

Core Focus


- Subtraction: Writing fact families, counting on and counting back and decomposing a number to bridge to ten
- Geometry: 3D objects

Subtraction

- In this module, students further develop their understanding of subtraction. They identify the known total and part, and from this they are able to write **related subtraction facts**.
- Students reinforce the relationship between addition and subtraction, which leads to the idea of a **fact family**.


10.5 Subtraction: Writing fact families

Step In Imagine this cube train is broken into two parts.



What two addition facts could you write about the two parts?
What two subtraction facts could you write to match?

The two addition facts and the two related subtraction facts make a **fact family**.




What is another fact family you know that goes with this cube train?

In this lesson, students write addition and subtraction facts that form fact families.



- Students use count-on (addition) and count-back (subtraction) strategies to solve problems with an unknown part and represent their thinking using equations. A number track makes the strategy visible.
- Students then extend count-on and count-back strategies to two-digit numbers, which involves bridging to the nearest ten.

10.8 Subtraction: Decomposing a number to bridge ten


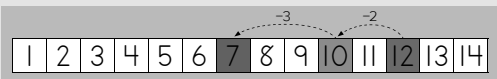
Step In Imagine you have 7 pennies. 

How much more money do you need to buy this toy?
How could you use a number track to figure it out?

I would start at 7 and jump on to 10.
Then I would jump on from 10 to 12.
3 add 2 is 5, so I would need 5 cents.

I would start at 12 and jump back to 10.
Then I would jump back from 10 to 7.
2 add 3 is 5, so I would need 5 cents.

In this lesson, students use a number track to jump on or back 1, 2, or 3 by bridging to ten.

Ideas for Home

- Count out 20 or fewer beans or pennies. Hide one part of the total in one hand and show your child what is in your other hand. Say, "I have 18 all together, there are 11 in this hand. How many are hidden?" If your child is still having trouble with the facts that make 10, use 10 as the total.

Glossary

► Fact family

A **fact family** includes an addition fact, its turnaround fact, and the two **related subtraction facts**. For example:

$$4 + 2 = 6$$

$$2 + 4 = 6$$

$$6 - 4 = 2$$

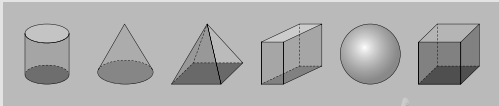
$$6 - 2 = 4$$

Geometry

- In Grade 1, students continue to identify, sort, analyze, and make 3D objects. These 3D objects may have flat surfaces (cube) or curved surfaces (sphere), or perhaps some of each (cylinder).


10.10 3D objects: Identifying and sorting objects

Step In Look at these 3D objects.



What 2D shapes were used to make these objects?

What other things do you know about these objects?

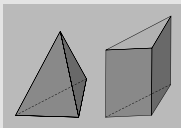


In this lesson, students examine features of basic 3D objects.

- Students examine the 2D shapes that are used to create the 3D objects and begin to identify the similarities and differences between different objects.

10.11 3D objects: Analyzing objects

Step In Look at these two objects.




What 2D shapes were used to make these objects?

What is the same about these two objects?

What is different about the two objects?

Both objects have only flat surfaces. One object was made with triangles, and the other with triangles and non-square rectangles.




In this lesson, students examine differences and similarities of 3D objects.

- The module concludes with students identifying examples of 3D objects in everyday life and creating their own 3D object in the classroom.

10.12 3D objects: Creating objects

Step In Look at this building.



Which 3D objects can you see?

Think about the buildings in your neighborhood. Which 3D objects can you see in those buildings?

Think about blocks you have used at home or at school. Which blocks do you use the most? Why?

Ideas for Home

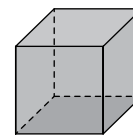
- Help students understanding of 3D objects in the kitchen: “How are the shapes of a cereal box and a box of macaroni and cheese the same, and how are they different?” Compare a soup can to a drinking glass, or a juice box to a milk carton.
- Play *I spy*. When we look at the flat faces of 3D objects, what 2D shapes can we see? Some 3D objects have triangular faces, while others have squares or non-square rectangles for faces, or some of each: “I spy with my little eye an object with triangle face.”

Glossary

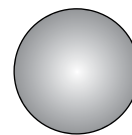
► 3D object

A **three-dimensional (3D) object** has flat surfaces, curved surfaces, or flat and curved surfaces.

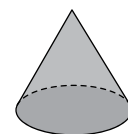
For example:



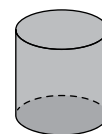
cube



sphere



cone



cylinder