



Dear Educator,

This file offers views of some of the worksheets in our “**Forces and Motions**” thematic unit. The cover for an eWorkbook is shown followed by the preview pages.

The “**Forces and Motions**” unit offers **14 pages**.

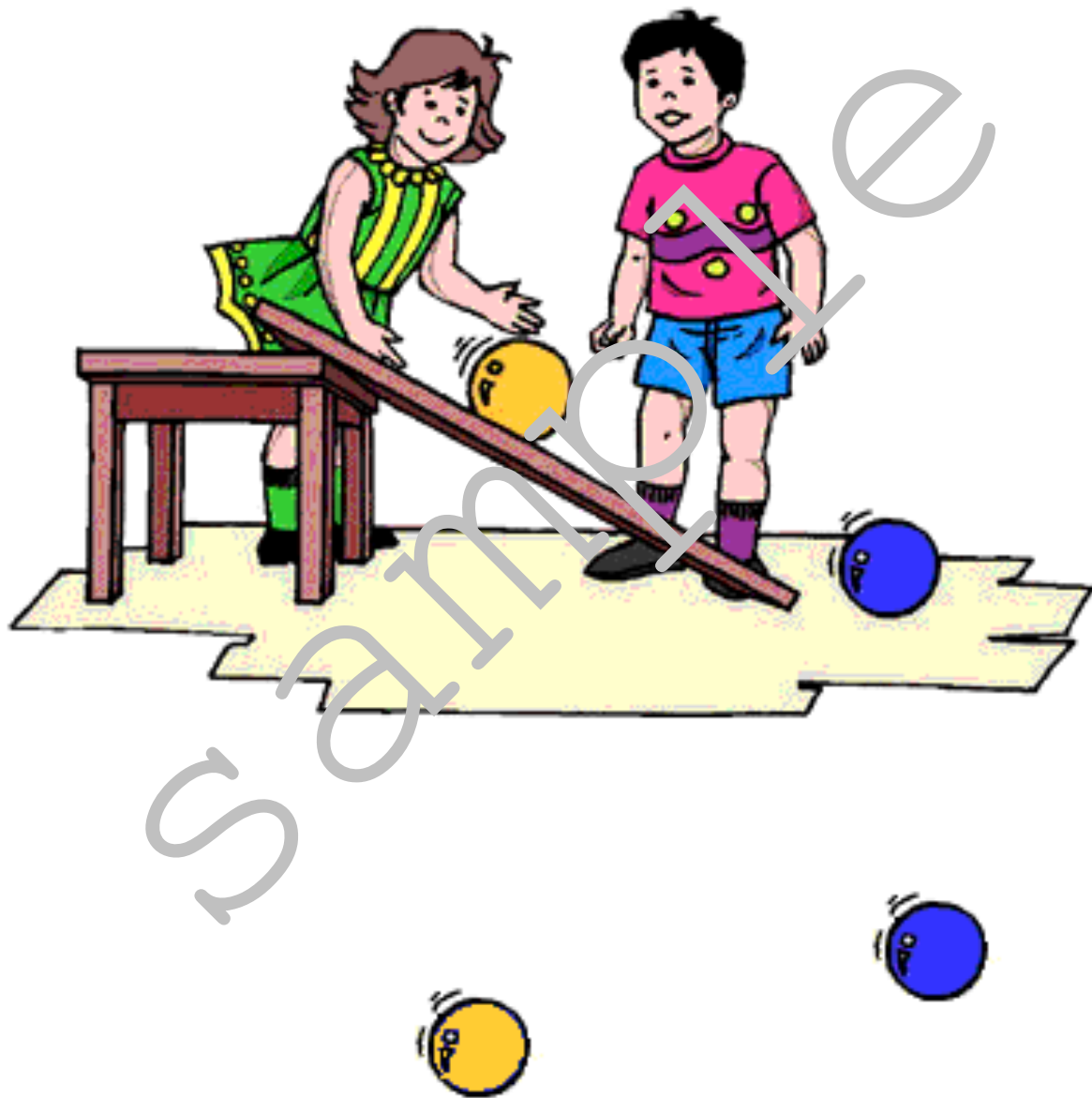
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# Forces and Motion



# Forces and Motion

**Forces are the actions that cause things to move or be in motion.  
Motion is any change in the location of an object that is the result of force.**

Pretend there is a chair in your bedroom. You want to put the chair in your living room. You need to use a force to make the chair move.

**There are many ways you can make the chair move.**  
Here are some of the ways you can move the chair with force.

- You can push or pull the chair.
- You can push it with your hands and arms or even your feet.
- You can pull it with your arms and hands.
- If the chair is too heavy for you to pull or push you will need to find another way to have enough force to move the chair.
- You can get someone to help you.
- You can put it on a rolling cart and push or pull the cart.



Pretend you need to move a pile of dirt from one corner of a yard to another area in the yard so you can plant a garden. Write about what you would do to move the dirt. However you choose to move the dirt you are using a force to move it.

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# Forces and Motion

## Aerodynamics

Aerodynamics is a big word. It might sound like something difficult to understand. It is not, however. Scientists study how air moves around things.

Think of the air around you, or around something in the place you are now. That air is moving around you or the object. It is not going through you or the object.

**Aeronautics is the study of the science of flight.**



When something flies through the air the air affects the motion of the object. The air is the force. When you fly a kite, the air affects the motion of the kite. When you throw a ball the air affects the motion of the ball.

**Have you ever played badminton?** yes  no

When you hit the shuttlecock with the racket you learn how much force you need to use to get it over the net. If it is a bit windy you learn that you need to use more force for it to fly through the air. You use your muscles as a force. The air is also a force on the shuttlecock as it flies through the air.



Can you list a four objects that you can throw through the air?

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# Forces and Motion

## Criss Cross

Can you fit these words into the criss cross?

Use a pencil so you can erase if you need to.

reaction  
inertia

Earth  
force

gravity  
speed

motion  
aerodynamic

