

**VARADHI
HIGH SCHOOL LEVEL
CLASS - 8**

**SCIENCE
WORKBOOK**



**State Council of Educational Research & Training
Amaravati, Andhra Pradesh**

Physical Science

1. Force

Class: VIII

Work sheet - 1

Date: _____

1. Fill in the blanks

1. We can move a ball from its position of rest by applying _____ on it.
2. The unit of pressure in S.I. system is _____
3. The force acting perpendicularly on unit area of a surface is called _____

2. Match the following

- | | | |
|--|--------|--------------------|
| 1. Force applied in the direction of motion | () | a) Force/Area |
| 2. Force applied in the opposite direction of motion | () | b) Speed decreases |
| 3. Pressure | () | c) Force/Volume |

3. 5. What forces can do? (effects of force)?

6. Does pressure have direction? Explain.

7. Give one example for effects of force on the shape of an object?

4. Read the passage and answer the following questions.

Take two trays. Fill both the trays with fine sand. Now take two rectangular bricks of equal mass and similar shape. Name them as A, B. Keep A vertically in one tray and the other brick B horizontally in other tray...

8. Which brick sinks deep into sand?

9. Although these two bricks have same masses. What is the reason for these two bricks sink to different depths in sand?

10. Give two daily life application of this concept? (Pressure)

Physical Science

1. Force

Class: VIII

Work sheet - 2

Date: _____

1. Fill in the blanks:

1. Removing Dalda from dalda packet is an example for _____ force.
2. Push or a pull is a _____
3. Magnetic force is an example for _____ force.

2. Match the following :

- | | | |
|---|---------|----------------|
| 1. Hoisting a flag | () | a) Push |
| 2. Erasing the letters on the black board with duster | () | b) Pull |
| 3. Moving vegetable cart | () | c) push / pull |

3. 5. What is field force?

6. What is contact force?

7. In which direction a free suspended bar magnet comes into rest?

4. Read the passage and answer the following questions.

Take a sewing needle and rub it with a bar magnet several times always moving the magnet in the same direction identify the pole of the needle with magnetic compass. Pin a red coloured foam ball to south pole and white ball to North pole of the needle. Drop the needle in bowl of water in such a way same coloured ball face each other.

8. What force a needle acquires when it is rubbed with a bar magnet several times in one direction?

9. What happens when we place needles in such a way that like coloured balls face each other?

10. When will the needles attract each other?

Physical Science

1. Force

Class: VIII

Work sheet - 3

Date: _____

1. Fill in the blanks:

1. Chair applies _____ force when you sit in it.
2. Expansion and contractin of lungs during breathing is due _____ force
3. Sliding of tyres of vahicles is due to lack of _____ force.

2. Match the following :

- | | | |
|-----------------------------------|---------|----------------------|
| 1. Walking | () | a) Normal force |
| 2. Upward push on a book by table | () | b) Musacular force |
| 3. Finger prints provide us | () | c) Force of friction |

3. 5. Define contact force?

6. What is muscular force?

7. How much force acts on a book. When it is in equilibraium?

4. Read the passage and answer the following questions.

The motion of the ball is different on different surfaces. The force of resistance to the motion seems to be more on the rough surface than on the smooth surface .

8. What is this force at resistance to the motion?

9. What we need to do to reduce resistance to the motion?

10. On which surface the speed of ball will be more?

Physical Science

1. Force

Class: VIII







Work sheet - 4

Date: _____

1. Fill in the blanks:

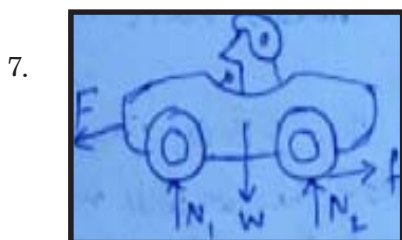
1. The unit of force in SI system is _____
2. The net force acting on your finger when four rubber bands of each 5N force are used is _____
3. The diagram showing all the force acting on an object at a particular instant is called _____

2. Match the following :

1. $\begin{array}{l} 8\text{N} \\ \rightarrow \\ 10\text{N} \end{array}$  12N () a) $F=10\text{N}$
2. 10N  () b) $F_{\text{net}}=6\text{N}$
3. 15N  () c) $F=8\text{N}$
4. $\begin{array}{l} 8\text{N} \\ \uparrow \\ \text{F}_{\text{net}}=0 \end{array}$  $\leftarrow F=?$ d) $F_{\text{net}}=25\text{N}$
 $\begin{array}{l} \text{F}_{\text{net}}=2 \\ \downarrow \\ F=? \end{array}$  $\uparrow 12\text{N}$


3. 5. What is Tension Force?

6. Among cotton, nylon, woolen which thread have more limiting force?



From this F.B.G. In which direction the car will move if $F=f$?

4. Read the passage and answer the following questions.

When forces act on a body along a straight line and they are in the same direction the net force is sum of all forces. When the forces on a body in a straight line are in opposite directions the net force is equal to difference between the two forces.

8. What is the net force when 10N and 15N forces acts on a body in the same direction?

9. What is the net force when 20N and 25N forces acts on a body in the opposite direction?

10. What is F_{net} on a table if F_1 and F_2 act on opposite direction? ($F_1 > F_2$)

Physical Science

1. Force

Class: VIII

Work sheet - 5

Date: _____

1. Fill in the blanks:

1. Rivers flow down to the sea is an example for _____ Force
2. If we rub a inflated ballon with a paper it acquired _____ force
3. The strength of a field in a particular region can be represented by _____

2. Match the following :

- | | | |
|-----------------------------------|---------|------------------------|
| 1. Greater density of field lines | () | a) Gravitational force |
| 2. Pen fall down | () | b) Electrostatic force |
| 3. Charged Ballon | () | c) Stranger force |

3. 5. What is magnetic field?

6. Whatis Gravitational force?

7. What is electrostatic force?

4. Read the passage and answer the following questions.

As the earth is so massive and huge, all the other object close to the earth are attracted in pulled towards it. When you sit in your classroom, there will be a gravita tional force between you and your teacher a similar force exists between you and the black board....

8. Which property of the body is a cause of gravitational force?

9. Why earth has atmosphere?

10. Why the blackboard in the classroom not moving towards you?-

Physical Science

2. Friction

Class: VIII

Work sheet - 1

Date: _____

I. Fill in the blanks

1. If there is no change in motion of an object along the vertical direction then the net force acting is _____
2. _____ friction helps wooden block to move along with trolley.
3. Static friction is _____ than sliding friction.
4. Match the following
 1. Static friction [] a) object in motion
 2. Sliding friction [] b) it comes to rest
 3. If Net force is zero on moving object [] c) object at rest

II. Answer the following questions

5. What is friction?
6. Define static friction?
7. What is sliding friction?
8. Write an experiment to understand the nature of friction and the concept of static friction.

Physical Science

2. Friction

Class: VIII

Work sheet - 2

Date: _____

I. Fill in the blanks

1. If roughness increases friction is _____
2. Friction is not depend on _____
3. If we double centripetal force the value of friction of force is _____
4. Match the following
 1. Factor of friction [] a) increase roughness
 2. Pen grip [] b) no change in freiction
 3. Number of types of velide [] c) Centripetal force.

II. Answer the following questions

5. What are the conditions applied for static friction between objects.
6. Give some examples for static friction
7. Sliding friction is less than static friction, Why?
8. Explain the effect of roughness on friction with a scitاسce activity.

Physical Science

2. Friction

Class: VIII

Work sheet - 3

Date: _____

I. Fill in the blanks

1. gymnasts apply some power on their hands to _____ friction for better grip.
2. _____ is responsible for over heating and wearing out of moving parts.
3. Because of friction _____ of surface increases.
4. friction produces _____
5. Match the following
 1. oil, grease [] a) increases friction
 2. threading of tyres [] b) decreases friction
 3. rough surface of match box [] c) helps in producing heat

II. Answer the following question

6. what is lubricant?
7. space craft is covered by heat shield, why?
8. why do we use grease between the moving parts of motor vehicles?
9. Do you agree With the statement " friction is both good and evil " explain?

Physical Science

2. Friction

Class: VIII

Work sheet - 4

Date: _____

I. Fill in the blanks

1. Fluid friction is also called as _____
2. gases and liquids are called as _____
3. aeroplanes are in the shape of birds to reduce _____
4. Match the following
 1. Suitcase rollers [] a) More fluid friction
 2. Design of race cars [] b) rolling friction
 3. More object speed [] c) fluid friction

II. Answer the following questions

5. What is fluid friction?
6. What are the factors effecting the fluid friction ?
7. Define rolling friction?
8. Why do birds and fishes have special shapes?
9. Give some examples where we use ball bearing in our daily life?