KCS @ home

Summer Edition

Second Grade Science

Activity 2

knoxschools.org/kcsathome

2nd Grade Science: Activity 2
How can we change an object's speed and direction during a collision?

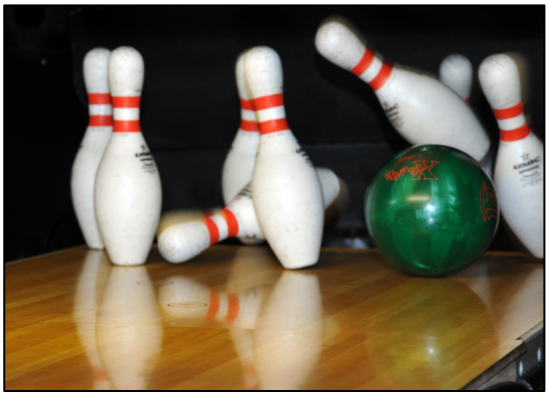
Directions: This handout can also accompany a KCSatHome Teacher Video. If you have access to the video, watch the video before doing this activity. You can find the videos at https://www.knoxschools.org/Page/21816

Read the short passage on push, pull and collisions. Match the vocabulary.

Forces: Push, Pull, and Collision

The power that makes other things move is called a force. A force can be a push or a pull. It changes the object's position. When a **force** moves an object away from it, that is called a **push**. When a force moves an object toward it, that is called a **pull**.

Sometimes these objects can **collide**. A collision is when two objects meet from different directions. When *bowling*, you use a push to make the bowling ball collide with the pins. The objects will then change directions or stop when a collision happens. *Every push and pull takes energy*. Large objects need a large force to move them. Small objects only need a small force to move them.

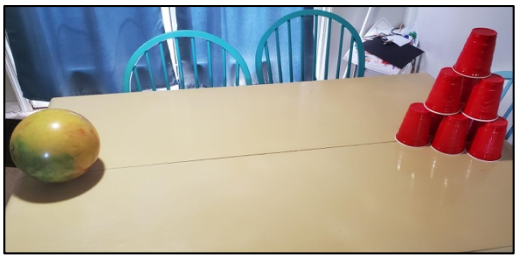


Match the Vocabulary: Draw a line from the word to the definition

Push	A *force* that moves objects away from you
Pull	Makes objects move
Collision	A *force* that moves objects closer to you
Force	When two objects meet

Activity: Cup Collision

For this activity, you will need to collect a small ball and 10 paper or plastic cups.



Stack your **10** cups into a tower like the one in the picture using **6** cups for the base.

Make a Prediction

What will happen to a cup tower when you give the ball a *gentle* push?

Carry Out an Investigation

1. Build a tower using 10 plastic or paper cups.
2. Draw a picture of your tower in the left column of the table.
3. Put the ball on the ground and *gently* push it into the tower.
4. Draw a picture of the tower now in the middle column of the table.
5. Build the tower, again using all 10 cups.
6. Put the ball on the ground and push the ball much *harder* into the tower.
7. Draw a picture of the tower now in the right column of the table.

Draw a picture in each box:

Cup Tower *Before*	After a *Gentle* Push	After a *Hard* Push

What push made a bigger change in the cup tower? *Explain* why.