

## Soda Straw Rockets

Connected Standard: Connected Standard: 3.2 PK.B.1 Explore and describe the motion of toys and objects.

What You Will Need:

- Empty soda bottle with its cap
- Two straws of different sizes (one needs to be thicker than the other to fit over top of it)
- Tape
- Drill



Instructions:

1. ADULTS: Drill a hole in the center of the bottle cap just big enough for the smaller straw to fit in it.
2. Tightly screw the cap back on the bottle.
3. Slide the smaller straw into the hole in the bottle cap. Push it about half way through.
4. Seal up one end of the larger straw using the tape. No air should be able to get out of one side.
5. Slide the larger straw over the smaller one.
6. Squeeze your bottle to launch your straw!

The Science Behind It:

Our soda straw rockets are a great way to see Newton's 3<sup>rd</sup> Law of Motion in action! Newton's 3<sup>rd</sup> Law states that "for every action, there is an equal and opposite reaction." As you squeeze the bottle, the air is forced out through the smaller straw and pushes on the closed end of the larger straw. The resulting force is that the larger straw gets launched through the air!

Books to Pair with this Experiment:

- *Rosie Revere, Engineer* written by Andrea Beaty, illustrated by David Roberts
- *Edward Built a Rocket Ship* written Michael Rack, illustrated Graham Ross and Michael Rack