



Representing Number to 10

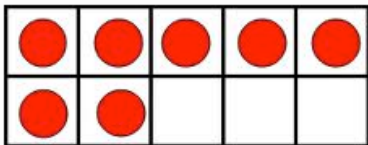
Mathematical Ideas

Representing whole numbers develops an understanding of number including its size and its relationship to other numbers.

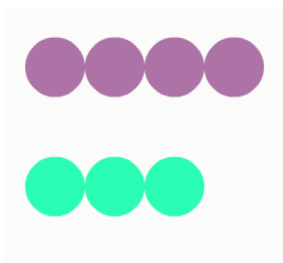
Any number can be represented in many ways.



Different representations of a number can reveal different things about that number.



"I can see that 7 is 2 more than 5."



"I can see that 7 is 4 and 3."



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Helpful Information

Tips

- Learning tools are used to explore mathematical ideas and are a way for children to share their thinking. Encourage your child to take the time to use the learning tools for each activity.
- Have your child count aloud to reinforce counting skills.

Mathematical Words/Symbols

Attribute – an aspect of an object that can be used to compare objects (e.g., colour, size, thickness, number of sides)

Set - a collection of objects

Materials

Activity 1:

- Colour Tiles

Activity 2:

- Set Tool
- Number Representation Cards

Activity 3:

- Whole Number Representation Cards

Activity 4:

- Rekenrek
- Representation Cards

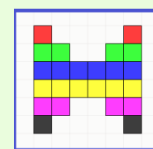
Activity 5:

- Representation Match (Whole Numbers) Game

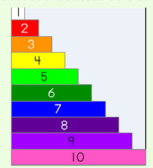
Activity 6:

- Catch a Bouncing Ball – Representations (Whole Numbers) Game

Colour Tiles



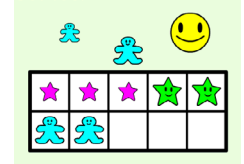
Whole Number Rods



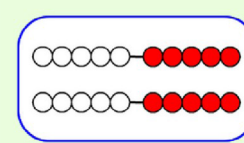
Representation Match (Whole Numbers)



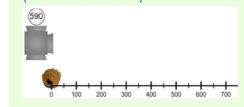
Set Tool



Rekenrek



Catch a Bouncing Ball - Representations (Whole Numbers)





Representing Number to 10


Representing Numbers Using Colour Tiles

Activity 1

Set Up for the Activity:

- Open the Colour Tiles learning tool.
 - » choose any type of tile

How to Do the Activity:

1. Show your child 4 to 10 fingers.
2. Ask your child to tell you the number of fingers shown.
3. Have your child show you that quantity using tiles of one colour.
4. Have your child show the same quantity using two colours of tiles.
5. Clear the workspace using the recycle icon. 
6. Repeat using different numbers of fingers up to 10. Vary the number of fingers you use when you show the number.

Example:



Your child may touch one finger and move one tile onto the workspace, then touch a second finger and move a tile, etc.



7 tiles using one colour



7 tiles using two colours

Let's Talk About It

How did you know how many tiles you needed to move?

How do you know you moved enough tiles onto the workspace?

Tell me what your representations look like. What makes them the same and different?



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Representing Numbers Using the Set Tool

Activity 2

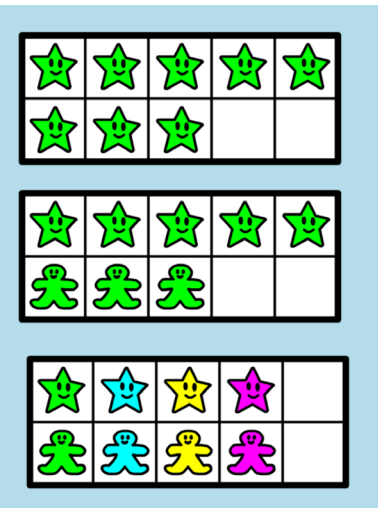
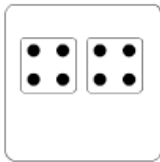
Set Up for the Activity:

- Open the Set learning tool.
 - » use the create mode (default)
- Shuffle one set of cards showing 4 to 10 and place them face down in a pile. Use the Representation Cards (dots, fingers, numerals, dice).

How to Do the Activity:

1. Ask your child to draw a card and tell you the number that is represented.
2. Have your child show you that quantity using one shape from the set tool.
 - » have your child organize this quantity using a ten-frame
3. Ask your child to show the same quantity using two shapes.
4. Have your child show the same quantity using any combination of attributes (shape, colour, size, face)
5. Clear the workspace using the recycle icon. 
6. Repeat as desired.

Example:



8 using one shape

8 using two shapes

8 using mixed attributes

Your child may count the number of dots on the dice and then count the same number of objects.

Let's Talk About It

- How did you know how many objects you needed to show?
How do you know you have shown enough objects?
Why is it okay to use different types of objects for the same number?
How does the ten-frame help you know the number of objects?



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Representing Numbers Using Whole Number Rods

Activity 3

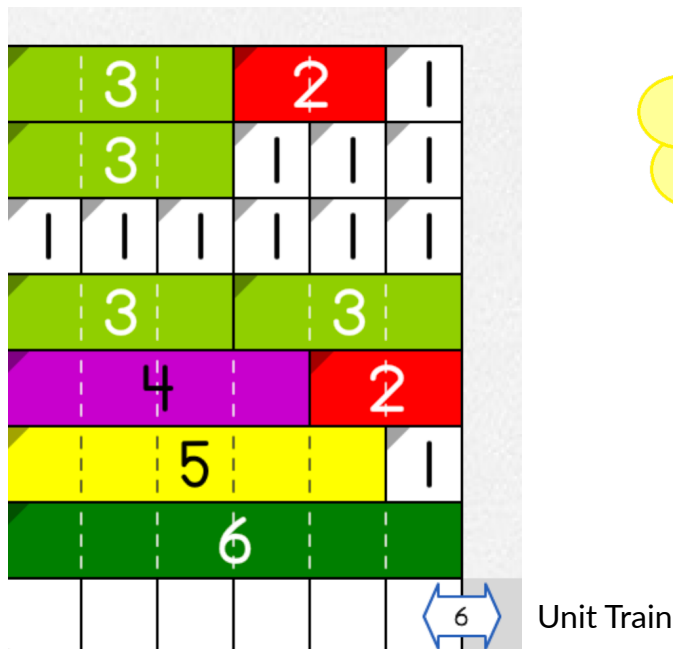
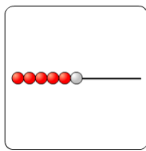
Set Up for the Activity:

- Open the Whole Number Rods learning tool.
- Shuffle one set of cards showing 4 to 10 and place them face down in a pile. Use the Representation Cards (dots, fingers, numerals, dice, beads).

How to Do the Activity:

1. Ask your child to pick a card and identify the quantity shown.
2. Have your child represent this number using the Whole Number Rods by aligning the rods horizontally to form a train.
3. Leave this representation on the workspace and then ask your child to show other trains that represent this number.
4. Have your child use the unit train to check and see if the number trains are the same.
5. Clear the workspace using the recycle bin  and repeat the activity as desired.

Example:



Your child may look for patterns to form more trains.

Let's Talk About It

How did you know which rods to place on the workspace?
How does the unit train help us check the rods?




Representing Number to 10

Matching Representations

Activity 4

Set Up for the Activity:

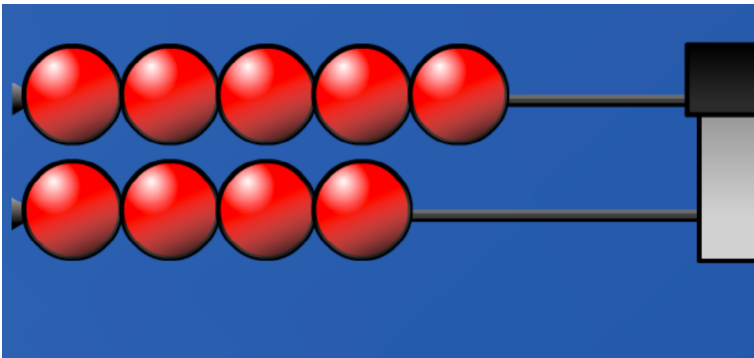
- Open the Rekenrek learning tool.
- Represent a number between 4 and 10 using one or two racks on the Rekenrek tool. Hide the other beads using the shade  feature of the tool.
- Spread face up one set of cards showing representations 4 to 10. Use the Representation Cards (dots, fingers, numerals, dice, beads).

How to Do the Activity:

1. Ask your child to tell you the number of beads shown on the Rekenrek.
2. Ask your child look at the number representation cards and find the cards that match the number of beads on the Rekenrek.
3. Repeat as desired.

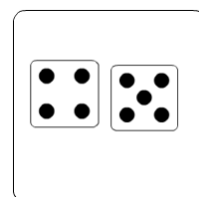
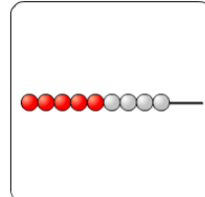
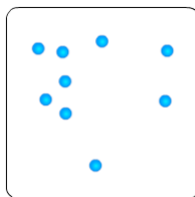
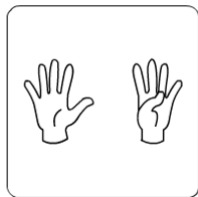
Example:

Representations of 9



Your child may count on to 5 to determine the number represented.

Matching cards:



Let's Talk About It

How did you find the matching cards?

If the Rekenrek has one less bead what would the matching cards look like?




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Representation Match Game

Activity 5

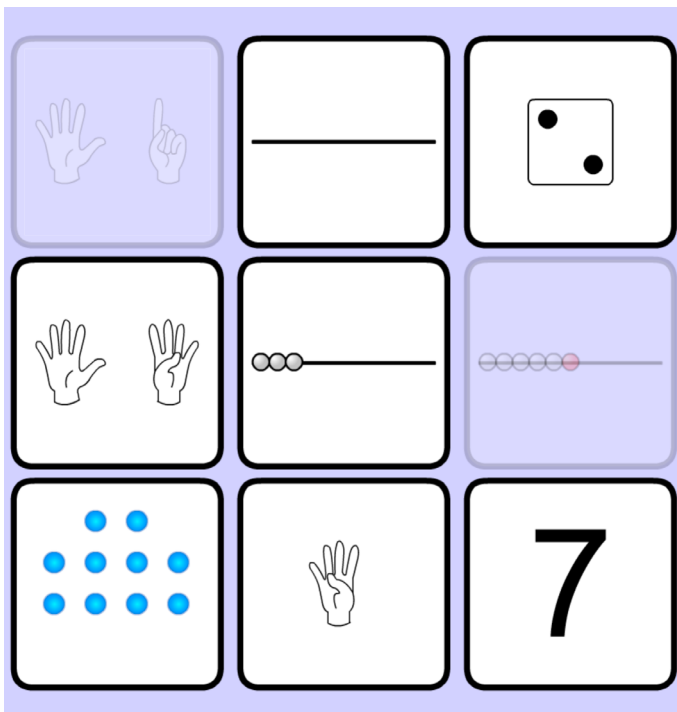
Set Up for the Game:

- Open the Representation Match (Whole Numbers) game.
 - » Select 0 to 10.
 - » Choose the Number of players through Settings  once you select Play.

How to Play the Game:

1. Pick the types of representations for the game.
2. Use the  icon to turn the cards face up.
3. Match pairs of cards where the representations are the same quantity.
4. There are ten possible matches in each game.
5. Play the game again using different representations.
6. Play as a memory game (face down).

Example:



Your child may count fingers or beads to match the number represented on the card.

Let's Talk About It

How did you know what number was shown?
How did you find the matching card?



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Catch a Bouncing Ball

Activity 6

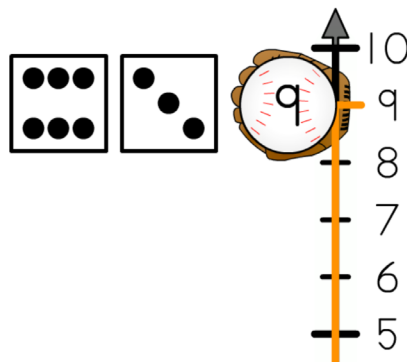
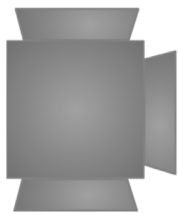
Set Up for the Game:

- Open the Catch a Bouncing Ball – Representations (Whole Numbers) game.
 - » Select 0 to 10.

How to Play the Game:

1. Move the baseball glove to the location on the number line that represents the quantity shown on the pitching machine.
 - » if the location is correct a new representation will appear
 - » if the location is incorrect, move the glove to the ball on the number line
2. The game is played until five balls have been caught.
3. At the end of the game you and your child may review location of the numbers on the number line by scrolling over the baseballs.

Example:



Your child may count three on from six.

Let's Talk About It

How did you know what quantity was on the pitching machine?
How did you know where to put the glove on the number line?