

DAY 7 – KPSI: MACHINES

Write "YES" or "NO" in every box to evaluate your knowledge.

	 I don't know	 I know a little	 I could explain it
Can you differentiate machines depending on the type of energy they use?			
Can you explain what a structure is, its parts and uses?			
Can you describe what a lever is, different parts and usage?			
Can you classify the different types of levers ?			
Can you describe what an inclined plane is and its usage?			
Can you explain what a pulley is and how it is used?			
Can you explain a relevant invention from the past ?			
Can you name the most important inventions nowadays ?			

ACTIVITIES: LEVERS

1. Watch the video "[Super Simple Machines: Levers](#)" and complete the following questions.

1.1. What kind of machine is a **ramp**?

It is a _____.

1.2. What do **simple machines** are used for?

A simple machine is just something that _____.

1.3. Tick the **parts of a lever**.

___ Wheel ___ Long bar ___ Bicycle ___ Inclined plane

___ Screw ___ Seesaw ___ Pulley ___ Fulcrum

1.4. What did Jessi (the scientist) do to make the job easier?

She _____.

1.5. Tick the lever



___ Wheel



___ Wheelbarrow



___ Inclined plane



___ Scissors



___ Seesaw



___ Bicycle



___ Table



___ Well



___ Pulley



___ Pulley



___ Shovel



___ Clock

2. Watch the video "[Lever classes](#)" and complete the following questions.

2.1. How many **classes of levers** are?

There are _____ different classes of level.

2.2. Tick the **elements** that determine the class of a lever.

___ Wheel ___ Lever ___ Effort ___ Inclined plane
___ Load ___ Pulley ___ Pulley ___ Fulcrum

2.3. Match the parts of a lever and their **definitions**.

- 1) Load ___ force applied to move the load.
2) Effort ___ the turning point of the lever.
3) Fulcrum ___ the object we're trying to move.

2.4. Choose the correct **class of lever**.

_____: the **effort** is between the load and the fulcrum.

_____: the **fulcrum** is between the effort and the load.

_____: the **load** is between the effort and the fulcrum.

2.5. Can you tell which **class of levers** are these objects?



Seesaw



Nail clipper



Crowbar



Tweezers



Wheelbarrow

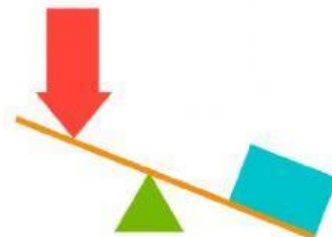


Stapler

3. Complete the diagram by choosing the correct words.

LEVERS

Simple machine made up of a long bar which moves up and down over a fixed point (the **fulcrum**) to transmit and increase the force applied.



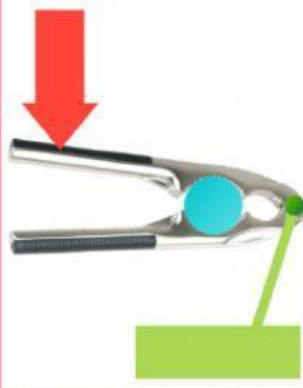
CLASS 1

The _____ is between _____ and _____.



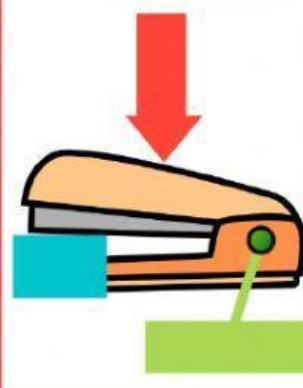
CLASS 2

The _____ is between _____ and _____.



CLASS 3

The _____ is between _____ and _____.

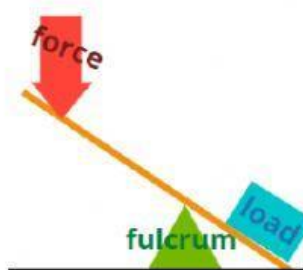


4. Look at the picture and notice where the fulcrum is in each one. Which is the best position for moving the box?

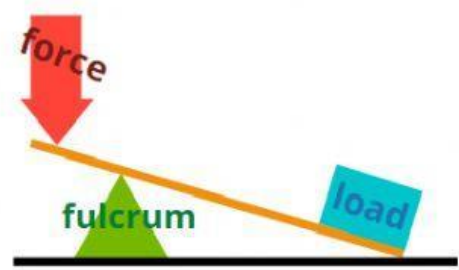
PICTURE A



PICTURE B

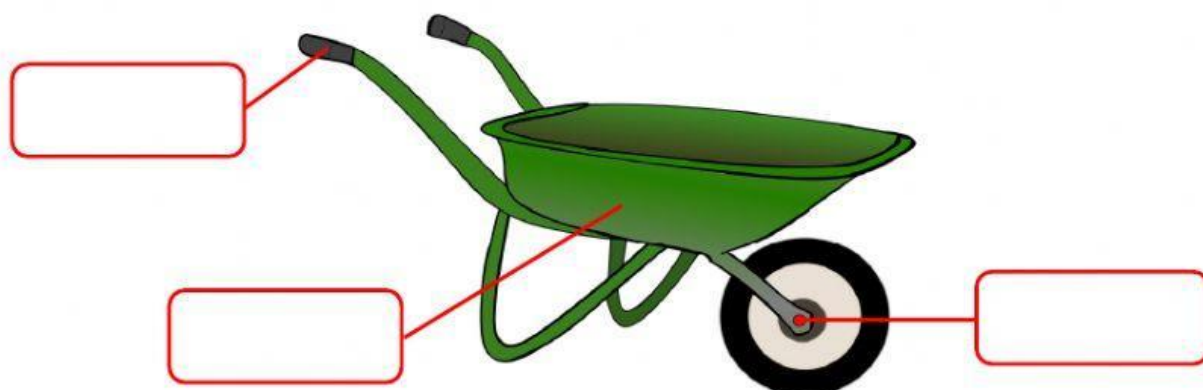


PICTURE C



The best position for moving the box is in picture ____

5. Label the fulcrum, load and force on the following pictures.



6. Classify the following levers as Class 1, Class 2 or Class 3.



Pliers



Stapler



Juicer



Bottle opener



Clothes-peg



Broom



Scale



Fishing rod



Nutcracker



Tongs



Wheelbarrow



Scissors

7. What type of lever is the hammer in each picture?
Explain your answer.



In this picture, the hammer is a
_____ lever because



In this picture, the hammer is a
_____ lever because
