



Year 4 Rocket Science - The Forces of Flight

STUDENT WORKSHEET

With Street Science, you became a junior rocket scientist, and used **Newton's Laws of Motion** to propel a rocket into the sky!

1. Use the word bank to complete the following sentences about Newton's First Law of Motion



stop in motion at rest start object force

Newton's First Law of Motion says that an _____ at rest will remain _____ until a force is applied to it.

It also says that an object in motion will remain _____ until a _____ is applied to it.

This means that pushing and pulling forces are used to _____ and _____ movement.


2. Using Newton's law, draw how you would apply a force to each ball below to make it move (be in motion) or stop moving (be at rest). Use arrows to show these forces.

Force this ball into <i>motion</i>	Force this ball to <i>rest</i>
	

List any other objects which come into contact with these balls:



3. Draw and label your rocket flying off the launch table.
- Include all the labels to show objects and forces
 - Use ARROWS to show the direction of forces
 - Circle places where two objects CONTACT each other



Rocket tube Push Friction Fins Rocket cap Table Gravity (Pull)

4. Contact and non-contact forces occurred between your rocket and other objects such as the table, air and Earth.
- a) Describe how a **contact force** affected your rocket

- b) Describe how a **non-contact force** affected your rocket

Extras for Experts!

Forces affect every part of our day. Take a walk around your school and see how many forces you and your classmates can describe. Decide if they are contact or non contact (HINT: some objects involved in contact forces cannot be seen!)