



Force and Motion

Sesame Street Little Discoverers: Big Fun with Science, Math, and More is a resource to help you and your child explore STEM.

Remember, it's okay to not know the answers to all of her questions. Model a sense of curiosity by saying something like, "That's a great question! I don't know the answer but let's find out together."

HELLO, FAMILIES!

Your child is full of curiosity. She is always observing, questioning, testing her thinking, and collecting information. These are important critical-thinking and problem-solving skills that help set her up for success in Science, Technology, Engineering, and Math (STEM).

HELP YOUR CHILD TALK ABOUT FORCE AND MOTION

- » A force is a push or a pull.
- » An object is in motion when a force acts on it (and it moves).
- » When all forces pushing or pulling on an object are equal, the object is balanced.

TRY THIS AT HOME

Pick and choose the activities that work best for you and your child.

Let's Talk. Use the word force as many times as you can this week! Say things like, "Can you use force to blow some bubbles?" or "Your tricycle is in motion because you put force on the pedals." Give a high-five anytime someone in the family uses these words.

Push and Pull. Point out things that you pull or push throughout the day (pulling a wagon, pushing a toy car). You'll notice forces are everywhere!

Compare the Force. Ask your child to push or pull a wagon or stroller. Compare the empty wagon or stroller to one filled with heavy objects. Which one takes more force to push or pull?

Have a Ball. Ask your child to think of different ways she can use force on a ball to make it move (throwing, kicking, rolling, dropping, bouncing). Which way uses the most force and therefore moves the ball farthest?



For more fun ideas, videos, and games, check out sesamestreet.org/STEM on your computer or mobile device.



FORCE AND MOTION

Bowling Alley

TUBE EXPLORATION

Use paper towel tubes to explore force and motion. How many ways can your child make a tube move? Does it spin? Bounce? Roll down a ramp?

WATCH "FINISHING THE SPLAT"

In the video, Oscar wants to make a grouchy, horrible painting. He uses squeeze bottles to make paint splats. Then, he mixes different paints together to make a brownish-green color. Fluffy the Elephant helps by blowing on the paint with a lot of force to make an even bigger splat. Oscar is sure this design will make everyone mad, but his friends think it's an amazing work of art!

ACTIVITY

Set up a "bowling alley" at home to investigate force and motion.

MATERIALS

- » A ball that can be used indoors, such as a tennis ball, bouncy ball, or small beach ball
- » 6 plastic bottles half-filled with water
- » smooth floor surface
- » Activity Chart
- » crayons

STEPS

1. Set up a bowling alley by placing the bottles on a smooth surface.
2. Help your child roll the ball lightly aiming towards the "pins". Record on the Activity Chart how many pins were knocked over.
3. Next, help your child roll the ball towards the pins with more force. Record how many pins were knocked over.
4. Ask questions such as, "Which roll worked best – the one with less force or more force?" "Who gave the ball the force to move?"



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