

**Mount Litera Zee School Roorkee**  
**Grade –VIII**  
**Subject-Science worksheet**

**Date-13.02.21**

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**Chapter- FRICTION**

**A. Fill in the Blanks:**

1. Friction opposes the ..... between the surfaces in contact with each other.
2. Friction depends on the ..... of surfaces.
3. Friction produces .....
4. Sprinkling of powder on the carrom board ..... friction.
5. Sliding friction is ..... than the static friction.

**B. Tick (✓) the Correct Option:**

1. Four children were asked to arrange forces due to rolling, static and sliding friction in a decreasing order. Their arrangements are given below. Choose the correct arrangement.  
(a) rolling, static, sliding  
(b) rolling, sliding, static  
(c) static, sliding, rolling  
(d) sliding, static, rolling
  
2. Alida runs her toy car on dry marble floor, wet marble floor, newspaper and towel spread on the floor. The force of friction acting on the car on different surfaces in increasing order will be:  
(a) wet marble floor, dry marble floor, newspaper and towel  
(b) newspaper, towel, dry marble floor, wet marble floor  
(c) towel, newspaper, dry marble floor, wet marble floor  
(d) wet marble floor, dry marble floor, towel, newspaper
  
3. It is difficult to walk on ice because:  
(a) pressure is high  
(b) pressure is low  
(c) friction is high  
(d) friction is low
  
4. Friction can be increased by:  
(a) making the surfaces smooth  
(a) lubricating the surfaces  
(c) using ball bearings  
(d) making the surfaces rough

**C. Answer the following questions in short:**

1. Suppose your writing desk is tilted a little. A book kept on it starts sliding down. Show the direction of frictional force acting on it.

2. You spill a bucket of soapy water on a marble floor accidentally. Would it make it easier or more difficult for you to walk on the floor? Why?
3. Explain why sportsmen use shoes with spikes.
4. Iqbal has to push a lighter box and Seema has to push a similar heavier box on the same floor. Who will have to apply a larger force and why?
5. Explain why sliding friction is less than static friction.
6. Give examples to show that friction is both a friend and a foe.
7. Explain why objects moving in fluids must have special shapes.
8. If there was no friction, what would happen to a moving object?
9. When you rub your hands together, they become warm. What is this due to?

**D. State True or False:**

1. Brakes in cars will work best if the friction between the brake shoes and wheels is reduced.  
.....
2. Friction causes wastage of energy. ....
3. Friction of air makes the meteors burn. ....
4. Oil is applied to machines to increase friction. ....

**E. Match the following:**

‘A’	‘B’
1. Sparks are produced when a pair of scissors is sharpened against a grinding wheel.	a. To make them rough and increase friction.
2. A piece of chalk wears out as it is used on a blackboard.	b. Friction produces heat.
3. Trolleys have wheels.	c. Friction causes wear and tear.
4. The leather soles of new shoes are rubbed on a rough surface.	d. Rolling reduces friction.

**F. Imagine that friction suddenly vanishes. How would life be affected. List ten such situations.**

**G Answer the following**

1. Sam is travelling in a train. He observes that the trees near the track appears to be moving whereas co-passengers appear to be stationary. He is curious to know the reason. Help him out
2. Select the odd one out
  - a. Motion of moon around the earth

- b. Motion of stone tied to a thread and whirling around
- c. Motion of the person sitting on merry go round
- d. Motion of a man walking on the straight road

3. Which of the below motion is a periodic motion

- a. Motion of an ant
- b. A swing in a playground
- c. Simple pendulum
- d. A flying bird

4. Which of the below are in motion

- a. A table
- b. A house
- c. A fish moving in water
- d. A moving train

5. Which of the below have lowest speed?

- a. Distance = 2 m , time = 2 sec
- b. Distance = 5 m , time = 3 sec
- c. Distance = 10 m , time = 4 sec
- d. Distance = 3 m , time = 6 sec

6. Which among the following is the smallest unit of length

- a. m
- b. km
- c. mm
- d. cm