



Rockets



Adults: You are the **navigators** of today's exploration, and you will be asking questions of your student to observe, predict, and explain their thinking.

Kids: You will be the **investigators**. Your job is to observe, make predictions, and explain your thinking!

Challenge: Build a rocket; then test your design to see how far it can fly!

Navigator (Adult) ask your **Investigator (Kid)**:

- How do you think we can make our rocket fly? Are there other ways we could make it fly?
- What changes could we make to our rocket that might change the way it flies?

What's the SCIENCE?

- Your rocket's **fins** help keep it flying straight – like feathers on an arrow.
- The rocket you made is able to fly because of the **energy** you give it by stretching and releasing the rubber band. If you stretch the rubber band more, you will give the rocket more energy and it will go higher or farther.

As you **build your rocket**, feel free to change the shape of your fins to see if that changes the way your rocket flies.

Talking Tip

Encourage your **Investigator** to make predictions.

Asking if/then questions is a good way to engage more in-depth thinking. Try asking...

"What do you think will happen if ...? or "If you tried ..., then what would you expect to happen?"

Navigator ask your **Investigator**:

- How can we make our rocket fly high in the air? How can we make our rocket fly far?
- How does the way we launch the rocket change the height or distance it can fly?

Take your rocket to the **Launch Area**. See how far you can make it fly. Record your distances on the graph. **Be sure to try different rubber band stretches to see if it changes your distance!**

Navigator ask your **Investigator**:

Look at your launch distance graph.

How do your distances compare with how much you stretched your rubber band? Why?

Rocket Launch Distance Graph

