Presentation Screens support learning in this lesson.



Explore:
Our Math Tools

How can we organize our math tools to show how many we have?

Key Concepts

Today's Goals

1. **Goal:** Organize objects into categories.
2. **Language Goal:** Describe how objects are sorted and tell how many in each category. **(Listening and Speaking)** **ELPS 1.E, 2.E**

To build curiosity and interest from the start of the unit, students engage in a non-routine task that elicits multiple strategies and solutions. They apply their own knowledge and language to a new mathematical task. Giving students a non-routine task with multiple answers and solution paths allows them to truly engage in the math process standards and invites all students to see themselves as mathematicians. **(TEKS 1.1.B)**

Students consider how to organize a set of mathematical tools to make it clear how many are in each group. They organize and display their set of classroom tools to show how many. **(TEKS 1.1.D)**

In Kindergarten, students counted groups of up to 20 objects. In Grade 1, students will work with up to 120 objects. This Exploration provides an opportunity to see students' skills and conceptual understanding of counting.

Caregiver Connection

Students may enjoy organizing and counting groups of objects at home. They can be encouraged to bring in collections of objects and organize them in a way that makes it clear how many are in each group.

Vocabulary

Review Vocabulary

sort

TEKS

Building Toward

1.8.A

Collect, sort, and organize data in up to three categories using models/representations such as tally marks or T-charts.

Math Process Standards: 1.1.B, 1.1.D

ELPS: 1.E, 1.F, 2.B, 2.E, 3.A, 3.F

Building On

K.2.C

K.6.E

K.8.A

Lesson at a Glance 60 min

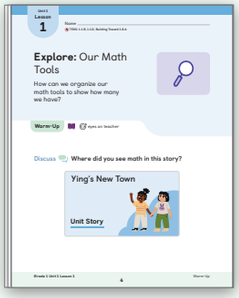
TEKS: 1.1.B, 1.1.D, Building Toward 1.8.A

Warm-Up

Whole Class | 10 min

Students are introduced to the **Notice and Wonder** routine, after hearing the Unit Story read aloud. Because there is no single correct response, this invitational routine allows all students to share their mathematical curiosity about the unit narrative to which they will return throughout the unit.

Materials: Unit Story, *Ying's New Town*

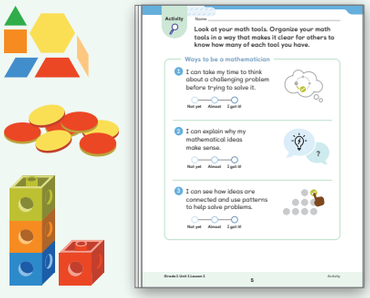


Activity

Pairs | 50 min

Pairs of students sort a collection of approximately 30 assorted math tools. They choose their own categories and how to organize their objects. Then students participate in a **Gallery Tour** to see how other groups organized their tools.

Manipulative Kit: bags of assorted math tools
Materials: paper bags, tools for creating a visual display, *Words to Describe Organizing and Representing Data* chart (teacher made), *Explore Organizer* PDF (optional)
Additional Prep Assemble: one bag of approximately 30 assorted math tools (e.g., counters, connecting cubes) per pair; Prepare: *Words to Describe Organizing and Representing Data* chart



Opportunities For Extension *(optional)*

Students may enjoy sorting and organizing different objects in their school environment, such as word sorts or recess equipment, to make the number of objects in each category clear for themselves and others.

Math Language Development

Emergent Bilinguals

Consider using the *Math Language Development Resources* with the **Warm-Up, Connect** to support math language acquisition.

- ✓ Cognates
- ✓ Sentence frames

ELPS 1.E, 2.C, 2.E, 2.F

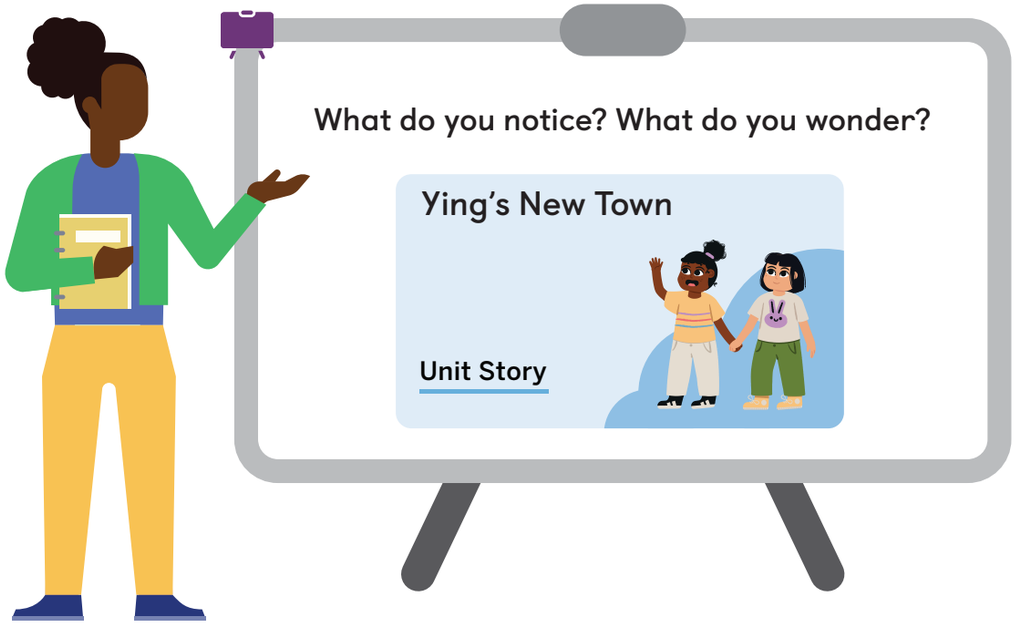
Pre-Production	Beginning	Intermediate	High Intermediate	Advanced
Students **listen** to spoken English and **respond** using their primary languages and gestures.	Students **listen** to spoken English and **speak** using their primary languages, gestures, and single words or short phrases.	Students **listen** to spoken English and **speak** using short phrases or simple sentences.	Students **listen** to spoken English and **speak** using a variety of sentence types.	Students **listen** to spoken English and **speak** using longer sentences.

Whole Class | 10 min

Presentation Screens

Warm-Up Notice and Wonder

Purpose: Students hear a read-aloud of *Ying's New Town*. They notice and wonder about mathematical situations she encounters.



1 Launch

Display the cover of the Unit Story, *Ying's New Town*.

Say, "You will use a routine called Think-Pair-Share. First, I will ask a question and you will have time to think. Then you will pair up to share your ideas and some will share with the class.

Use the Think-Pair-Share routine. Activate students' background and prior experiences by asking, "We are about to read a story called *Ying's New Town*. Have you ever explored a new town before? What new things did you see and do?"

Read aloud the Unit story from this Teacher Edition while displaying the illustrations on Screens 2–14. **ELPS 1.E, 1.F**

Use the Notice and Wonder routine.

Pause on Screens 3, 5, 7, and 13. For each screen, ask, "What do you notice? What do you wonder?"

Students might say . . . ELPS 2.B

There are a lot of things to count in the story.

Ying's dad organizes his rock collection.

There are a lot of shapes at the lake.

2 Connect

Use the Think-Pair-Share routine. Ask, "Where did you see math in the story?"

Record students' responses as they share.

Say, "In this unit, you will explore new math ideas with your classmates, just like Ying explores her new town in the story. Today, you will start by exploring ways to sort and organize your math tools."

Pairs | 50 min

Activity How can we organize our math tools to show how many we have?

Purpose: Students sort a collection of math tools and organize them in a way that makes it clear how many are in each category.

Presentation Screens

Materials

Lesson Resources:

- Provide students with access to the *Explore Organizer* PDF (optional).

Manipulative Kit:

- Prepare one bag **(Classroom materials)** of approximately 30 assorted math tools for each pair. Distribute the bags during the Launch.

Classroom materials:

- Use chart paper and markers to prepare the *Words to Describe Organizing and Representing Data* chart. Display the chart during the Monitor.

Teachers Choice

Make It Your Own!

It is suggested that students sort math tools in the classroom, but students can sort any collection of objects. Students may sort groups of objects in the school or bring their own collections to sort.

1 Launch

Say, "Ying had many boxes to unpack. The first box Ying opened was full of her clothes. As she unpacked the box, she sorted each type of clothing by making a group of shirts, a group of pants, and a group of socks."

Display the contents of a bag of math tools.

Say, "You and your partner will discuss how to sort your bag of math tools. After you sort them, organize them in a way that makes it clear how many are in each group."

EB **Emergent Bilinguals:** If possible, pair students with different levels of English language proficiency together to complete this activity. ELPS 2.B, 2.D, 2.E

A **Accessibility: Visual-spatial processing** Guide processing by asking students to first make observations about the different shapes, sizes, and colors of the math tools. Encourage students to use these observations to help as they sort the tools.

2 Monitor

As students complete the activity, refer to the D Differentiation | Teacher Moves table on the following page.

If students need help getting started . . .

- Ask, "What do you notice about these objects?"
- Ask, "Which objects can you sort into a group?"

MLR **MLR2: Collect and Display** Display the words and phrases students use to describe the way they organized their objects on a chart titled. *Words to Describe Organizing and Representing Data*, and update it throughout the lesson. Keep this chart displayed throughout the sub-unit. ELPS 3.F

3 Connect

Say, "We will use a routine called the Gallery Tour routine. A gallery is a room that has different work displayed. In this routine, you will take a tour around our classroom to look at your classmates' work. You will discuss how other pairs sorted their math tools, how they organized them, and how many are in each group."

Use the Gallery Tour routine. Have students visit 2 or 3 other pairs' work.

Use the Think-Pair-Share routine. Ask, "What did another pair do to organize the math tools that helped make it clear how many were in each group?"

Invite students to share their reflections. Provide the *Explore Organizer* PDF to those students who wish to write or draw their reflections.

Key Takeaway: Say, "Today, you found ways to organize your math tools to see how many there are in each group. In this unit, you will sort other objects and represent how many in each group for others to see. At the end of the unit, you will share new ideas and questions you have about organizing objects into groups."

Unit 1
Lesson
1

Name

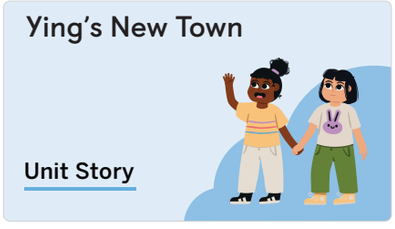
TEKS: 1.1.B, 1.1.D, Building Toward 1.8.A

Explore: Our Math Tools

How can we organize our math tools to show how many we have?

Warm-Up eyes on teacher

Discuss **Where did you see math in this story?**



Activity

Name

Look at your math tools. Organize your math tools in a way that makes it clear for others to know how many of each tool you have.

Ways to be a mathematician

1. I can take my time to think about a challenging problem before trying to solve it.

Not yet Almost I got it!

2. I can explain why my mathematical ideas make sense.

Not yet Almost I got it!

3. I can see how ideas are connected and use patterns to help solve problems.

Not yet Almost I got it!

Presentation Screens

D Differentiation | Teacher Moves

Look for students who . . .	For example . . .	Provide support . . .
Keep objects in 1 large group.	*I took all the objects and lined them up to make them easy to count.*	S **Strengthen** Ask, "How many objects are in each group? How many objects are there in total?"
Sort objects into 2 categories — one with a given attribute and one without that attribute.	*I made 1 group with all the round tools and another group with tools that are not round.*	
Sort objects into mutually exclusive categories, or categories that do not overlap with one another.	*I sorted the tools by color. This group is all red tools, this one is all yellow, and this group is all green.*	

Activity Sample Student Work

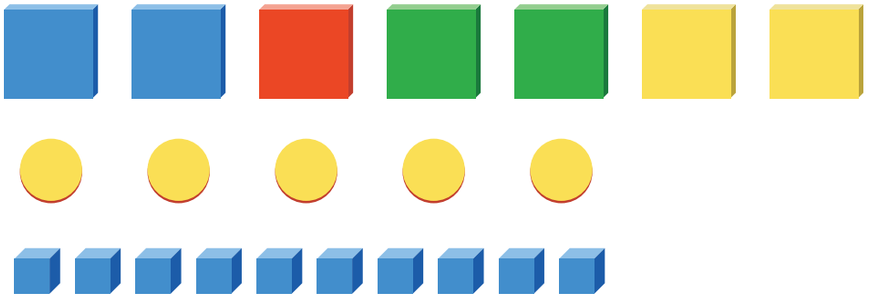
Students will likely represent their answer to the Explore question in different ways. Because this is the beginning of the unit, there is no expectation for students to sort or organize the math tools in a specific way.

How can we organize our math tools to show how many we have?

Sample student responses:

Sample response 1

Sample response 2



Sample response 3