

WHEN THINGS GO BUMP

ACTIVITY TO DO AT HOME



FIND OUT WHAT HAPPENS WHEN BALLS COLLIDE.

What happens when balls bump into each other?

TIME 15 minutes

MATERIALS

- 2 identical balls
- 1 ball about the same size as the other balls but noticeably heavier

DIRECTIONS

1 SET UP

- Gather three balls. Two balls should be the same. The third ball should be the same size but heavier. For example, use two kickballs and a basketball, two tennis balls and a pool ball, or two table tennis balls and a golf ball.
- Get a few people to play with you and your child, if possible.

2 GOAL

Your child will **investigate** what happens when objects bump each other. They will **find out** what happens when a ball moves fast and bumps a slow ball. They will roll a heavy ball and a light ball and **notice** what happens.

3 EXPLORE

Your child can observe the three balls. Your child can share what they notice about the balls. What size are they? How heavy are they?

4 EXPLORE

Use the two balls that are the same. You and your child can practice rolling the balls back and forth to each other. Give the ball a push, and watch it roll! **Try** rolling the balls fast. Try rolling the balls slowly. Don't let the balls bump each other! What does your child **notice**? What kind of push makes the ball go fast? What kind of push makes the ball go slowly?



5

EXPLORE

What does your child think will happen if the balls bump into each other? **Try it out!** You and your child can try rolling the balls so they bump into each other. What does your child **notice**? Ask your child, *When the ball got bumped, what did it do? Which way did the ball move after it got bumped?* Point out to your child that a bump is a kind of push. When the balls bump, they push on each other.

6

EXPLORE

Place one heavy ball and one light ball on the floor. Your child can **observe** each ball. Your child can pick up each ball and see what they **notice**. How are the balls alike? How are they different?

7

EXPLORE

What does your child think will happen when these balls bump?

- Your child can roll the heavy ball to bump the light ball. **Try** this a few times.
- Your child can roll the light ball to bump the heavy ball. **Try** this a few times.

8

SHARE

Encourage your child to **share** what they **noticed**. What happened when the balls bumped? Have your child describe the directions that the ball moved. Your child can **think of other questions to ask**. Here are some examples:

- *What happens if two balls that are the same bump into each other going fast?*
- *What happens if a heavy ball and a light ball bump into each other going fast?*
- *What happens if one ball is still, and the same kind of ball bumps into it?*

Your child can **test out** their ideas!



The contents of this document were developed under a grant from the U.S. Department of Education. However, those contents do not necessarily represent the policy of the Department of Education, and you should not assume endorsement by the Federal Government. PR/Award Number U295A150012. The U.S. Department of Education is the funding agency.



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