

TEACHER'S GUIDE **Overview** *continued*

i-Ready Classroom Mathematics lessons consist of three types of sessions: Explore, Develop, and Refine. The following is a walkthrough of the planning and support features within the Teacher's Guide for a Develop session. You will find many of the same features in the Explore and Refine sessions.

Lesson Overview provides information for use in planning whole class instruction, small group differentiation, and independent learning opportunities.

Student Learning Target uses friendly language to set expectations for what children will be able to do by the end of the lesson.

Content Objectives identify the mathematical learning goals for the lesson, while **Language Objectives** indicate the language children are expected to understand and produce as they work on those goals.

Prior Knowledge identifies key skills children will build on during the lesson and presents opportunities to monitor understanding and identify children's learning needs.

Math and Academic Vocabulary are initially introduced using the **Vocabulary Routine**, and then explored in the context of the lesson. Children revisit vocabulary at the end of the unit using the **Build Your Vocabulary** page.

LESSON 5

Math Focus

Focus Standards

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

c. Understand that each successive number name refers to a quantity that is one larger.

K.CC.C.6 Identify whether the number of objects in one group is greater than, less than or equal to the number of objects in another group, e.g., by using matching and counting strategies.

K.CC.C.7 Compare two numbers between 1 and 10 presented as written numerals.

See Unit 2 Overview for developing and applied standards.

Standards for Mathematical Practice (SMP)

SMP 1, 2, 3, 4, 5, and 6 are integrated into Try-Discuss-Connect.

This lesson provides additional support for:

7 Look for and make use of structure.

8 Look for and express regularity in repeated reasoning.

OVERVIEW

Compare Numbers to 5

STUDENT LEARNING TARGET: Compare groups of objects and numbers up to 5. Recognize that each counting number is one more than the last.

Lesson Objectives

Content Objectives

- Compare two numbers and quantities within 5, using the words *more*, *less*, or *same*.
- Recognize that one more than a given number is the next number in the counting sequence.

Language Objectives

- Use *more*, *less*, and *same* to compare the number of objects in each group.
- Tell, write, and show using drawings the number or quantity that is *one more* than a given number or quantity.
- Explain ideas clearly and check with the audience for understanding.

Prior Knowledge

- Count up to 5 objects.
- Read and write numbers to 5.
- Compare length.

Vocabulary

Math Vocabulary

- compare** to decide if numbers, amounts, or sizes are greater than, less than, or equal to each other.
- more, more than** the greater number, quantity, or amount.
- less, less than** the group or number with fewer, not as much, not as many.
- same, same as** an equal value, size, or amount.
- one more** names the next number in the counting sequence.

Review the following key terms.

- count** to find out how many things are in a group.
- one, two, three, four, five** the counting numbers from 1 to 5.
- zero** a number for a group with no objects. None, not any.

Academic Vocabulary

- after** following or happening next.
- both** two things together.

Learning Progression sets context for the mathematics of the lesson, providing information on how the context fits within and across grade levels—what children previously learned, what they are learning now, and what they will be learning next.

Learning Progression

Previously

Earlier in Kindergarten, children learned to count quantities to 5 and represent the count with a written number. They also developed comparison thinking in the context of length and height.

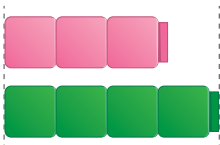
IN THIS LESSON

Children continue to build their skills with counting objects. They use length and matching strategies to compare groups of up to 5 objects and use the words *more than*, *less than*, and *same as* to compare. They compare written numbers using concrete or pictorial support. Children learn that as they count, each number name they say refers to a quantity that is one more than the previous number.

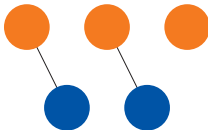
Later

Later in Kindergarten, children will extend their comparison skills to groups and numbers to 10. They will begin using the terms *greater than*, *less than*, and *equal to* when comparing.

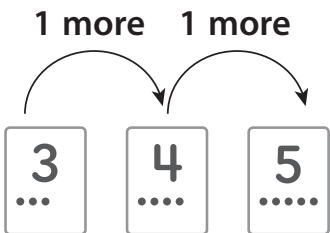
THIS LESSON AT A GLANCE



The concept of length can be used to compare.



Matching can also be used to compare.



The counting number that comes next is one more.

This Lesson at a Glance provides a visual representation of the lesson progression.

TEACHER'S GUIDE **Overview** *continued*

Pacing Guide provides session-by-session pacing used to plan daily instruction and practice.

Assessment is used to determine children's progress and inform instructional decisions. Teachers can choose from observation, pencil and paper, and digital options.

Centers, Differentiation, and Practice time is built into the lesson pacing to help teachers meet children's individual needs.

Materials list helps teachers prepare the manipulatives and resources children can use during the lesson activities.

Presentation Slides include key visuals and questions to support the delivery of each lesson.

LESSON 5

OVERVIEW

Pacing Guide

• Individual ↔ Pairs ↻ Small Group ⌘ Whole Class

SESSION 1 EXPLORE	SESSION 2 DEVELOP	SESSION 3 DEVELOP	SESSION 4 REFINE	SESSION 5 REFINE
Number Sense ⌘ (10 min) Notice and Wonder	Number Sense ⌘ (5–10 min) Show It Another Way	Number Sense ⌘ (5–10 min) Show It Another Way	Number Sense ⌘ (5–10 min) How Many?	Number Sense ⌘ (5–10 min) How Many?
Discover It ↻ ⌘ (15–20 min)	Try-Discuss-Connect ⌘ (20 min) Try It ↻ Discuss It ↔ Connect It ⌘	Try-Discuss-Connect ⌘ (20 min) Try It ↻ Discuss It ↔ Connect It ⌘	Make Connections ⌘ (20 min)	Analyze It ⌘ (10 min)
Investigate It ↻ ⌘ (15–20 min)	Apply It ↔ (10 min) Counter Compare Activity	Apply It ↔ (10 min) Hide One More Activity	Apply It • (10 min) Compare Numbers Activity	Assessment • (10 min) Activity-Based Assessment, Lesson Quiz, or Comprehension Check
	Centers, Differentiation, and Practice ↻ ↻ ↻ (15–25 min)	Centers, Differentiation, and Practice ↻ ↻ ↻ (15–25 min)	Centers, Differentiation, and Practice ↻ ↻ ↻ (15–25 min)	Centers, Differentiation, and Practice ↻ ↻ ↻ (25–35 min)
Close (5 min) ⌘	Close (5 min) ⌘	Close (5 min) ⌘	Close (5 min) ⌘	Close (5 min) ⌘

What You Need

Presentation Slides

Slides are available to support all parts of the lesson.



Math Toolkit

Make available for use at any time in the lesson:

- Counters
- Connecting cubes
- 5-Frames Workmat

Digital Math Tools

- Counters and
- Connecting Cubes

Materials

SESSION 1

- Connecting cubes (200 per class)
- Crayons (2 colors per child)

SESSION 2

- Two-color counters (20 per pair)
- Number and Dot Row Cards (2 sets per pair)

SESSION 3

- Two-color counters (10 per pair)
- Opaque bowl (1 per pair)
- 5-Frames Workmat

SESSION 4

- Crayons

SESSION 5

- Two-color counters (10 per child)
- Number and Dot Row Cards (2 sets)



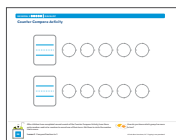
Centers, Differentiation, and Practice

CENTERS | Student-Led Practice

Session Centers: Each Apply It activity can be continued as a student center and repeated as needed in later sessions. Slides and additional printable workmats are available.

SESSION 2 Counter Compare

Compare groups of counters to determine if a group has *more than*, *less than*, or the *same* number as another group.



SESSION 3 Hide One More

Identify a number of counters that is *one more* than a given number.



SESSION 4 Compare Numbers

Compare numbers shown in written form and as quantities.



SESSION 5 Lesson Reflection

Show what you learned from the lesson.

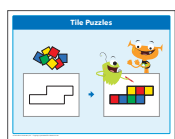


Centers Library: Reinforce skills, review, and build fluency.

SKILL REVIEW Tile Puzzles

Card 8

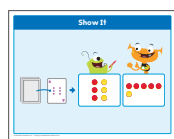
Reinforce counting up to 5 objects.



FLUENCY Show It

Card 13

Reinforce showing quantities within 5.



DIFFERENTIATION | Teacher-Led Small-Group

Meet the needs of each and every child through teacher-led small groups.

RETEACH and **EXTEND** options are provided for each Session Center.

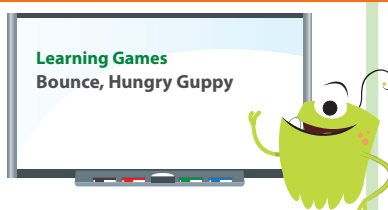
INDEPENDENT PRACTICE

Session Practice: in the Student Worktext

Fluency and Skills Practice: available on Teacher Toolbox

Interactive Practice: assignable through i-Ready Connect

i-Ready Personalized Instruction



Student-Led Centers

Session Centers extend children's work with the Apply It activities begun during the Develop and Refine sessions.

Centers Library is a set of repeatable centers that provide opportunities for children to practice and review key skills and develop fluency. Two centers from the library are recommended to accompany each lesson and can be used in any session.

Additional Practice options include Student Worktext practice pages, *Fluency and Skills Practice*, digital practice, and digital games.

Optional Add-On: Personalized Instruction resources provide children with opportunities to strengthen grade-level skills by working on their personalized path.

TEACHER'S GUIDE **Overview** *continued*

Purpose provides a roadmap of what children will be learning and doing throughout the session.

Start: Number Sense activities provide daily opportunities for children to talk about numbers and relationships, develop understanding of number, and use numbers and operations flexibly.

Counting Routines provide children with engaging opportunities to practice rote counting daily.

DIFFERENTIATION | English Learners helps teachers scaffold or amplify language for a specific activity so English learners can access and engage with grade-level mathematics.

LESSON 5

SESSION 2 DEVELOP

Purpose

- **Develop** understanding of one-to-one matching to compare groups.
- **Recognize** that a group has more when, after matching, that group has objects left over.

How can you show it another way?

START

Number Sense

Show It Another Way

Show the slides one at a time.

ASK: *How can you show the number another way?*

- Encourage children to use materials, fingers, or drawings.
- Have children turn and talk about how they showed the number.
- Listen and look for a variety of solutions for whole class sharing.

Facilitate Whole Class Discussion

- *What number did you show? How did you show it?*
- *How is your partner's way the same or different from yours?*

Repeat for each slide.



PASS AND COUNT Have children count forward by 1s from 1 to 40 as they pass a bean bag around the circle. Then reverse direction and count backward from 10 to 0.

DIFFERENTIATION | English Learners Use with Connect It

Academic Vocabulary: *Match* means to put one thing with exactly one other thing or to put two of the same thing together..

Levels 1–3 Listening/Speaking

Support participation in Connect It by building the meaning of *match*. Show some pencils and fewer erasers. **SAY:** *Let's match the pencils and the erasers. Have children repeat. SAY: We cannot match this pencil to an eraser. The group of pencils has more.* Invite partners to explain *match* and *more* in their home language using other unequal groups. **ASK:** *Which group has more?* Encourage children to respond using phrases.

Levels 2–4 Listening/Speaking

Help children participate in Connect It by beginning to model how to match a group of pencils and fewer erasers. After you start, have partners explain *match* and *matching*, first in their home language and then in English. Then provide sentence frames to support using *match* and *more*:

- *I match the ____ and the ____.*
- *I cannot match all of the ____.*
- *So, the group of ____ has ____.*

Levels 3–5 Listening/Speaking

Support participation in Connect It by first inviting children to explain ideas in their home language before explaining in English. Provide partners with some pencils and fewer erasers to compare. **ASK:** *How does matching help you find which group has more?* After partners discuss, provide a sentence frame to support their explanations:

- *Matching helps me find which has more because ____.*

Math Toolkit provides options of hands-on materials and visual models for children to strategically use as needed.

Make Sense of the Problem uses a language routine to help children understand the problem. See the Integrating Mathematics and Language section on the Teacher Toolbox (under the Program Implementation tab) for tips on integrating language routines, teacher moves, and conversation tips during instruction.

Support Partner Discussion provides teachers with prompts to help children engage in meaningful peer discourse.

Facilitate Whole Class Discussion provides questions and facilitation moves that help teachers guide discussions that illuminate the mathematical ideas of the lesson. Connect It questions prompt children to make connections among representations or solutions and to articulate a generalization of the key mathematical concept in the lesson.

Select and Sequence Strategies gives a range of possible strategies—from concrete to representational to abstract—for use in monitoring childrens' work and facilitating discourse. This information can be used to make decisions about which models and strategies to share and discuss as a class.

ASK/LISTEN FORs are mathematical discourse questions followed by expected responses that support whole class discussion.

As children share their thinking, these discourse questions can be used to make connections between their approaches and different models and representations, prompt justifications and critiques of approaches and solutions, and check conceptual understanding.

SESSION 1
EXPLORE

SESSION 2
DEVELOP


SESSION 3
DEVELOP

SESSION 4
REFINE

SESSION 5
REFINE

LESSON 5

MATERIALS

- Math Toolkit 
- Counters
- Connecting cubes
- 5-Frames Workmat

Try-Discuss-Connect

How can you compare two groups?

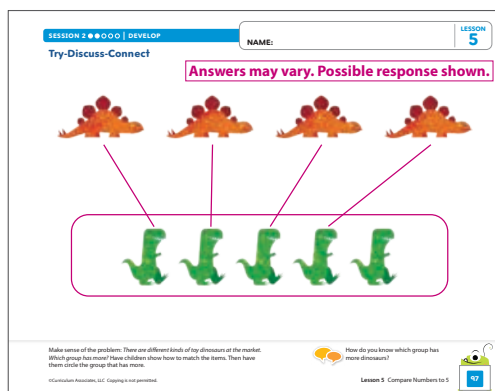
Try It | SMP 1, 2, 4, 5, 6

Read the problem aloud:
There are different kinds of toy dinosaurs at the market. Which group has more?

Use **Connect to Culture** to encourage children to make personal connections.

Make Sense of the Problem

Use **Notice and Wonder** to help children make sense of the problem. Ensure children understand they should show a way to compare the dinosaurs in each group.



Discuss It | SMP 2, 3, 6

Support Partner Discussion

Have children respond to the Discuss It question with a partner:
How do you know which group has more dinosaurs?

Facilitate Whole Class Discussion

Have two or three selected children share their strategies in the order you have chosen.

ASK How does [child name]'s strategy show which group has more?

LISTEN FOR children to say the bottom group has more because they counted more dinosaurs in the bottom group than in the top group or that when they matched the objects, the bottom group has one left over. Children may question why the bottom group looks shorter but has more dinosaurs.

Guide children to **Compare and Connect** the strategies.

Connect It | SMP 2, 4, 5

Help children recognize that you can match objects to compare groups.

ASK How does matching the objects show which group has more?

LISTEN FOR children to say a group that has objects left over is the group with more.

In the next **Apply It** activity, children will practice comparing numbers using counters.

Select and Sequence Strategies

One possible order for whole class discussion:

- Counting
- Matching the objects
- Comparing numbers

Develop Academic Language

Why? Help children become aware of the uses of *compare*.

How? Help children point to and say the word *Compare* on their **Counter Compare**

Activity page. **SAY:** *Sometimes we compare numbers or the size of things in math. We also compare things to see how they are the same and how they are different, like characters in stories or strategies for solving problems. So, compare can be a math word or an academic vocabulary word.* **ASK:** *When do you compare numbers? When do you compare to see how things are the same and different?*

Develop Academic Language supports all children—including ELs—in learning, understanding, and using academic language at the word, sentence, and discourse levels.

TEACHER'S GUIDE **Overview** *continued*

Apply It Activities are repeatable tasks that are introduced during whole class instruction and can be continued as centers.

Error Alert draws attention to frequently made errors in procedure or calculation and provides on-the-spot remediation.

Sentence Frames provide language support to children as they explain their strategies, make connections, or justify their thinking.

LESSON 5

SESSION 2 DEVELOP

MATERIALS (per pair)



Two-color counters
(20)



Number and Dot Row Cards
Numbers 0 to 5
(2 sets)

Counter Compare Workmat
(optional)

Preparation: Give each pair 20 two-color counters and a stack of Number and Dot Row Cards (2 sets mixed together).

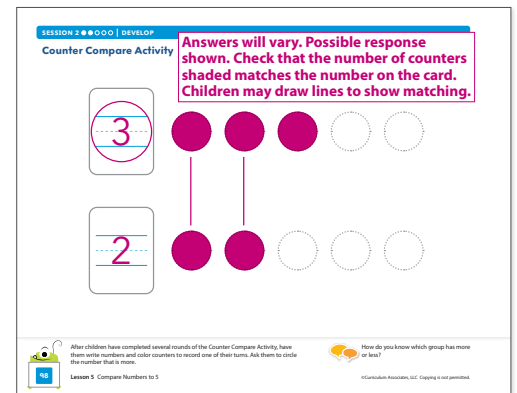
• **APPLY IT** | SMP 2, 5, 8

Counter Compare Activity

How can you use objects to compare numbers?

This activity guides children to develop understanding of using one-to-one matching to compare groups.

- Tell children they will practice comparing numbers by using counters. They will show numbers with counters and decide which is more.
- Invite two volunteers to demonstrate the game.
- Place the stack of number cards facedown next to a pile of 20 counters.
- Both players take a number card but do not show it to the other player yet.
- Each player uses counters to show their number.
- Players match counters to decide which group has more and which group has less.
- Players reveal their cards and check that the counters match the numbers.
- The player whose group shows less says the comparison aloud, for example: *1 is less than 3*. The player whose group shows more says their comparison aloud: *3 is more than 1*.
- The player whose group shows more keeps both cards. If the groups are the same, each player keeps a card.
- Place the counters back in the pile and repeat until all the cards are used.
- The player with more cards wins the game.
- After demonstrating the game, have children play in pairs.



Error Alert

If the number of counters shown does not match the number on the card, encourage children to check their work by matching each dot on the card with one of their counters.

• **Sentence Frames**

To support children explaining their strategies when speaking or writing:

- We compared ____ and ____.
- I know ____ is more because ____.

Facilitate Whole Class Discussion

Guide children to share their understanding of using matching to compare numbers. Have children turn and talk with a partner to share their ideas before discussing as a class.

ASK How did matching help you know which player had more counters?

LISTEN FOR children to explain that whoever had counters without a match had more.

ASK How did matching help you know when you both had the same number of counters?

LISTEN FOR children to describe how neither player had any counters left over after matching their counters.



Centers, Differentiation, and Practice

CENTERS | Student-Led Practice

Session Centers

Counter Compare

Children strengthen understanding that they can compare two groups of objects to determine which has more or less, or whether they have the same, by continuing the activity in a center.

Centers Library

SKILL REVIEW: Tile Puzzles

FLUENCY: Show It

DIFFERENTIATION | Teacher-Led Small Group

RETEACH

Use with children who need support to decide which group has more or less.

Materials: 5 markers with removable caps

- Remove the cap from each marker. Give the 5 caps to the child.
- Instruct the child to place some or all of the caps in front of them.
- Choose some or all of the markers and place them in front of the child.
- Have the child arrange both groups into rows and count to tell how many in each row.
- Ask questions like: *Is there a cap for each marker? Not enough caps? Too many markers?* Ask the child which group has more and how they know. Repeat with asking the child to determine which group has less.

EXTEND

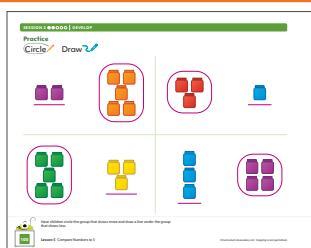
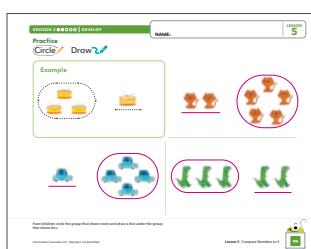
Use with children who readily compare two given numbers.

Materials: 5 two-color counters, Number and Dot Row Cards (0 to 5, 2 sets)

- Mix up the number cards. Lay 10 of the cards faceup on the table.
- Put out a group of 1 to 4 counters.
- Children work to quickly pick up as many cards as they can that show *more*.
- Replace cards to make 10 total and repeat with new counters.
- Repeat, varying the game by having children pick up cards that show *less*.

INDEPENDENT PRACTICE

Student Worktext



Digital Practice

Learning Games: Bounce, Hungry Guppy

i-Ready Personalized Instruction

Independent Practice options include Student Worktext practice pages, *Fluency and Skills Practice*, digital practice, and digital games.

Reteach mathematical concepts using the teacher-led activity with children who need additional support.

Extend mathematical concepts with the teacher-led activity for children who demonstrate proficiency.

CLOSE

MATH REFLECTION *Think about some ways you compared numbers. What did you discover about more, less, and the same?*

SELF REFLECTION *Why is it important to keep your math activity space organized?*

Close prompts are provided at the end of each session to invite children to reflect on the math of the lesson, as well their own learning habits.