

# THIS PASSPORT

BELONGS TO

TEACHER



## Simple Machines

Science SOL's

K.1 b 1.2 a,c 3.2 4.2 a,b,c

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**Simple  
Machines**



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# What's a Simple Machine Anyway?

Imagine needing  
to travel across the United States.  
Now imagine doing this if the wheel was  
never invented. Yikes!

Simple machines are tools that make  
work easier.

Let's go learn more!



Welcome to  
Mill Mountain Theatre's  
Waldron Stage!

Put your listening ears on!

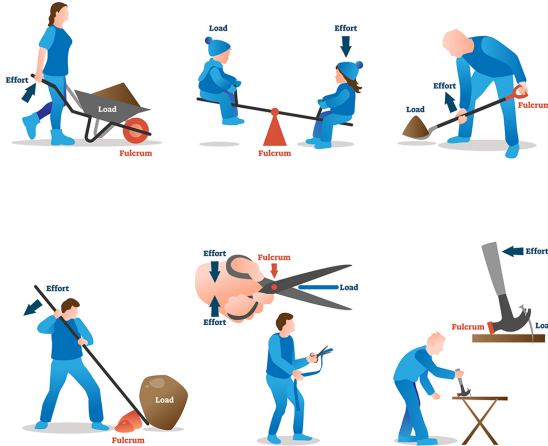
Tour Guide Victoria tells you some  
important words to know when learning  
about simple machines. Listen up to fill in  
the blanks for each simple machine.

## LEVER

A lever works by having a fulcrum  
in the middle and a plank or beam.

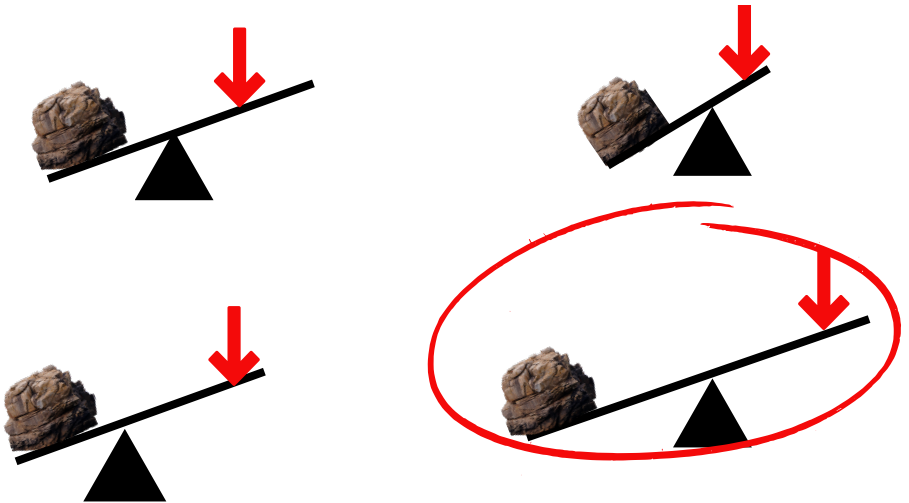
# Simple Machine #1: Lever

## LEVER EXAMPLES

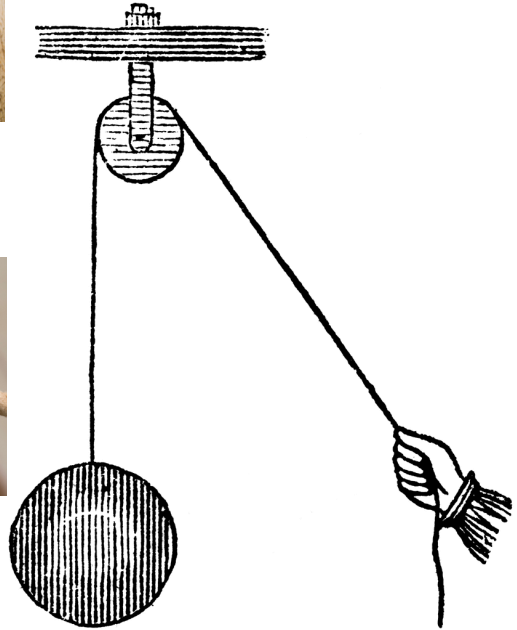


The farther the applied effort is from the fulcrum, the easier it is to lift the load!

Look at the pictures below. If you wanted to lift a heavy rock by sitting on a seesaw, which picture would make that the easiest? Circle it!



## Simple Machine #2: Pulley



A pulley makes moving something easier. Often times it helps when moving something heavy.

The students from Mill Mountain Theatre used their bodies to pull a pretend bucket.

Draw what this might look like in real life below:

Can you put your thinking caps on and think of some things you might use a pulley for everyday?

flagpole

crane

curtain

garage doors

# Simple Machine #3: Inclined Plane

The Inclined Plane (or ramp) is used to raise or lower a load.

**The boys and girls got in line from**

shortest to tallest  
(in the back) (in the front)

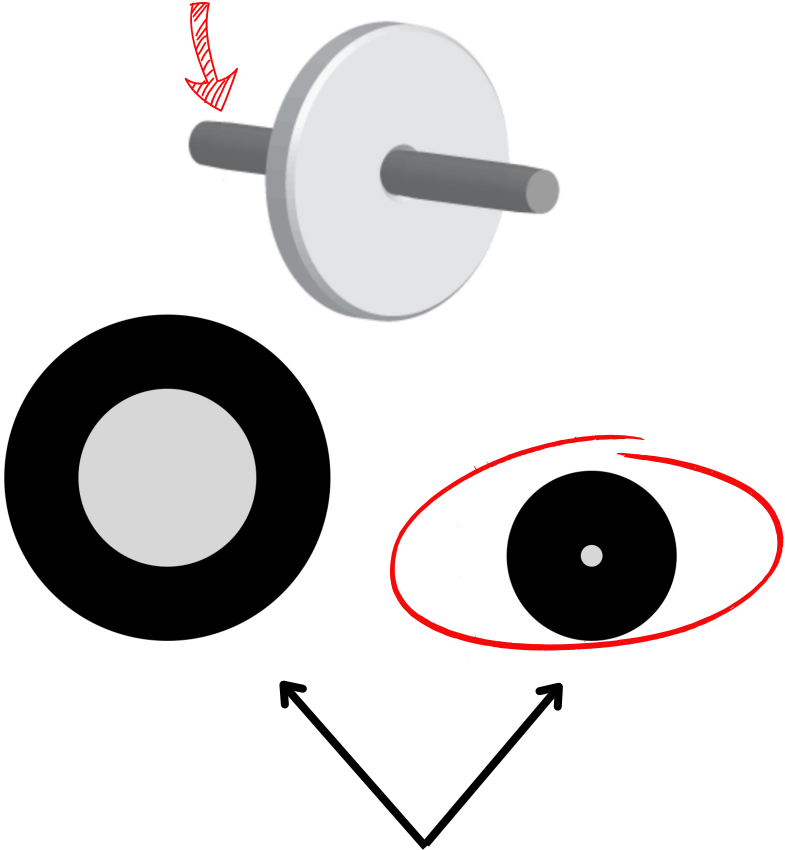
**to create the inclined plane.**

Draw an example of an inclined plane  
you might use.



# Simple Machine #4: Wheel and Axle

Point to where the axle is on the picture below



If these two wheels travel the same distance, which one will rotate the most times to get there?  
Circle it.

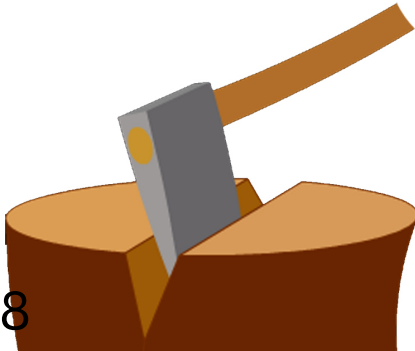
# Simple Machine #6: Wedge



Wedges are often used to stop something or to split something.

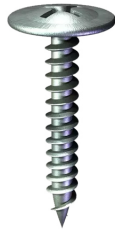
Wedges can also be used with levers to gain mechanical advantage, making work easier.

Draw an example of a wedge below.



# Simple Machine #7: Screw

**Did you know. . .  
That a screw is an inclined plane  
wrapped around a cylinder?**



Screws can be used to hold things together.

What did the Mill Mountain Theatre Students  
pretend to do?

The Mill Mountain Students pretended to screw a  
screw into the ground to secure a piece of wood.

Screws can also be used to move things.

Have you ever twisted a chapstick tube to raise or lower  
the chapstick inside? If so, you have used a screw.

Find an example of a screw being used and draw it  
below!

# Welcome to Mill Mountain Theatre's Scene Shop!

Do you remember. . .



What was the first simple machine that Payton used in the scene shop?

inclined plane

What was one of the examples of a lever that you saw in the scene shop?

clamp , crow bar

What simple machine does Drew use to help him pick up large pieces of scenery and move them around?

wheel and axle

Matt shows us a complex machine called a winch. Can you remember which simple machines make up the winch?

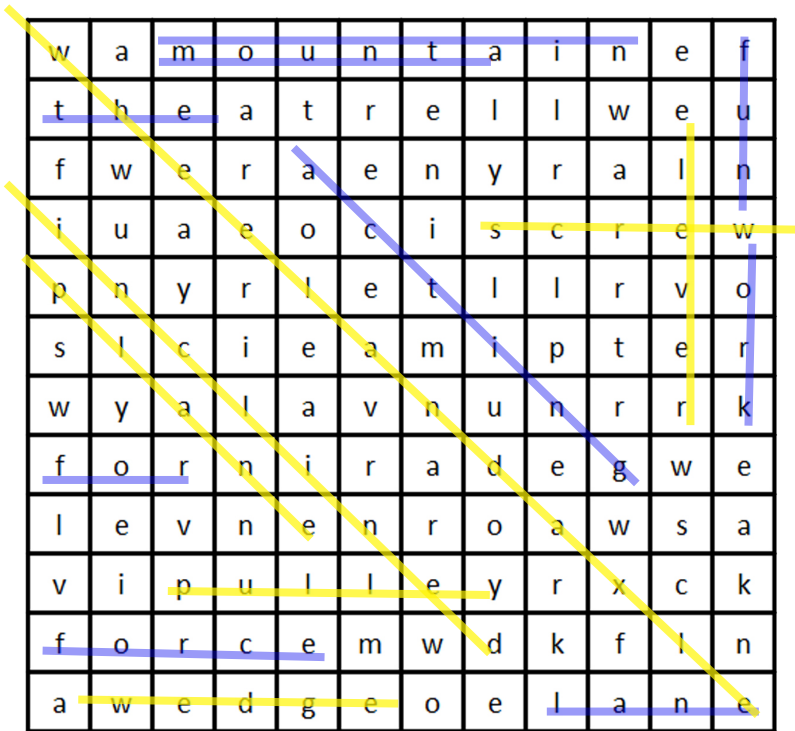
The pulley, wheel & axle, lever, and screw

are the simple machines that make up the winch.

# Imagination Station

Draw a pulley behind the curtain and a large prop that it is holding up for your imaginary play below.





Find these words...

pulley

wedge

screw

inclined plane

lever

wheel and axle

Can your eagle eyes find any other words...