

Name: _____

Date: _____

Grade 3

Work, Force, Simple Machine, Wheel & Axle, Inclined Plane, Wedge, Lever, Pulley, Screw, Pendulum

Ask a Question – about something you observe:

What are simple machines? Complex machines? How does a machine make work easier? Pendulums?

State Your Hypothesis – a possible answer to your question that can be tested: **Pendulums**

If _____ then,

because _____ .

Materials: paper clip, plastic rod, hex nut and string, tape, ruler, wood block, paper, science workbook

Vocabulary: Work

Force

Machine

Make a drawing of the paper clip wheel and axle.

Label **D&f**

Label **F&d**

Make a drawing of the lever. Label the **lever, arm, fulcrum, load** and **effort**.

Label **D&f**

Label **F&d**

What did you learn?

Find and draw 10 simple machines found in your classroom or your school on the back of this worksheet.

Pendulum Energy

Materials: string, tape, weight, block of wood, ruler, worksheet

Procedure: Follow directions and record results

1. Tie the string to your weight to make a pendulum that will swing.
2. Tape the sting to your chair so that it will swing and almost touch the floor.
3. Trace the outline of the wood block on a piece of blank paper.
4. Write the words **Work** and **Force** and copy the pencil dot on the paper.
5. Copy the Tape the paper with the traced block of wood on the floor under the front of the chair.
6. Place the block of wood on the paper in the traced area next to the resting pendulum.
7. Pull back the pendulum let it swing to test how it hits the wood block.
8. Let it swing. It should strike the block of wood and make it move – doing science work.
9. Measure how far the block moved from pencil dot on paper to pencil dot on wood block.
10. Repeat at the same pendulum swing five times at half the height.
11. Repeat at the same pendulum swing five times at full height.
12. Complete the data chart below

Height of Swing	Trial 1	Trial 2	Trial 3	Trial 4	Trial 5
Half way up the chair	___cm	___cm	___cm	___cm	___cm
Full way up the chair	___cm	___cm	___cm	___cm	___cm

What did you learn?

Draw the Pendulum and Wood Block