

Energy is something that makes something else change or move.

Work happens when a force moves an object.

Seven forms of energy

Mechanical - energy in movement, one thing moving another

Chemical - energy produced in a chemical reaction

Heat - energy that moves tiny particles (atoms) in matter

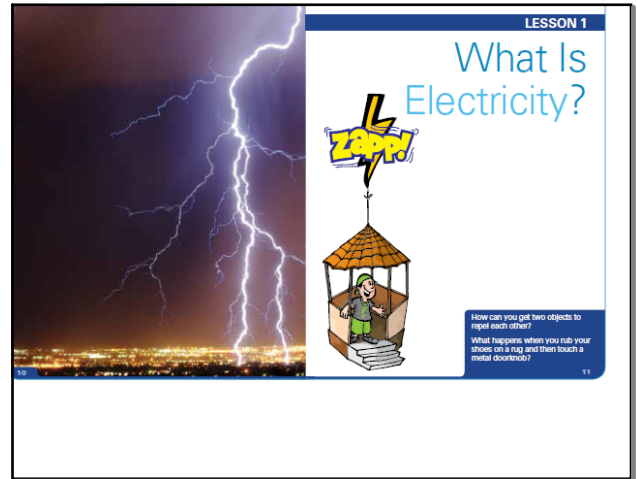
Light - energy that travels in waves, can move through empty space

Electrical - energy in electrical current, comes from electrical charges

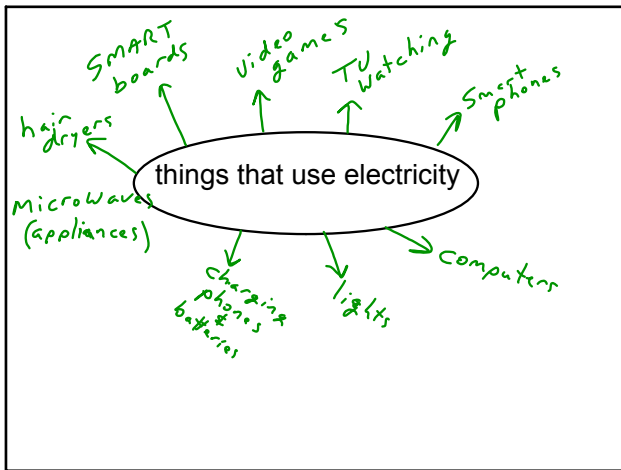
Sound - energy of vibrations in matter

Nuclear/atomic - energy that is in atoms, it is released when atoms break apart or join together

Apr 13-8:44 AM



Apr 15-7:20 AM



Apr 15-7:21 AM

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Balloons before rubbing
opposite charges attract

Balloons after rubbing
same charges repel

Lab activity balloon

1. What charge did the straw have initially? How do you know? Did it have a charge after rubbing? How do you know?
The balloon didn't have a charge at first because the metal pieces of the electroscope didn't move. It did have a charge after rubbing it because the charge went down the wire and made the metal pieces move apart.

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test object	before rubbing	after rubbing
golf ball	not move	not move
bouncy ball	not move	not move
can lid	not move	not move
test tube	not move	some move
paper towel	not move	not move
balloon	not move	<u>moved</u>

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PREDICT
Is the straw electrically charged? Yes No
Will it repel or attract? Explain your thinking.

TEST
What happened when you moved the straw close to the electroscope?

CONCLUDE
Is the straw electrically charged? Explain your thinking.

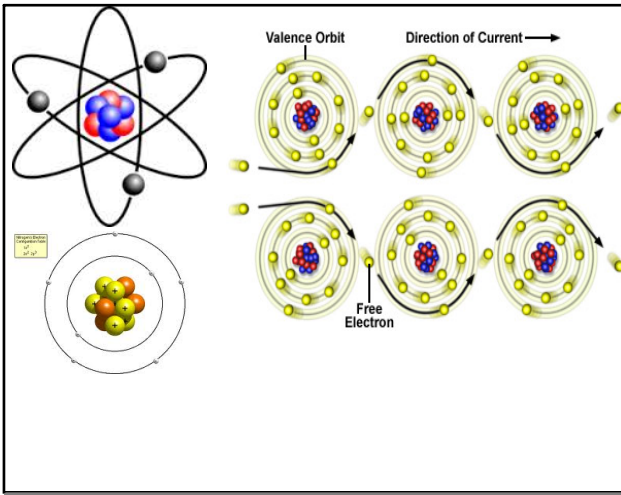
PREDICT
What will happen if you rub the straw with a paper towel? Will it repel or attract? Explain your thinking.

TEST
What happened when you moved the straw close to the electroscope?

CONCLUDE
Is the straw electrically charged? Why? Explain your thinking.

PREDICT
What will happen if you bring tape close to the electroscope? Will it repel or attract? Explain your thinking.

Apr 16-10:16 AM



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Explain 1. Explain why you got the results you did in this investigation.

None of the objects moved the electroscope except for the balloon because none of them had an electrical charge. But when we rubbed the balloon, our clothes gave off an electrical charge to the balloon.

Lab 1. What did your observations and investigations with the electroscope tell you about electricity?

Some things have electrical charges a some do not. Positive and negative charges act like magnets (attracting & repelling) Static electricity is made by rubbing two objects together, negative charges are given away, then the charged object moves the electroscope.

Apr 17-8:35 AM

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1. Explain what attract and repel mean, using one of the class activities as an example.

Attract means to come together, like the balloons that were rubbed against each other. Repel means to push away, like the balloons that were both rubbed on a pant leg.

2. What does it mean for an object to have a charge?

To have a charge means that something has given away or picked up extra electrons. Extra electrons gives a negative charge, less electrons gives a positive charge.

3. How does an electroscope help you understand whether a material is charged?

When something has a charge and you hold it near the wire on the electroscope, the charge is passed down the wire and the aluminum foil pieces move apart because they both have that same charge.

Apr 15-8:02 PM

Apr 15-8:02 PM