

EDUFRIENZ

FORCE AND MOTION



INTRODUCTION

Edufrienz has designed these engaging worksheets to help children explore force and motion.

Children will discover how forces make things move (or not move!). Explore pushes, pulls, and everything in between, unraveling the mysteries of motion. Through the various activities provided, children will be able to test their knowledge and apply what they have learned through practice.

Number of pages: 21

Recommended for: 7 years old and above

Activity Outcome

Through our engaging activities, children identify the forces and motion acting on everyday objects.

FORCE *and* MOTION

The way objects move and interact with each other.

FORCE

Force is a push or pull that can make an object move.

PUSH

Move something away from you.



PUSH

Bring something closer to you.



TYPE OF FORCE

CONTACT FORCE

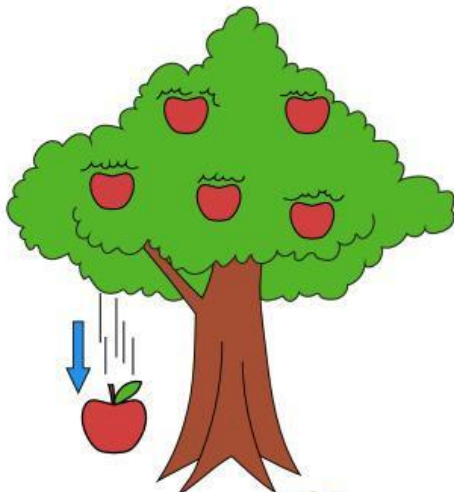
When two objects are touching each other.



You open the door.

NON-CONTACT FORCE

When objects affect each other without touching.



The apple falls from the tree.

FORCE *and* MOTION

MOTION

Motion is when something is moving from one place to another.



Motion happens because of force.



Motion can be fast or slow.

Fast Motion – means getting from one place to another very quickly.

Example: You're running as fast as you can in a race.

Slow Motion – means taking a long time to move from one place to another.

Example: Snail crawling along a leaf.

Motion can occur in different directions. It can be forward, backward, sideways, or up and down.

1. **Forward** – Moving straight ahead.

Example: Riding your bike down the street to the park.



2. **Backward** – Moving in the opposite direction.

Example: Rowing a boat backward



3. **Sideways** – Moving to the left or right.

Example: Sliding to the left or right during a dance move.



3. **Up and Down** – Moving higher and moving lower.

Example: Jumping up to reach a ball.



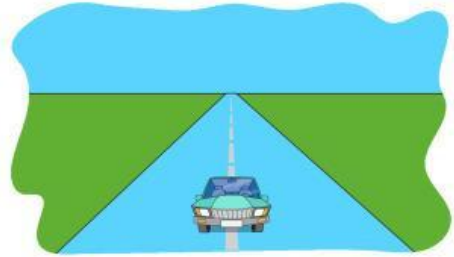
Going Down a Slide



TYPES OF MOTION

Linear motion

means something moves in a straight line.



Circular motion

is when something moves in a circle in one direction.



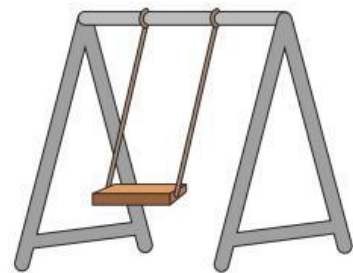
Rotatory motion

happens when something spins around in any direction.



Periodic motion

shows that something moves back and forth in the same way over and over.

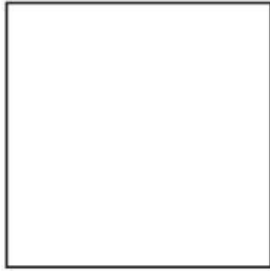


Random motion

means moving in different directions without any pattern.



Look at these pictures that show motion. Cut out the pictures and paste them next to the description.



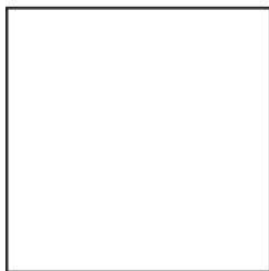
The children are playing tug of war.



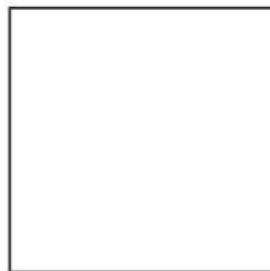
A fisherman uses fishing pole to catch a fish.



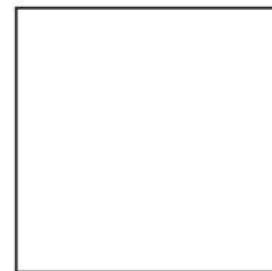
A boy plays a yo-yo.



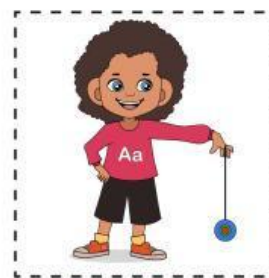
Leaves falling from a tree.



The boy pushing the toy car to move



The girl pushing he door.



Look at the picture. Circle whether the action shown is a 'push' or a 'pull'.

	Push	Pull
	Push	Pull
	Push	Pull
	Push	Pull
	Push	Pull

Read each statement carefully. Choose the best answer from the options provided and circle the letter of your choice.

1. _____ is a push or pull that can make an object move.
a. Force b. Motion c. Contact Force
2. _____ is when something is moving from one place to another.
a. Force b. Motion c. Contact Force
3. When something spins around, _____ happens.
a. Circular Motion b. Random Motion c. Linear Motion
4. _____ occurs when two objects touch each other.
a. Contact Force b. Non-Contact Force c. Force
5. _____ is movement in a straight line.
a. Rotatory Motion b. Linear Motion c. Rptatory Motion
6. A force that acts on an object without physical touch, is known as
_____.
a. Contact Force b. Non-Contact Force c. Force
7. Movement without direction is a good way to understand
_____.
a. Periodic Motion b. Random Motion c. Linear Motion
8. _____ is when something moves around a fixed point ion a circular path.
a. Circular Motion b. Rotatory Motion c. Periodic Motion
9. _____ are the interaction and movement of objects.
a. Force and Motion b. Contact and Non-Contact Force
c. Types of Motion
10. _____ is a type of movement that moves back and forth.
a. Periodic Motion b. Linear Motion c. Circular Motion

Draw a line to match each item with the correct types of motion.



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• Linear



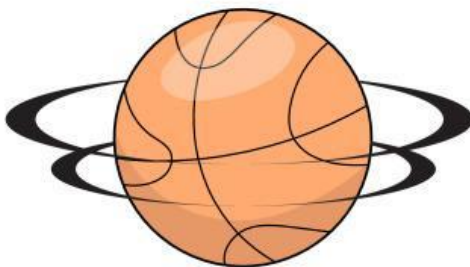
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• Circular



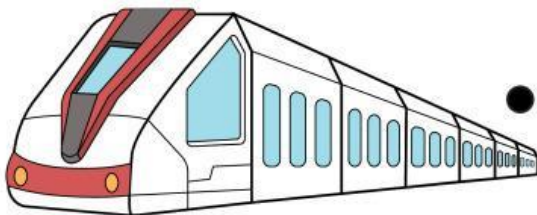
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• Rotatory



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• Periodic



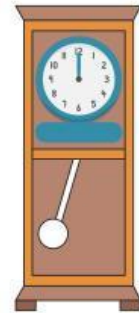
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• Random

Tick the box next to each item to indicate whether it is fast or slow motion.

ITEM	Fast Motion	Slow Motion
A cheetah running	[]	[]
A turtle walking	[]	[]
A rocket launching	[]	[]
Leaves falling from a tree	[]	[]
A snail crawling	[]	[]
A roller coaster ride	[]	[]
Wind blowing a kite	[]	[]
Walking in slow motion	[]	[]
Cars racing on a track	[]	[]
Skipping Rope	[]	[]

Look at each picture carefully. Circle the objects or actions that show movement in the forward movement.



Draw and write to show how you can use force to affect motion in each way.

Make something start moving

Make something stop moving

Make something slow down

Make something speed up

Make something change direction

Make something change direction

Draw a picture of yourself moving sideways.
Label it with your name on it and write a
sentence about what you're doing.

