Math In Our World

Kindergarten : Unit 1

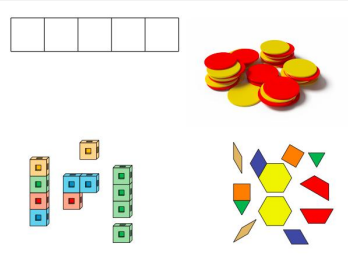
Standards addressed: CC.A.1, CC.B, CC.B.4, CC.B.4A, CC.C.6

Unit 1 Progression Overview

Math In Our World

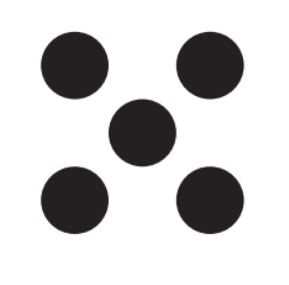
Section A
Lessons 1-5
CC, G, G.B

- Explore and use math tools
- Share mathematical ideas with a partner



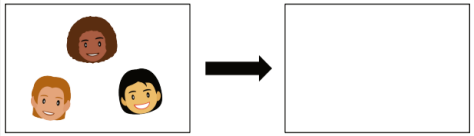
Section B
Lessons 6-9
CC, CC.B.4

- Recognize and name groups of up to 4 objects and images without counting



Section C
Lessons 10 - 11
CC.

- Answer “are there enough” questions



Section D
Lessons 12-17
CC, CC.A.1, CC.B, CC.B.4, G.B

- Count groups of up to 10 objects

Unit 1 Quick Links

L1 L2 L3 L4 L5 L6

L7 L8 L9 L10 L11 L12

L13 L14 L15 L16 L17

1

Explore Connecting Cubes

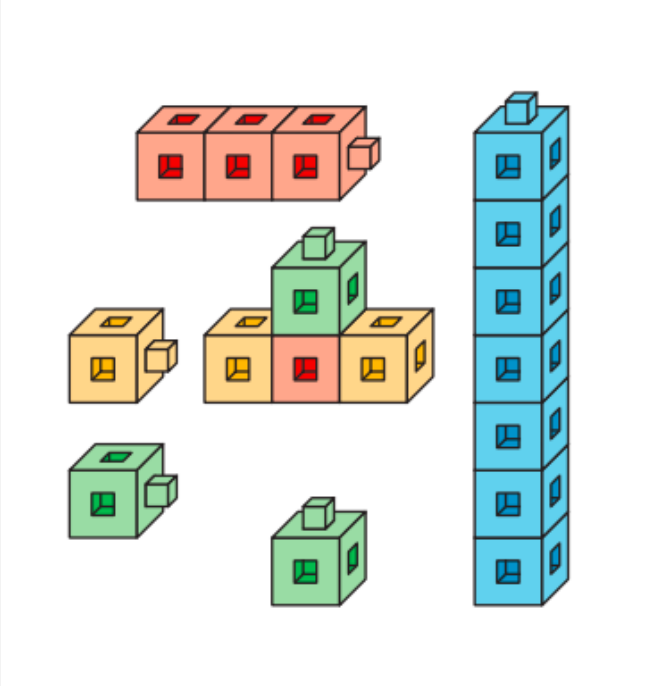
Let’s explore connecting cubes

MD, MD.B.3, CC.B, G.B

Warm up

Notice and Wonder

What do you notice? What do you wonder?



These are called connecting cubes.

What is one thing you could do or make with the connecting cubes?

Activity #1

Introduce Connecting Cubes; Explore

Share with your partner or class one thing you made with your connecting cubes.

Who heard something you might want to try next time with the connecting cubes?

Lesson Synthesis

Today we explored connecting cubes and you explained to your partner what you were doing with the cubes.

Let's make a chart about what you did and what I did while we were doing math today.

Mathematical Community	
Doing Math	*Norms*
Students	Students
Teacher	Teacher

2

Explore Pattern Blocks

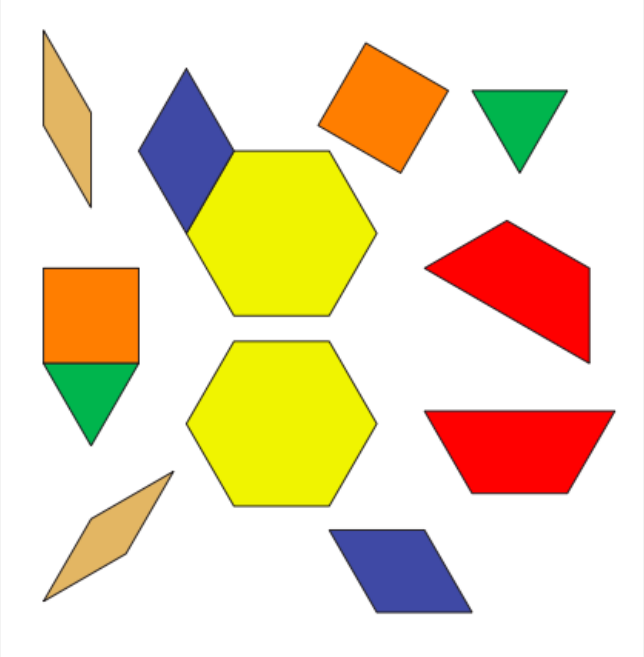
Let’s explore pattern blocks

K.G, K.MD.B.3, K.CC.B

Warm up

Notice and Wonder

What do you notice? What do you wonder?



These are called pattern blocks.

What is one thing you could do or make with the pattern blocks?

Activity 1

Introduce Pattern Blocks; Explore

Share with your partner or class one thing you did or made with your pattern blocks.

Some of us used the pattern blocks to make designs and pictures.

What kinds of tools can you use at home to make designs or pictures?

Lesson Synthesis

Today, we explored pattern blocks and you explained to your partner what you were doing with the blocks.

Let's add to our chart from yesterday about what doing math together looks like.

Mathematical Community	
Doing Math	*Norms*
Students	Students
Teacher	Teacher

3

Exploring Two-Color Counters and 5-Frames

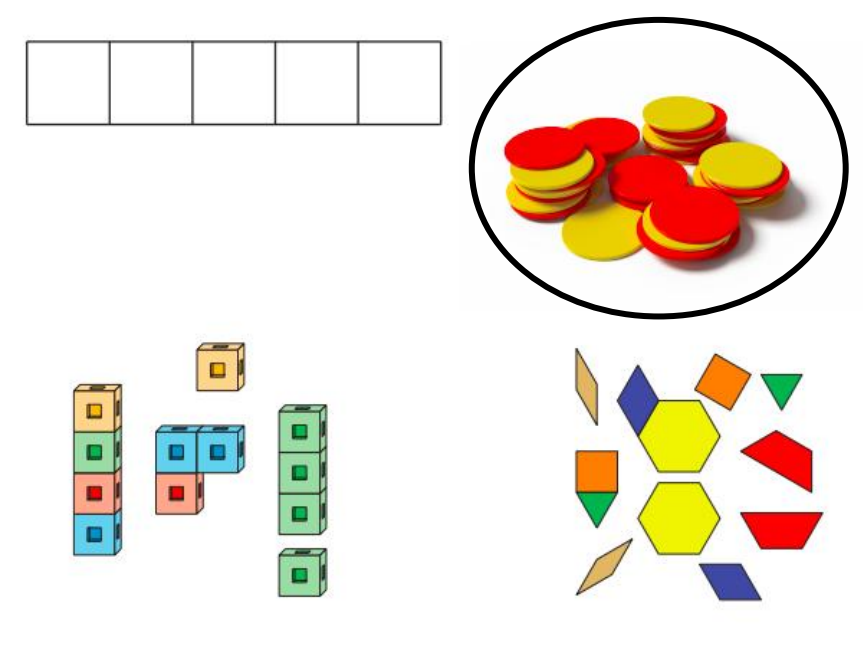
Let’s explore two-color counters and 5-Frames

CC.B, MD.B.3

Warm up

Notice and Wonder

What do you notice? What do you wonder?

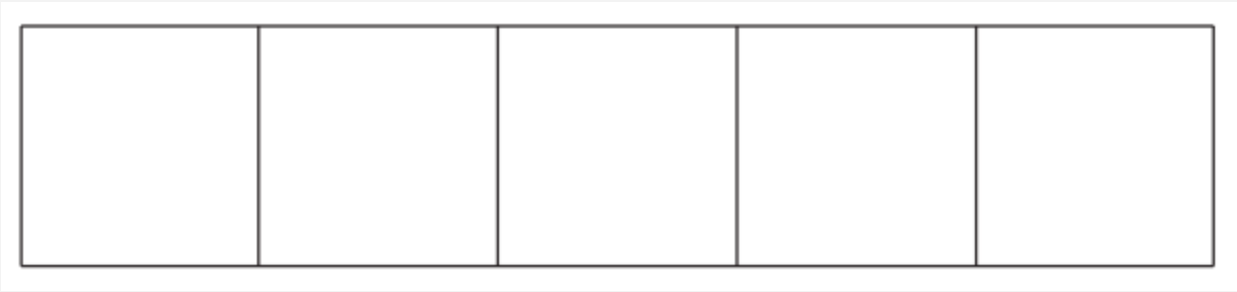


These are called two-color counters.

How are these math tools the same? How are they different?

Activity #1

Explore Counters and 5 - Frames

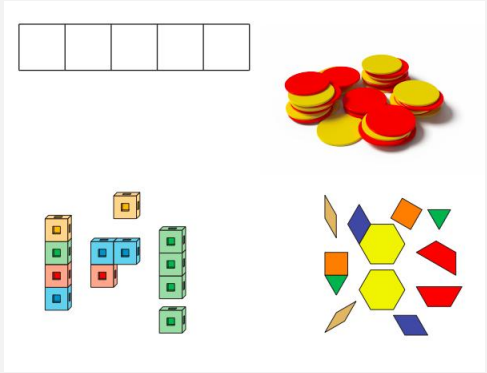


Share one thing you did or made with the two-color counters and 5-frames?

Lesson Synthesis

We've learned about tools that can help us do math - connecting cubes, pattern blocks, counters, and 5-frames.

Let's practice counting to 10.



Which tools can you use to count? Why?

Which tools can you use to make shapes? Why?

4

Explore Geoblocks

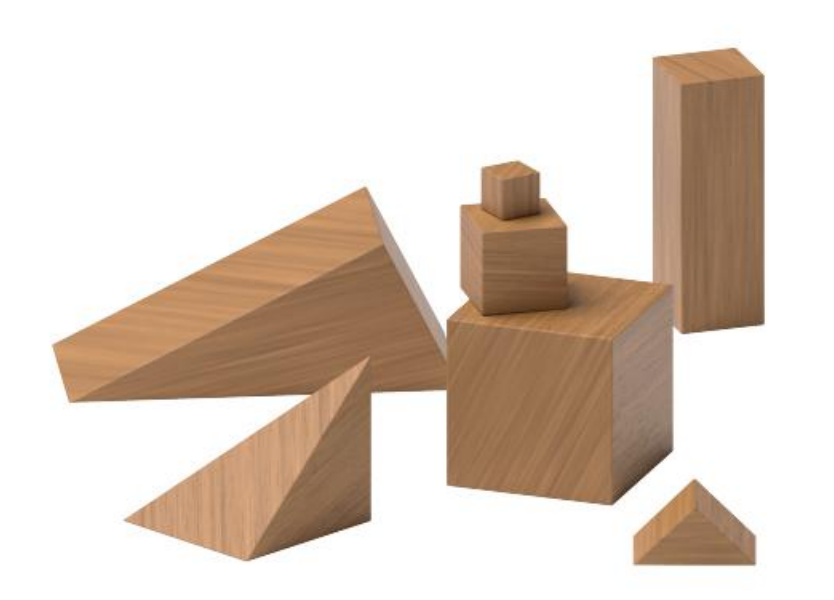
Let’s explore blocks

K.MD, MD.B.3, CC.B,, K.G

Warm up

Notice and Wonder

What do you notice? What do you wonder?



These are called geoblocks.

What is one thing you could do or make with the geoblocks?

Activity #1

Introduce Geoblocks; Explore

Share with your partner or class one thing you did or made with geoblocks.

One thing that we did with the geoblocks was build.

What kinds of tools can you use at home to build things?

Activity #2

Introduce Geoblocks; Build

What do you notice? What do you wonder?

Use blocks to build a house.

What new ideas did you hear your partner talk about today when they used the geoblocks?

What did you see your partner do with their geoblocks?

Lesson Synthesis

Today we explored geoblocks.

What was your favorite thing you did or made with geoblocks?

Let's practice counting to 10.

Which of these did you do today?
How did they help the class?
Is there anything we should add to our poster?

Mathematical Community	
Doing Math	*Norms*
Students	Students
Teacher	Teacher

5

Explore Math Tools

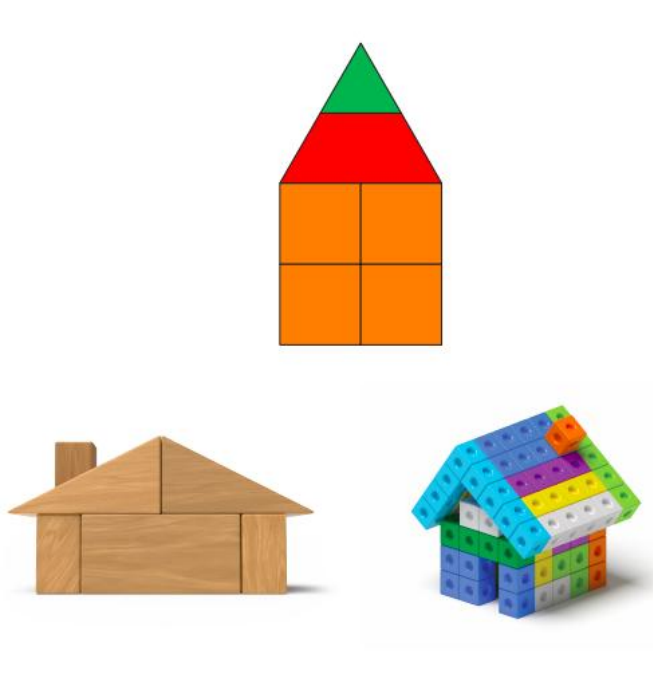
Let’s explore our math tools

K.CC.B, K.G, K.MD.B.3

Warm up

Notice & Wonder

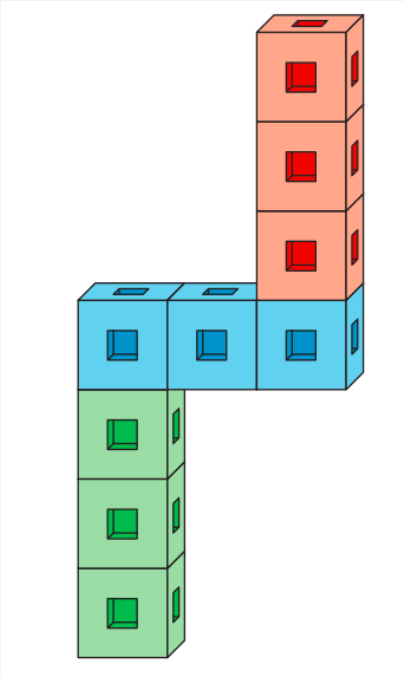
What do you notice? What do you wonder?



Can someone tell me what their partner said?

Introduce Connecting Cubes, Build To Match

Activity #1

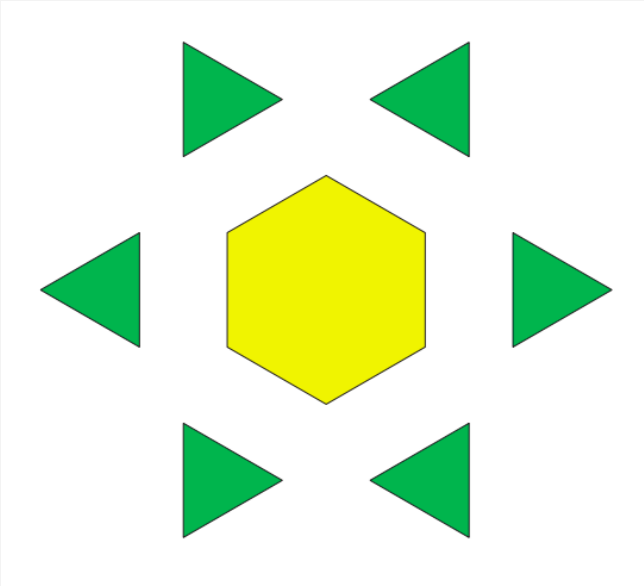


Use your connecting cubes to build this object.

Show your partner and describe it to them.

Introduce Pattern Blocks, Puzzles

Activity #2

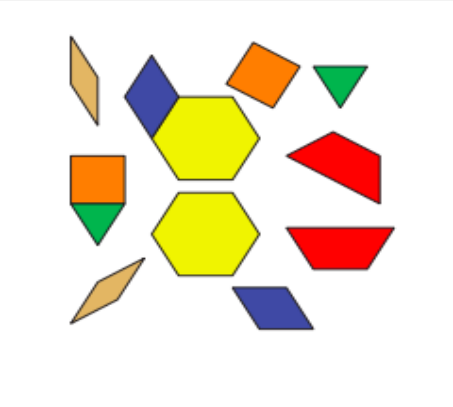


Use your pattern blocks to fill in the puzzle.

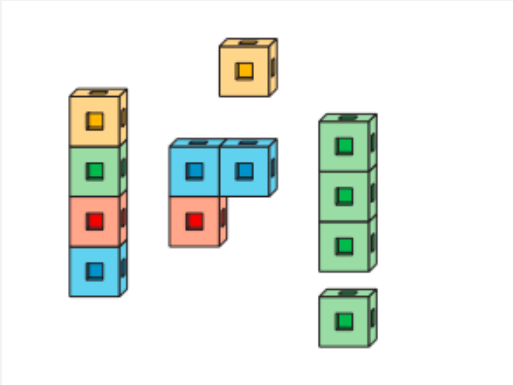
Which puzzle was your favorite?

Activity #3

Center Choice Time



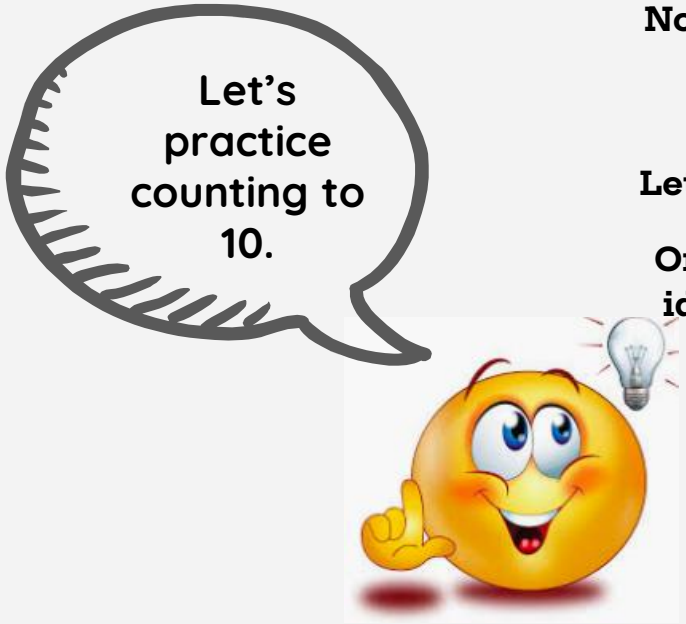
Pattern Blocks
Geoblocks



Connecting Cubes

Lesson Synthesis

Today, we got to choose a math tool to work with. We also listened carefully to other students so we could repeat their math ideas.



Norms are expectations that help everyone in the room feel safe, comfortable, and productive doing math together.

Let's make a list of norms for how we do math together.

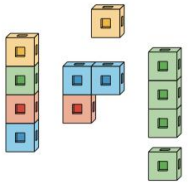
One example of a norm is 'Listen as others share their idea ass?

Mathematical Community	
Doing Math	*Norms*
Students	Students
Teacher	Teacher

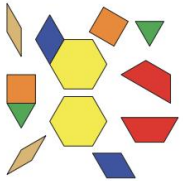
Section Summary

We explored many math tools.

Connecting cubes



Pattern blocks



Geoblocks

Two-color counters

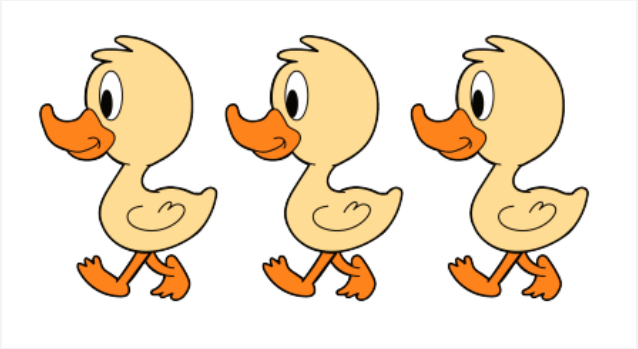
5-frames

Look for Small Groups

Let’s look for small groups of objects

Warm up

Act It Out



Three (3) little ducks went out one day,
Over the hill and far away.
Mother duck said, “Quack, quack, quack.”
Then the three (3) little ducks came back.

We will come back to this story tomorrow and think about what happens in the story.

Activity #1

How Many Do You See?

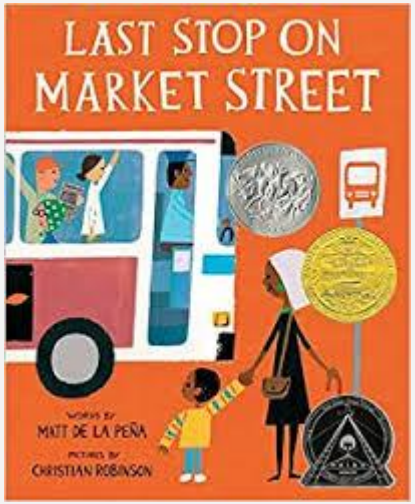
How many do you see? How do you see them?

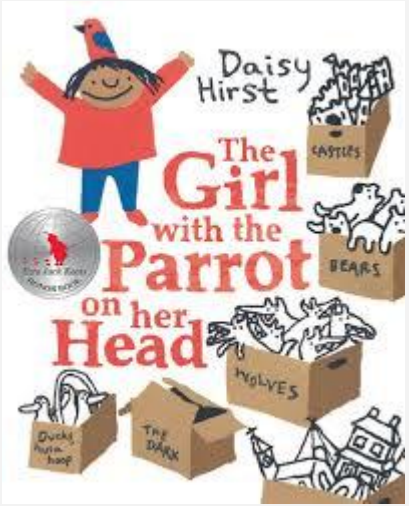
There are three dots.

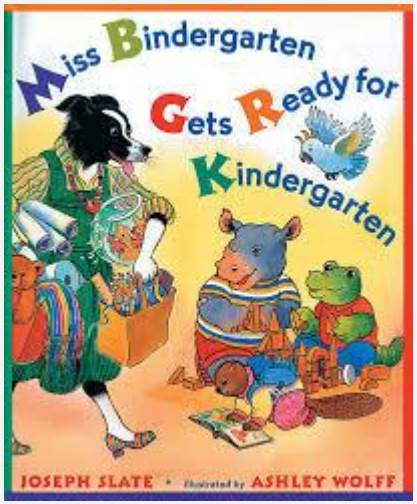
Activity #2

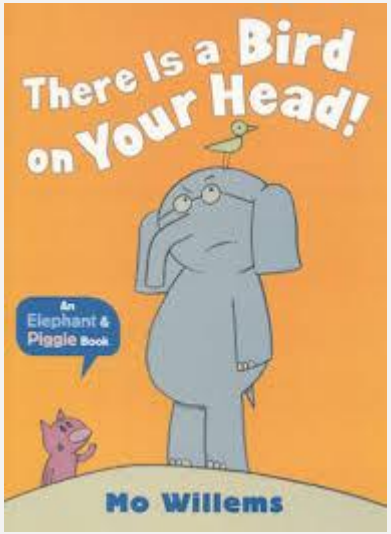
Exploring Picture Books

Look for groups of things in your book. Use your fingers to show your partner and tell your partner how many things there are in the groups you find.





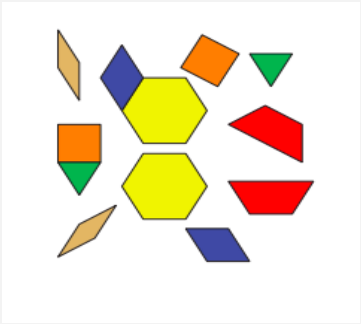


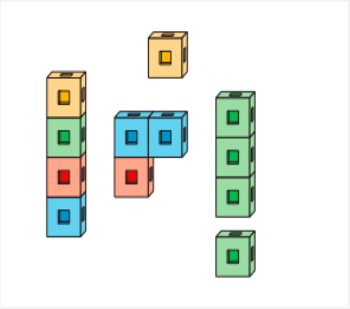


What groups of things did you find in your book? How many things are in the group?

Activity #3

Choice Time





Pattern Blocks

Connecting Cubes

Geoblocks

Picture Books

Lesson Synthesis

Today, we worked with partners and shared our ideas as we looked for groups of things in books. What went well? What can we continue to work on?

7

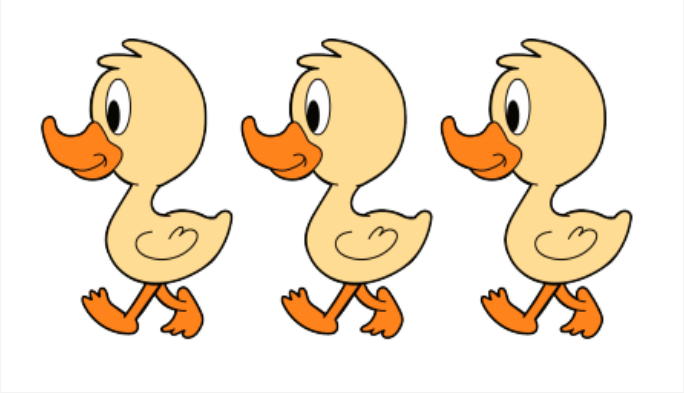
Classroom Scavenger Hunt

Let’s look for groups of objects in the classroom.

K.CC, K.CC.B.4

Warm up

Act It Out



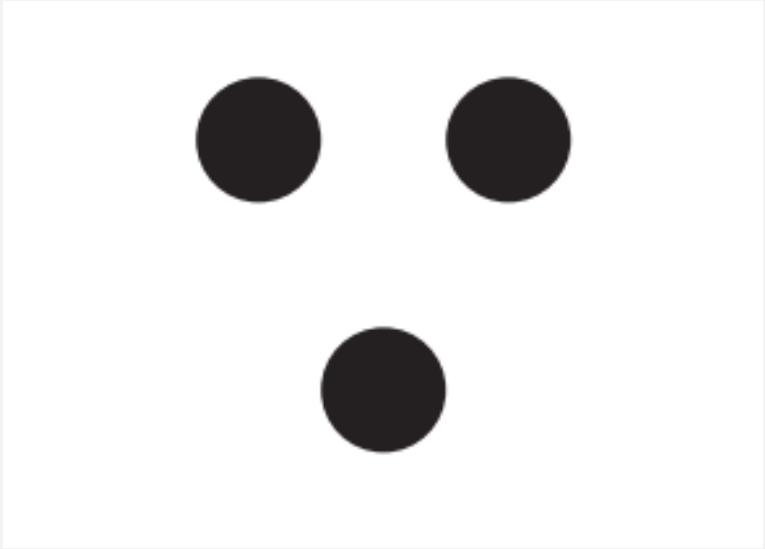
Three (3) little ducks went out one day,
Over the hill and far away.
Mother duck said, “Quack, quack, quack.”
Then the three (3) little ducks came back.

Let’s act it out.

Activity #1

How Many Do You See?

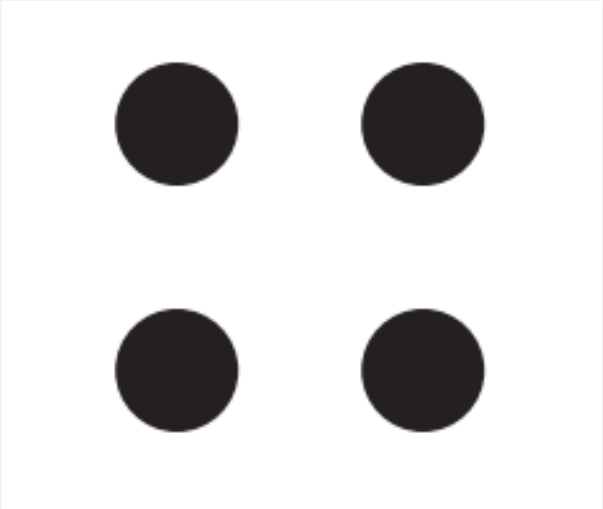
How many do you see? How do you see them?



Activity #1

How Many Do You See?

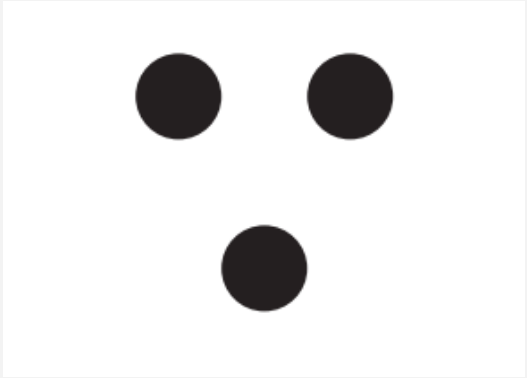
How many do you see? How do you see them?



We used our fingers to show how many dots there are.
Use your fingers to show how many teachers are in our classroom.

Activity #2

Classroom Scavenger Hunt



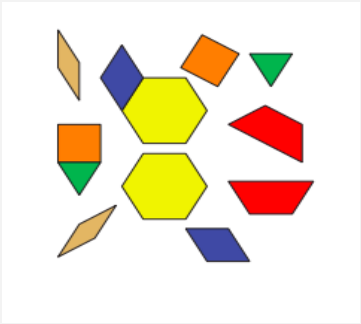
Where do you see a group of 3 objects in our classroom?

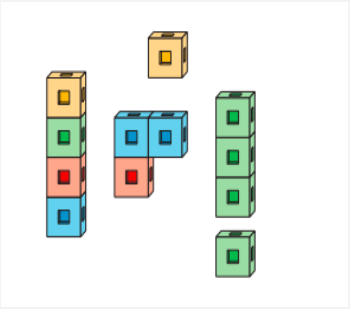
Walk around the room with your partner and find groups of objects. When you find a group, tell your partner how many objects are in the group and how you know.

What groups of objects did you find in our classroom?
How did you know how many objects were in the group?

Activity #3

Choice Time





Pattern Blocks

Connecting Cubes

Geoblocks

Picture Books

Lesson Synthesis

Today, we found groups of objects in the classroom. Tell your partner how you knew how many objects were in each group you found.

8

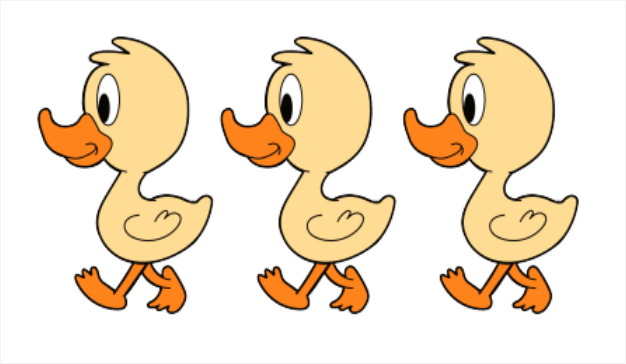
Different Group, Same Quantity

Let’s find groups that have the same number of things.

K.CC.B.4, K.CC, K.CC.C.6

Warm up

Act It Out



Three (3) little ducks went out one day,
Over the hill and far away.
Mother duck said, “Quack, quack, quack.”
Then the three (3) little ducks came back.

Let’s act it out a different way.

Activity #1

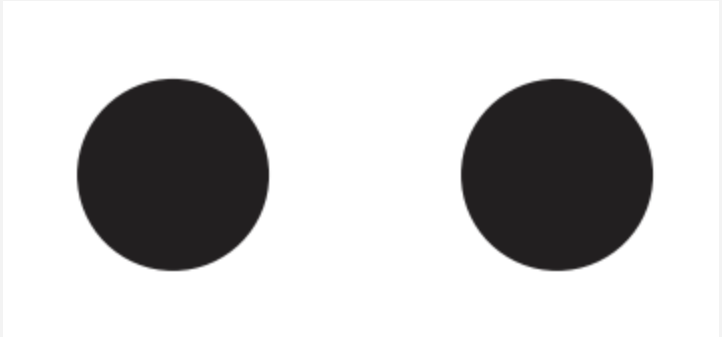
How Many Do You See?

How many do you see? How do you see them?

Activity #1

How Many Do You See?

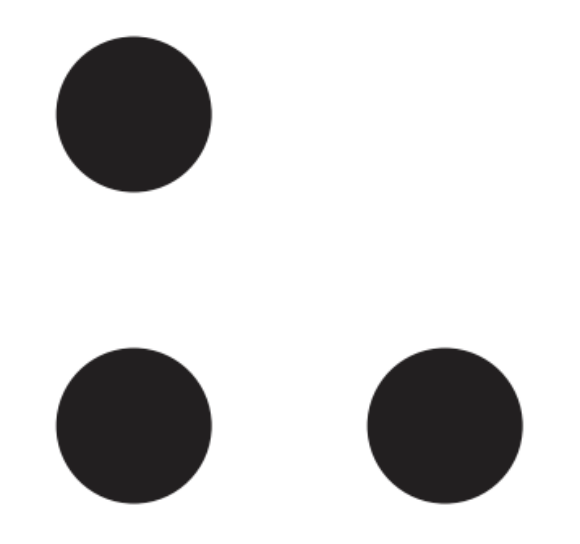
How many do you see? How do you see them?



How Many Do You See?

Activity #1

How many do you see? How do you see them?



We're going to play a game called "Is it 3?" When I show you fingers or dots, think about if it is 3. If it is 3, give a thumbs up. If it is not 3, touch your shoes.

Activity #2

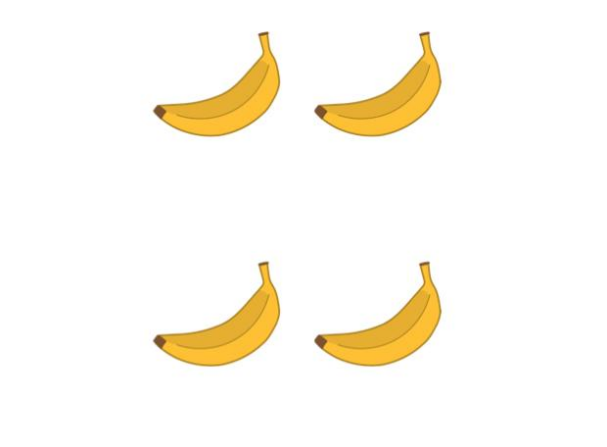
Different Groups, Same Quantity

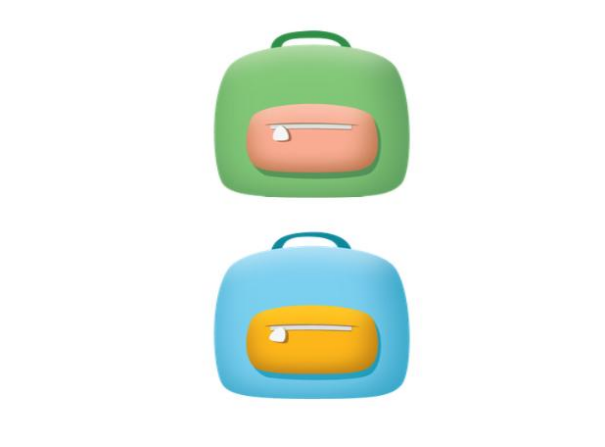
Which groups have the same number of things? How do you know?

Work with your partner to match the cards that have the same number of things. Explain to your partner how you know.

Activity #2

Different Groups, Same Quantity

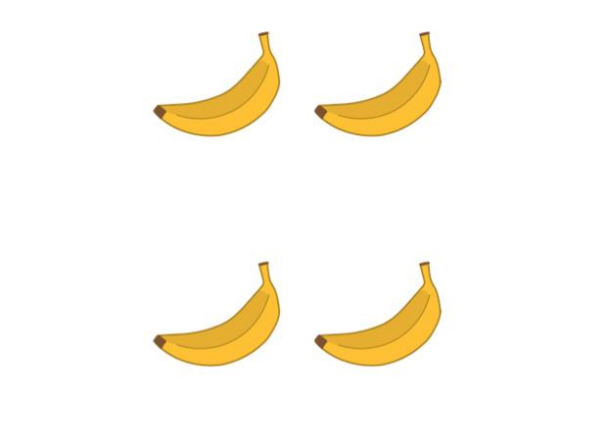




What's the same about these cards? What is different?

Activity #2

Different Groups, Same Quantity

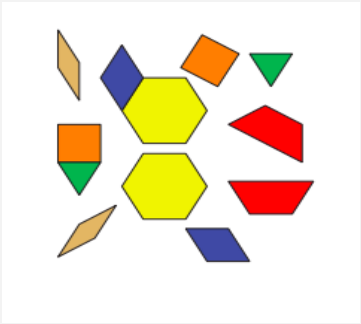


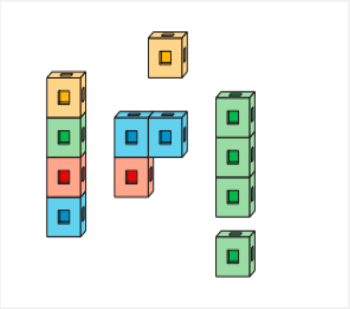
What's the same about these cards? What is different?

These cards both have the same number of things.
They both have 4.

Activity #3

Choice Time





Pattern Blocks

Connecting Cubes

Geoblocks

Picture Books

Lesson Synthesis

Today, we matched groups that had the same number of things.

Show or tell your partner how many things are on this card.

What are some groups of things in our classroom that have 3 things?

9

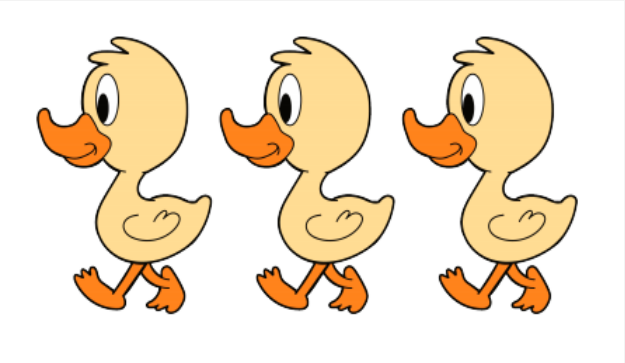
Picture Book Creation

Let’s make picture books about our classroom.

K.CC.B.4

Act It Out

Warm up



3 little ducks went out one day,
over the hill and far away.
Mother duck said, “Quack, quack, quack.”
Then 3 little ducks came back.

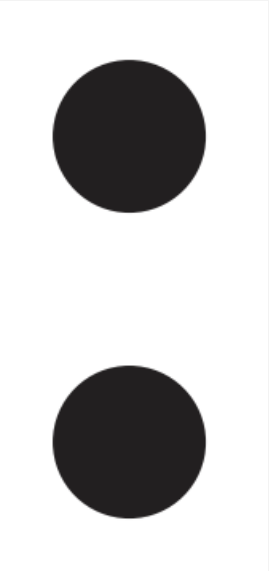
3 little ducks went out one day,
over the hill and far away.
Mother duck said, “Quack, quack, quack.”
Then 2 little ducks came back.

What will be different about how we act out the story this time?

Activity #1

How Many Do You See?

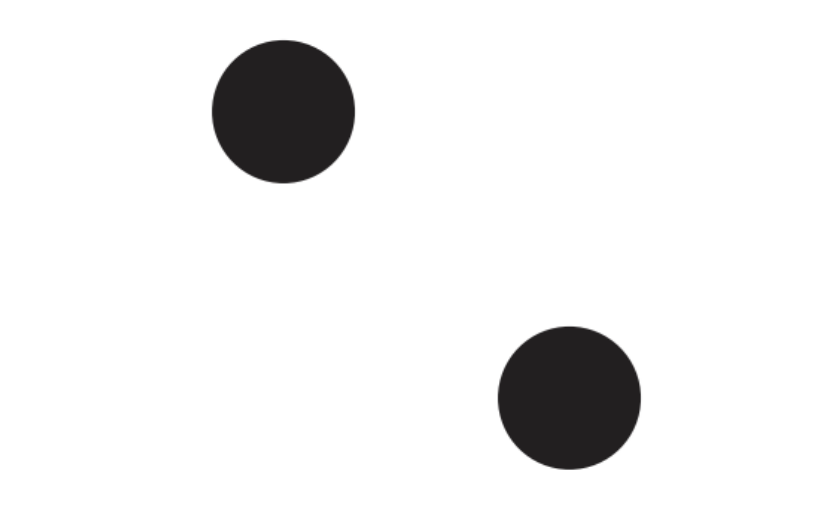
How many do you see? How do you see them?



How Many Do You See?

Activity #1

How many do you see? How do you see them?

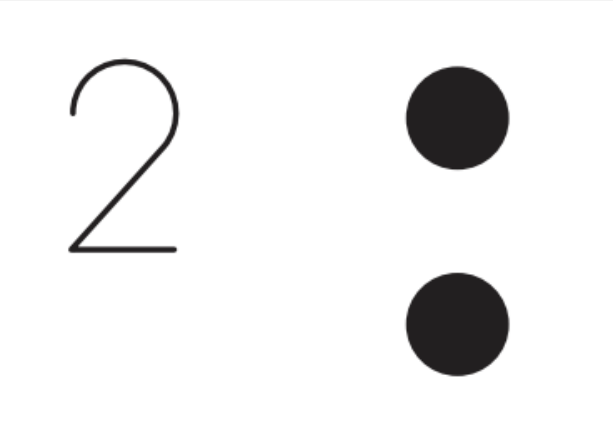


What did you notice about the group of dots?

Activity #2

Introduce Picture Books, Create

What do you notice? What do you wonder?

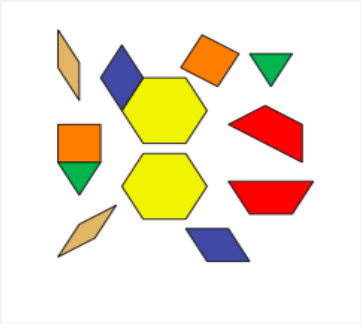


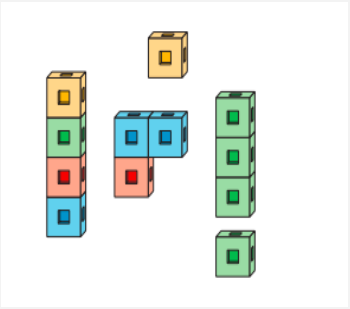
What is the same about all of these groups of things?

Make a page for a picture book.
There are two dots at the top of the page, so on this page you should draw things that there are two of in our classroom.

Activity #3

Choice Time





Pattern Blocks

Connecting Cubes

Geoblocks

Picture Books

Lesson Synthesis

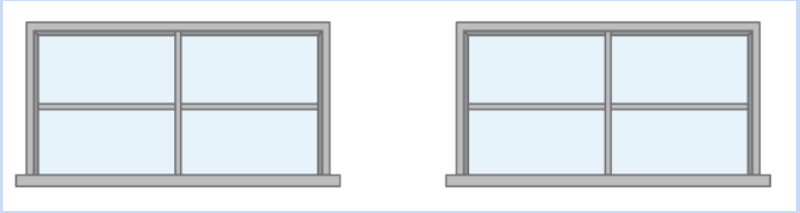
Today, we made a page in our picture books with different groups of things from around our classroom.

What are some groups of 2 we saw?

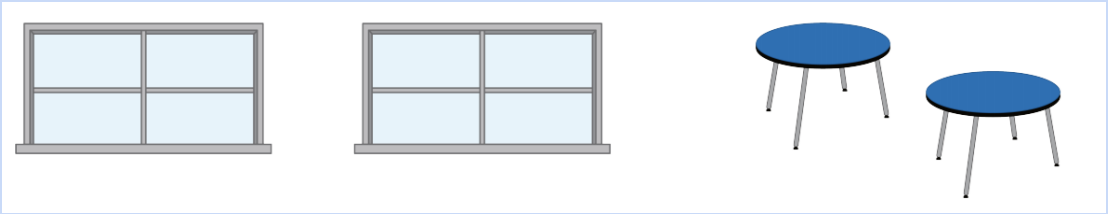
Let's count to 10.

Section Summary

In this section, we noticed math in our world. We found groups of things in our classroom and in books. We used our fingers and said numbers to tell how many things there are.

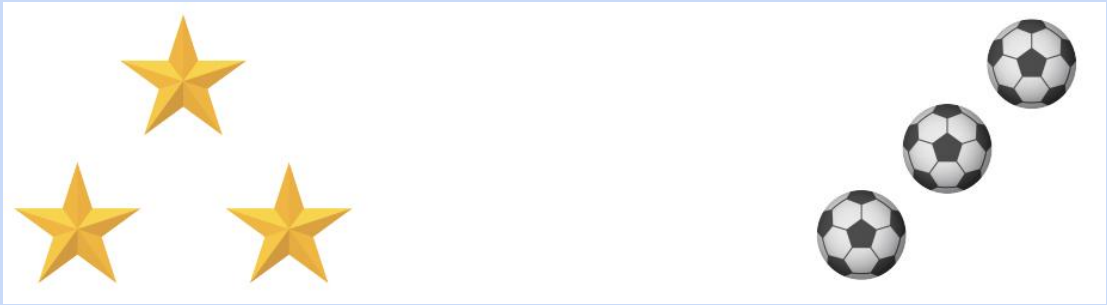


We found groups that have the same number of things.
There are 2 windows and 2 tables.

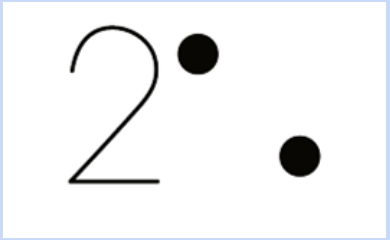


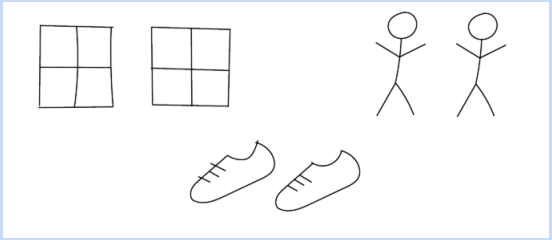
Section Summary

There are 3 stars and 3 soccer balls. They look different but they are both 3.



We created our own books to show groups that have the same number of things in our classroom.





Are There Enough?

Let’s figure out if there are enough supplies for everyone.

Warm up

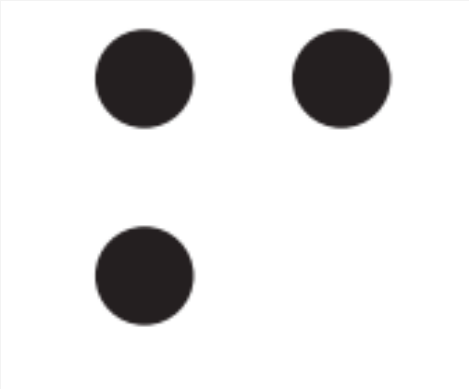
How Many Do You See?

How many do you see? How do you see them?

Warm up

How Many Do You See?

How many do you see? How do you see them?



Did any see the dots the same way but would explain it differently?

Activity #1

Act It Out

4 little speckled frogs sat on a speckled log,
eating the most delicious bugs. Yum! Yum!
1 jumped into the pool, where it was nice and cool.
Now there are 3 green speckled frogs. Glub! Glub!

We will come back to this story tomorrow and think about what happens in the story and act it out.

Activity #2

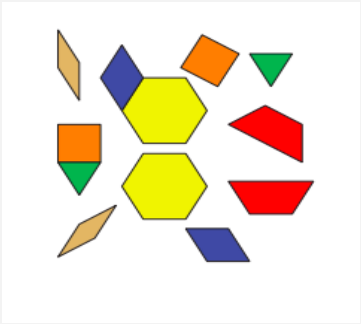
Are There Enough?

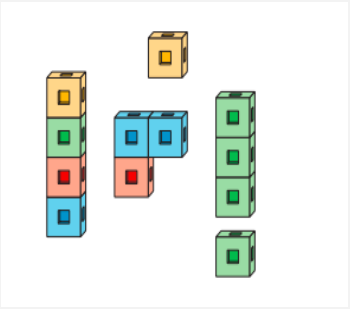
Are there enough pencils at your table for each student to get one?

How did you find out if there were enough erasers?

Activity #3

Choice Time





Pattern Blocks

Connecting Cubes

Geoblocks

Picture Books

Lesson Synthesis

Today, we decided if we had enough pencils and erasers for everyone in our group. Now we are going to see if there are enough markers for everyone in this group.

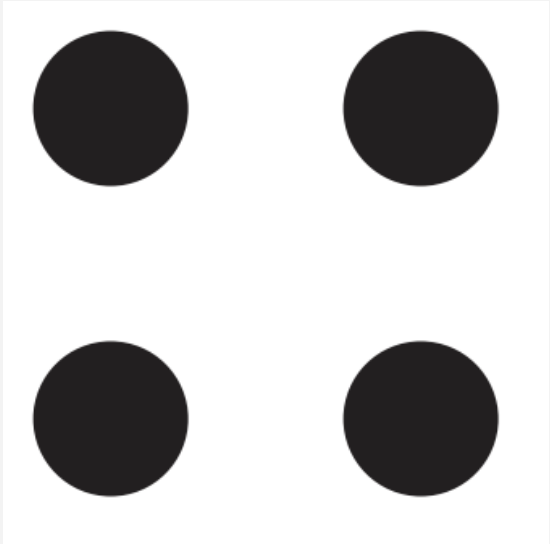
Get Enough

Let’s get enough pencils for everyone.

Warm up

How Many Do You See?

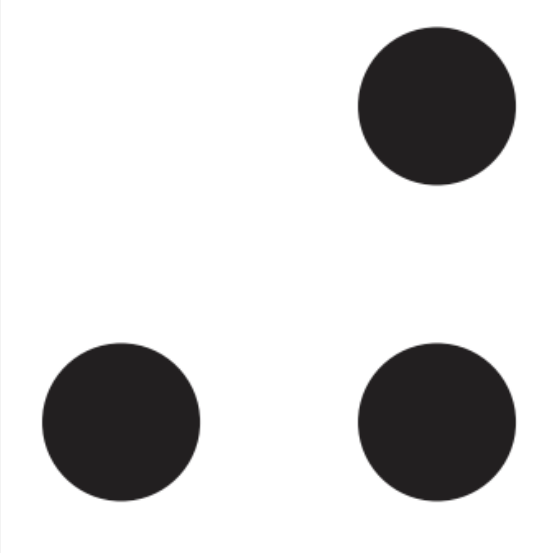
How many do you see? How do you see them?



Warm up

How Many Do You See?

How many do you see? How do you see them?



How could you tell how many dots there were when I flashed the dots so quickly?

Activity #1

Act It Out

4 little speckled frogs sat on a speckled log,
eating the most delicious bugs. Yum! Yum!
1 jumped into the pool, where it was nice and cool.
Now there are 3 green speckled frogs. Glub! Glub!

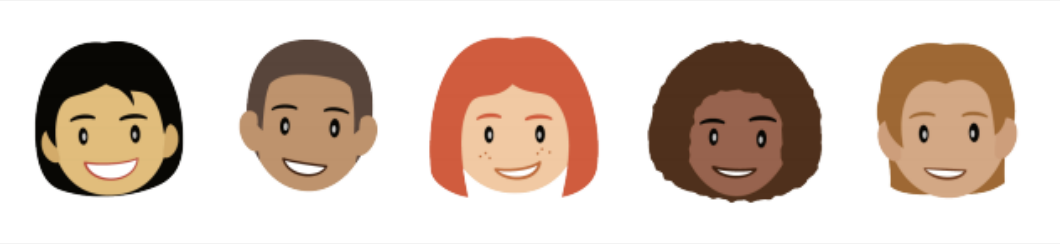
Act it out.

Activity #2

Get Enough

Work together with your group to get enough pencils so that everyone in your group has one pencil.

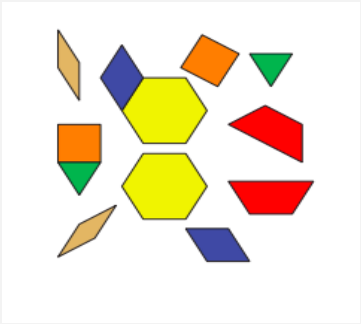
Work with your group to get enough pencils so that each student pictured gets one.

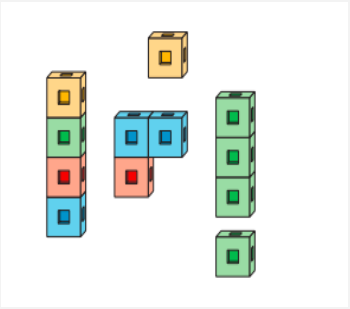


I need to get enough pencils so that each student has one. What should I do?

Activity #3

Choice Time





Pattern Blocks

Connecting Cubes

Geoblocks

Picture Books

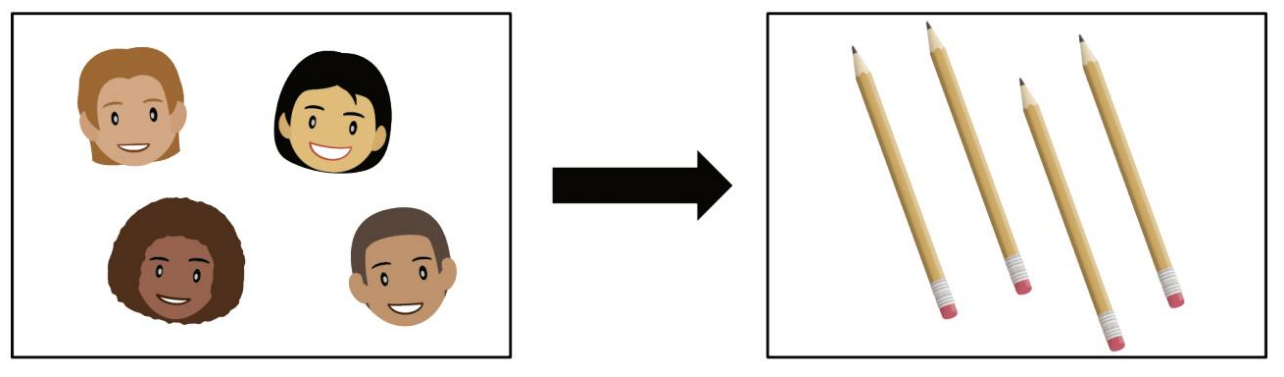
Lesson Synthesis

If this group of students is working with geoblocks during center time, how many blocks do we need so that each student can have one? How do you know?

Let's count to 10.

Section Summary

In this section, we figured out if there were enough pencils for everyone in our group



We matched each pencil with one person. We also got enough pencils so that each person could have one

How Many Are There? (Part 1)

Let’s count collections of objects.

Warm up

Questions About Us

How can we figure out how many of us are there?

How many of us are here today?

Did I count the students correctly?

Activity #1

Counting Collections

Figure out how many objects are in your collection.
Use the tools if they are helpful.

What did you notice about how _____ counted?

Activity #2

Counting to 10

Take turns counting to 10 with your partner.

You can clap your hands or touch the table when you say each number.

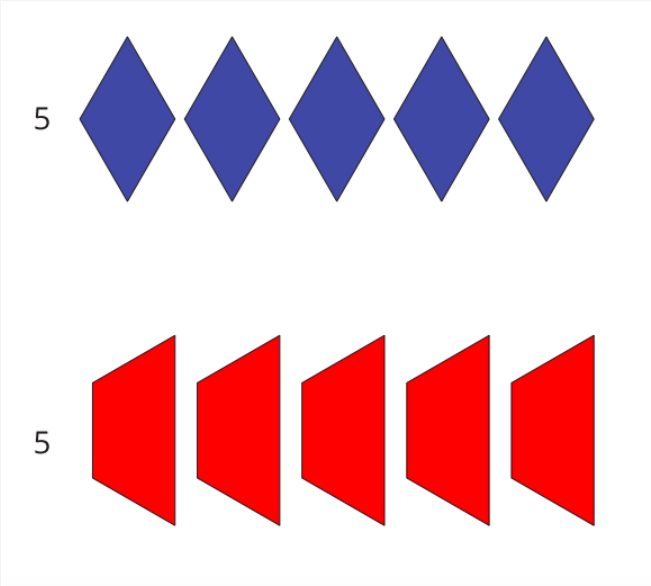
You can also think of your own movement for each number.

Introduce Pattern Blocks, Get and Build

Activity #3

What do you notice? What do you wonder?

This shows you which pattern blocks you need. Work with your partner to take out all of the pattern blocks that you need.

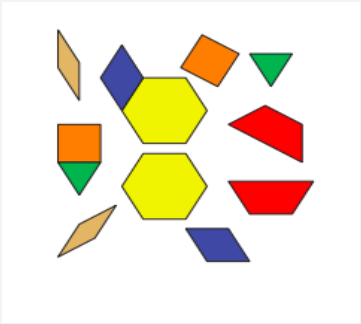


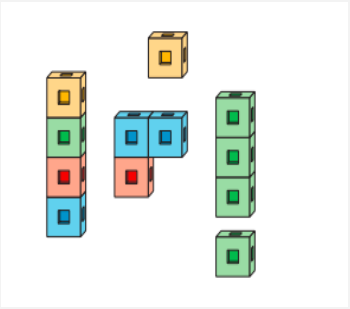
Now you can use your pattern blocks to create whatever you'd like. You can make a robot or a design or something else.

How did you figure out how many pattern blocks you needed?

Activity #3

Choice Time





Pattern Blocks

Connecting Cubes

Geoblocks

Picture Books

Lesson Synthesis

Today we counted collections of objects.

13

How Many Are There? (Part 2)

Let’s count collections of objects.

K.CC..A.1, K.CC.B.4, K.CC.C.6

Warm up

Questions About Us

We need to figure out how many of us are here. How can we make sure that we count each person 1 time?

How many of us are here today?

Did we count everyone one time? How do you know?

Activity #1

Counting Collections

Figure out how many objects are in your collection.

What did you notice about how _____ counted?

Activity #2

Pairing Objects and Numbers

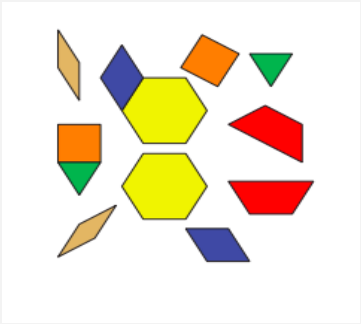
Let's practice counting to 10.

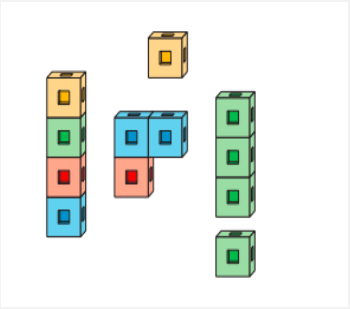
Move the objects in your collection into the bucket one at a time. Say a number each time you put an object in the bucket."

Why do we say one number as we move each object?

Activity #3

Choice Time





Pattern Blocks

Connecting Cubes

Geoblocks

Picture Books

Lesson Synthesis

Today we counted collections of objects.

Answer “How Many” Questions

Let’s count to figure out how many objects are in our collections.

Warm up

Questions About Us

How can we show how many of us are here today?

How can we figure out how many of us are here?

How many of us are here today?

_____

What did we do to show each student in our class?

Activity #1

Counting Collections: How Many?

Figure out how many objects are in your collection.

How many objects are in _____'s collection? How do you know?

Activity #2

Egg Carton Counting

Use the egg carton to figure out how many objects are in your collection.

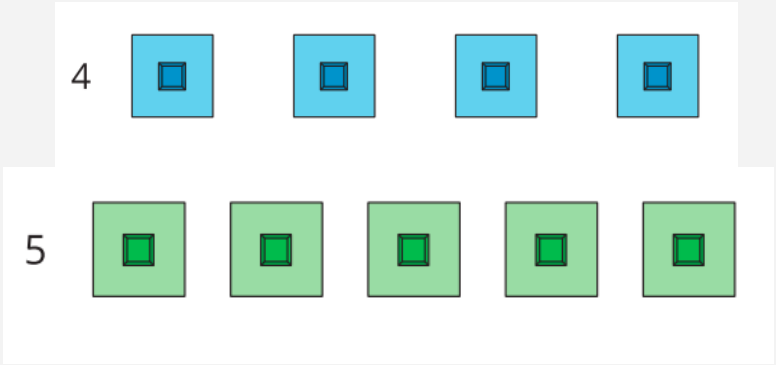
Take turns counting your collection with your partner. As you place each object in the egg carton, your partner says one number.

Activity #3

Introduce Connecting Cubes, Get and Build

What do you notice? What do you wonder?

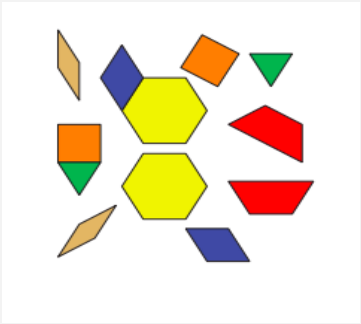
This shows you which connecting cubes you need. Work with your partner to take out all of the connecting cubes that you need.

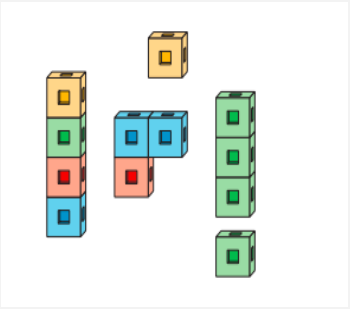


Now you can use your connecting cubes to create whatever you'd like. You can make an animal or tower or something else.

Activity #3

Choice Time





Pattern Blocks

Connecting Cubes

Geoblocks

Picture Books

Lesson Synthesis

Today we counted collections of objects to figure out how many objects there were..

Ask your partner a question about the classroom that starts with “How many…”

Explain How You Counted

Let’s count collections of objects and tell our partners how we counted.

Warm up

Questions About Us

How can we show how many of us are here today?

How can we figure out how many of us are here?

How many of us are here today?

_____

What did we do to show each student in our class?

Counting Collections: Share How You Counted

Activity #1

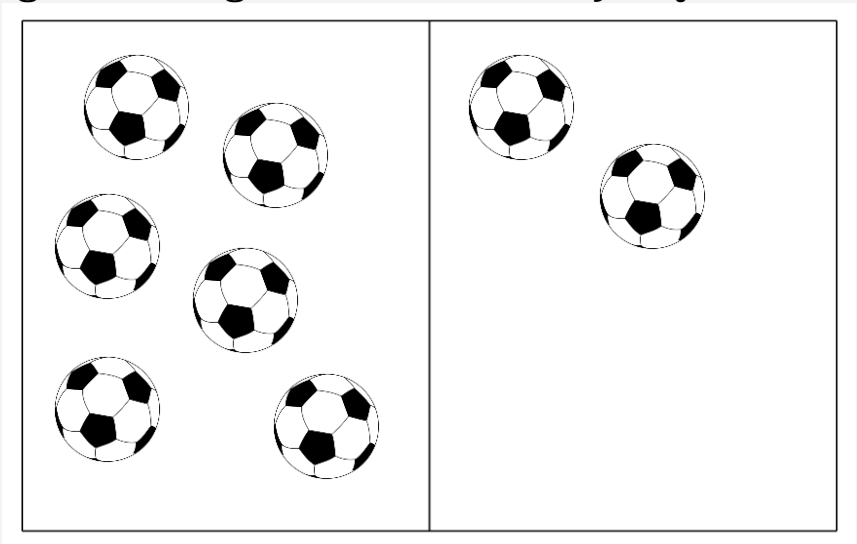
Figure out how many objects are in your collection.

How did the 5-frame (or counting mat) help you count your collection of objects?

Using a Counting Mat to Keep Track

Activity #2

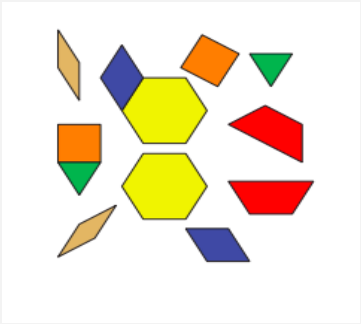
Use the counting mat to figure out how many objects are in your collection.

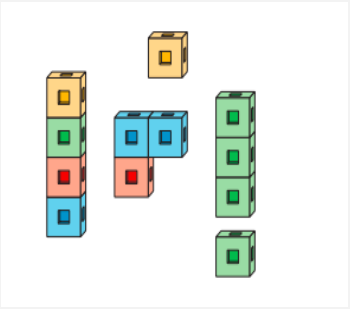


Which objects do I still need to count? Which objects did I already count? How do you know?

Activity #3

Choice Time





Pattern Blocks

Connecting Cubes

Geoblocks

Picture Books

Lesson Synthesis

Today we counted collections of objects.

Did you use any math tools to help you count? How did they help you count?

16

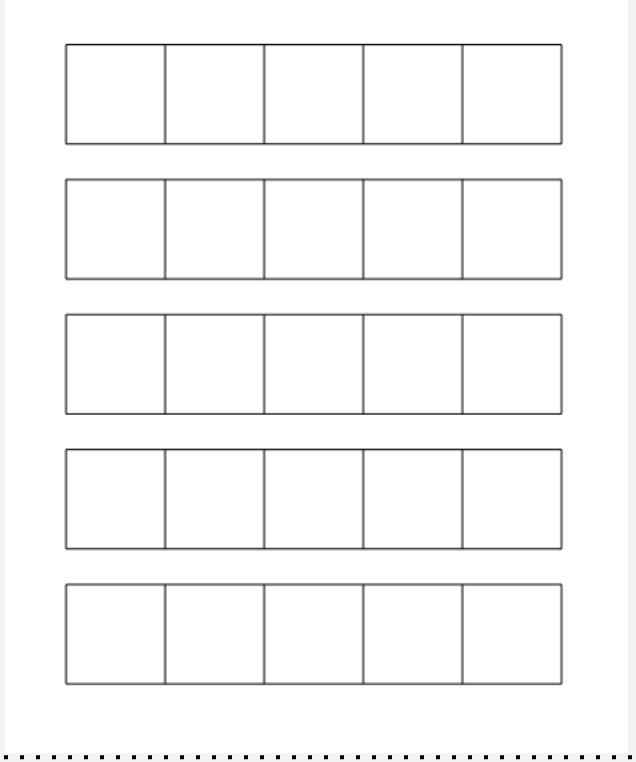
Represent Our Collections

Let’s count collections of objects and show how we counted.

K.CC.A.1, K.CC.B

Warm up

Questions About Us



How can we figure out how many of us are here?

How many of us are here today?

What do you notice?

Counting Collections: Show How Many

Activity #1

Figure out how many objects are in your collection.

Show how you counted your collection. Show your thinking using objects, drawings, numbers, or words.

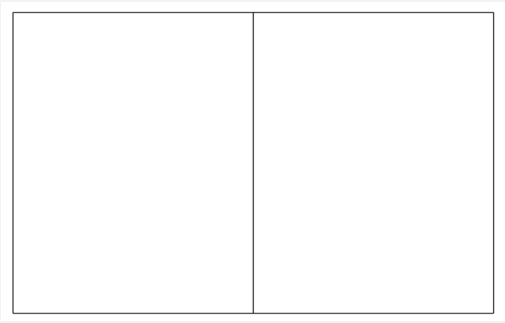
What is the same about how _____ and _____ showed their collections?
What's different about how they showed their collections?

Answering How Many Questions

Activity #2

Figure out how many objects are in your collection.

How many objects are in your collection? Tell your partner how many objects are in your collection without counting the objects again.



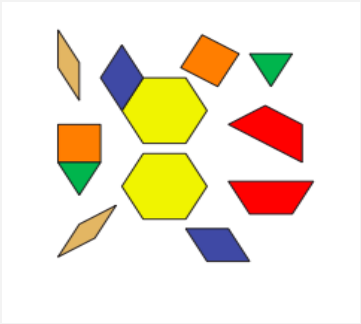
Answering How Many Questions

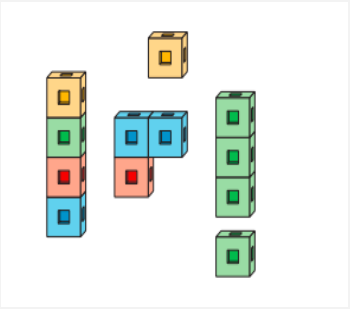
Activity #2

How many are in the collection?

Activity #3

Choice Time





Pattern Blocks

Connecting Cubes

Geoblocks

Picture Books

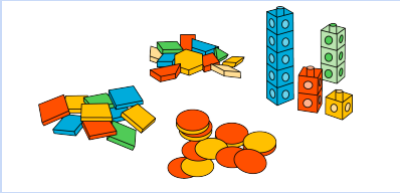
Lesson Synthesis

Today we counted collections to figure out how many objects there are.

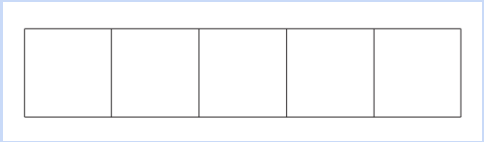
Ask your partner a question about our classroom that starts with "how many".

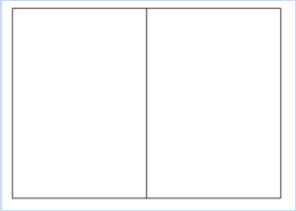
Section Summary

In this section, we counted collections of objects.

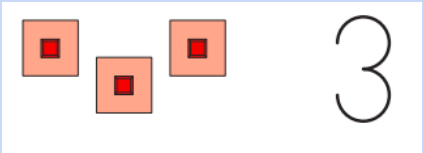


We counted each object and kept track of which object we've counted.





We said a number to tell how many objects there are.



Connecting Cubes Sculptures (Optional)

17

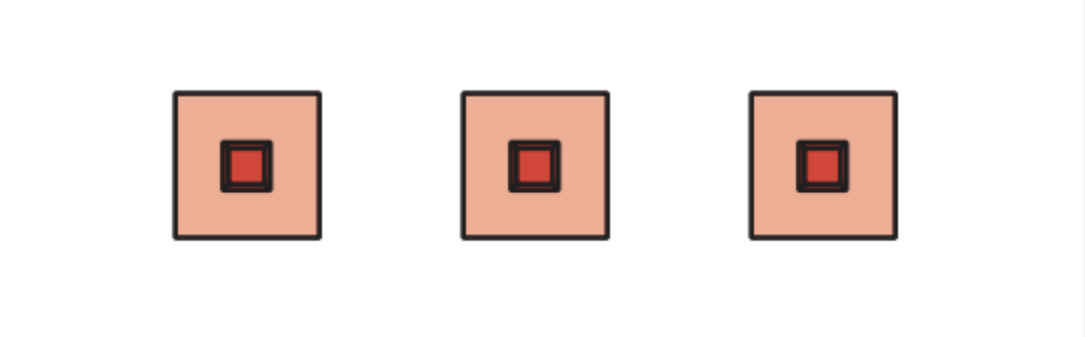
Let’s build with connecting cubes and figure out how many we have.

K.CC.B.4

Warm up

How Many Do You See?

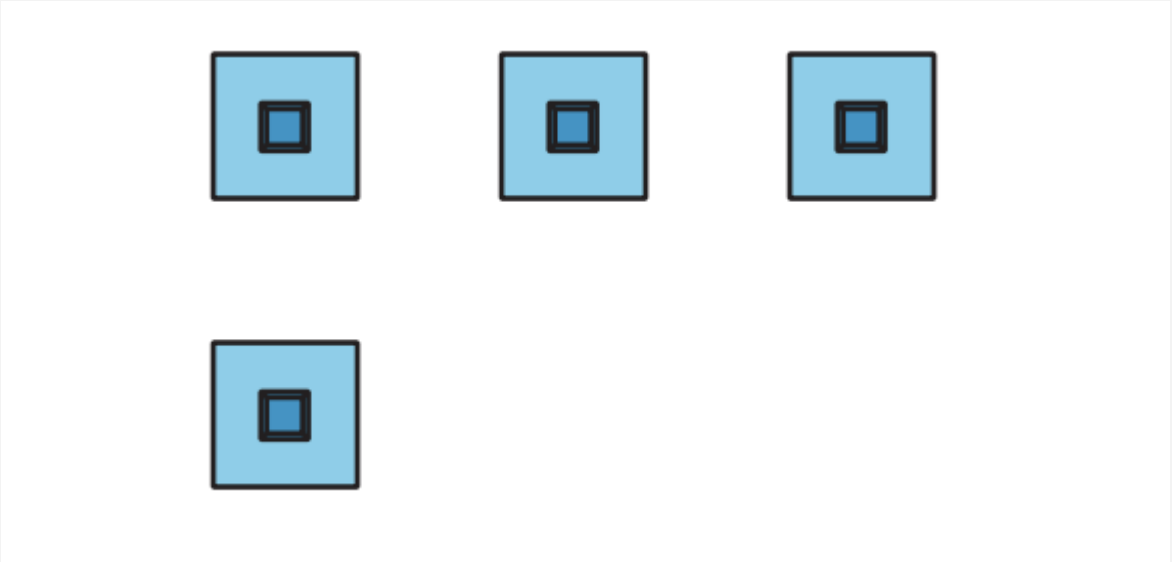
How many do you see? How do you see them?



Warm up

How Many Do You See?

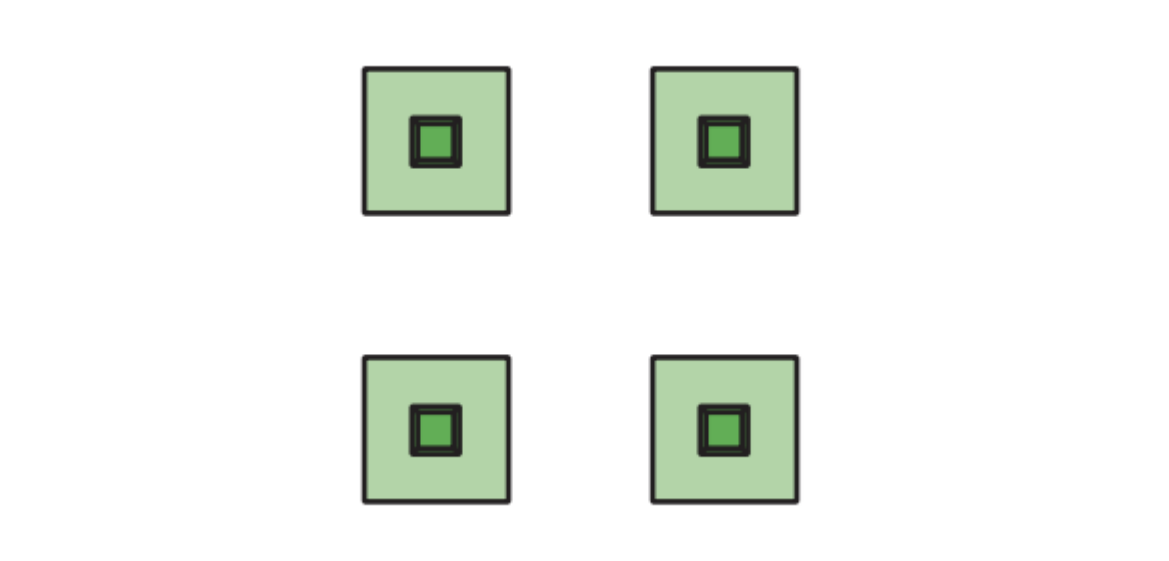
How many do you see? How do you see them?



Warm up

How Many Do You See?

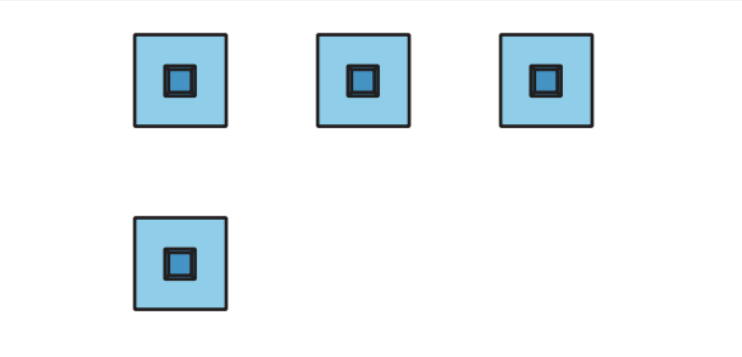
How many do you see? How do you see them?

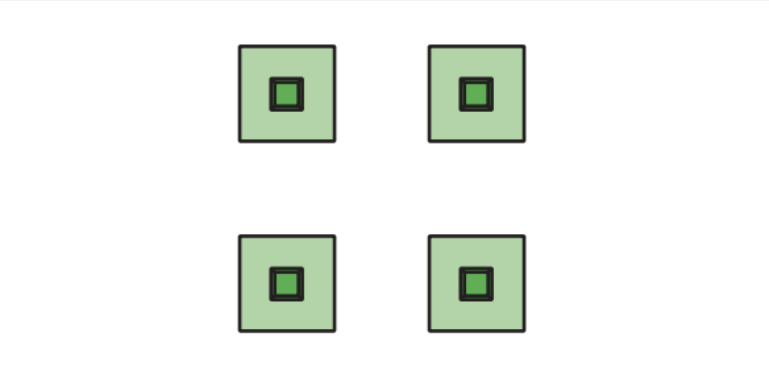


Warm up

How Many Do You See?

How many do you see? How do you see them?





What is the same about these groups of connecting cubes? What is different?

Count Cubes

Activity #1

Figure out how many cubes are in your collection.

Show how you counted your collection. Show your thinking using objects, drawings, numbers, or words.

How many cubes are in _____'s collection? How do you know?

Connecting Cube Creations

Activity #2

Use all your connecting cubes to create whatever you'd like.

Tell your group what you made and how many cubes you used without counting them again.

Lesson Synthesis

What are some questions we can ask about what your classmates made?