

SCIENCE – UNIT 4 – WORKSHEET 1

ACHIEVEMENT		COMMENT		
<input type="checkbox"/> Excellent	<input type="checkbox"/> Fair	Knowledge		
<input type="checkbox"/> Very good	<input type="checkbox"/> Need improvement	Skills		
<input type="checkbox"/> Good		Attitude		

UNIT 4**REMEMBER****Words to Learn**

Exert
Force Diagram
Balanced
Unbalanced
Net
Energy
Work
Friction
Lubricate

- Forces act in different directions.
- Forces act in pairs. Each force in a pair act in the opposite direction to the other.
- Force diagrams show the direction and size of forces.
- When both forces on an object are the same size, the forces are balanced.
- When one force on an object on an object is bigger than the opposite force, the forces are unbalanced.
- When two opposite forces are not balanced, there is a net force.
- Forces change the movement of an object by speeding it up or slowing it down.
- Forces change an object's direction of movement.
- Forces change the shape of an object.
- A force is needed to make objects move or to stop them from moving.
- Moving objects have energy.
- Work is the amount of energy transferred to an object to make it move.
- Friction is a force that stops things sliding past each other.
- Friction slows down moving objects.
- Friction can be useful as it helps objects to grip on surfaces.
- Friction can be a problem as it makes objects wear out or get hot.
- Frictional force is greater between rough surfaces than between smooth surfaces.
- Frictional force is bigger over large surfaces than small surfaces.

I. Directions: True or False.

1. Gravity is a force that pulls objects downwards.
2. Forces can only act sideways.
3. Friction is stronger in rough surfaces.

4. An apple sitting on top of a table has unbalanced forces acting on it.
5. A force is needed to make things move.
6. When we exert force on an object, we give that object energy.
7. Forces can change an object's shape.
8. Two forces are unbalanced if they are opposite but not equal.
9. If an object sinks in water, the two forces acting on it are unbalanced.
10. Forces can change a moving object's direction.

II. Directions: Identify if the following pairs of forces are **balanced** or **unbalanced** in each picture.

1.



balanced

unbalanced

ball moves away from the boy

2.

balanced

unbalanced



neither the boy or dog move

3.



balanced

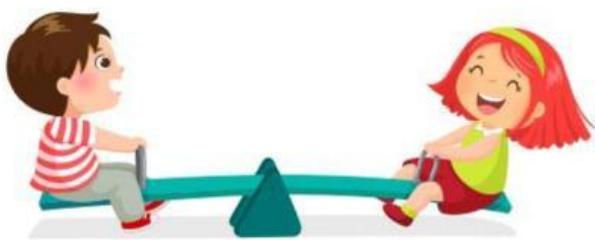
the rope moves to the left

unbalanced

4.

balanced

unbalanced



the seesaw does not move

III. Directions: Identify whether friction is USEFUL or a PROBLEM in each situation.

Situation	Useful	Problem
A car brakes and slows down		
Socks wear out		
A pencil gets blunt		
You get a blister from your shoes		

The ball you kick stops rolling		
Clothes get clean when you rub them with soap		

IV. Directions: Look at the following pictures and decide whether the forces acting on each is opposite, or the same, and equal and not equal.

