

Warm Up

1.) Explain the electrical circuit components of your electro-boards; why/how does it work?

2.) What are simple machines?

3.) Can you name some types of simple machines?

-the batteries (power source) supply the electrical energy that travels through the conductors (wires and brads) to power the light bulb (the load) when the circuit is complete

-machines that make life easier; they allow us to push or pull over greater distances

-pulleys, wedges, levers, screws, inclined planes

May 16-8:04 AM

Warm Up -Simple Machines

1.) What do you think mechanical advantage means?

2.) How might you find the Mechanical Advantage of a machine?

3.) What is mechanical efficiency?

-the difference between the applied force and the work accomplished

-divide the resistance (output) force by the effort (input) force; usually the resistance force is the weight of the object

-the effectiveness of the machine's performance

May 17-7:43 AM

Let's take a look at some simple machines...



May 17-8:00 AM

WARM UP


1.) What is the difference between a simple and complex machine?

2.) What are some basic household items that are considered complex machines, but are simply a few simple machines combined?

3.) Which simple machine is often said to be humankind's greatest invention?

- A simple machine is made of 1 component while a complex machine is several simple machines put together
- scissors, bikes, can openers, doors...
- the wheel

May 27-5:07 PM



Simple Machines: make work easier for us by allowing us to push or pull over increased distances.

6 Main Types: inclined plane, lever, pulley, screw, wedge, wheel and axle

May 27-6:54 PM



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Warm Up

- 1.) Why might it help us to know the mechanical advantage of a machine?
 - so we know how much force is needed to move an object

- 2.) A machine makes tasks easier by multiplying input....
 - forces OR distances; but not both at the same time

- 3.) Can the mechanical advantage of a machine be less than 1?
 - yes, but it doesn't mean it isn't useful

May 27-7:52 PM

Mechanical Advantage of Machines

- Simple machines can multiply input forces or input distances, but never both at the same time.
- If a machine has a mechanical advantage less than 1, it means that instead of multiplying force, the machine multiplies distance
 - > a broom doesn't push the dust with as much force as you use to push the broom, but a small movement of your arm pushes the dust a large distance
- Ideal Mechanical Advantage: the mechanical advantage a machine should have if there was no friction or wear on the machine
- Actual Mechanical Advantage: the physical measurements of the input and output forces

Video -->

May 28-10:08 PM

Let's Practice!

1. Let's read through the information and examples first. any volunteers?
2. Work with your table partner to complete questions #1-7 on the back.
3. Let's go over them together.
4. Finish with questions #8-14.
5. Let's go over them. Any questions?
6. Homework: Complete the 10 question worksheet on Mechanical Advantage -due tomorrow! Don't forget about your quiz tomorrow on simple machines!

May 28-10:27 PM