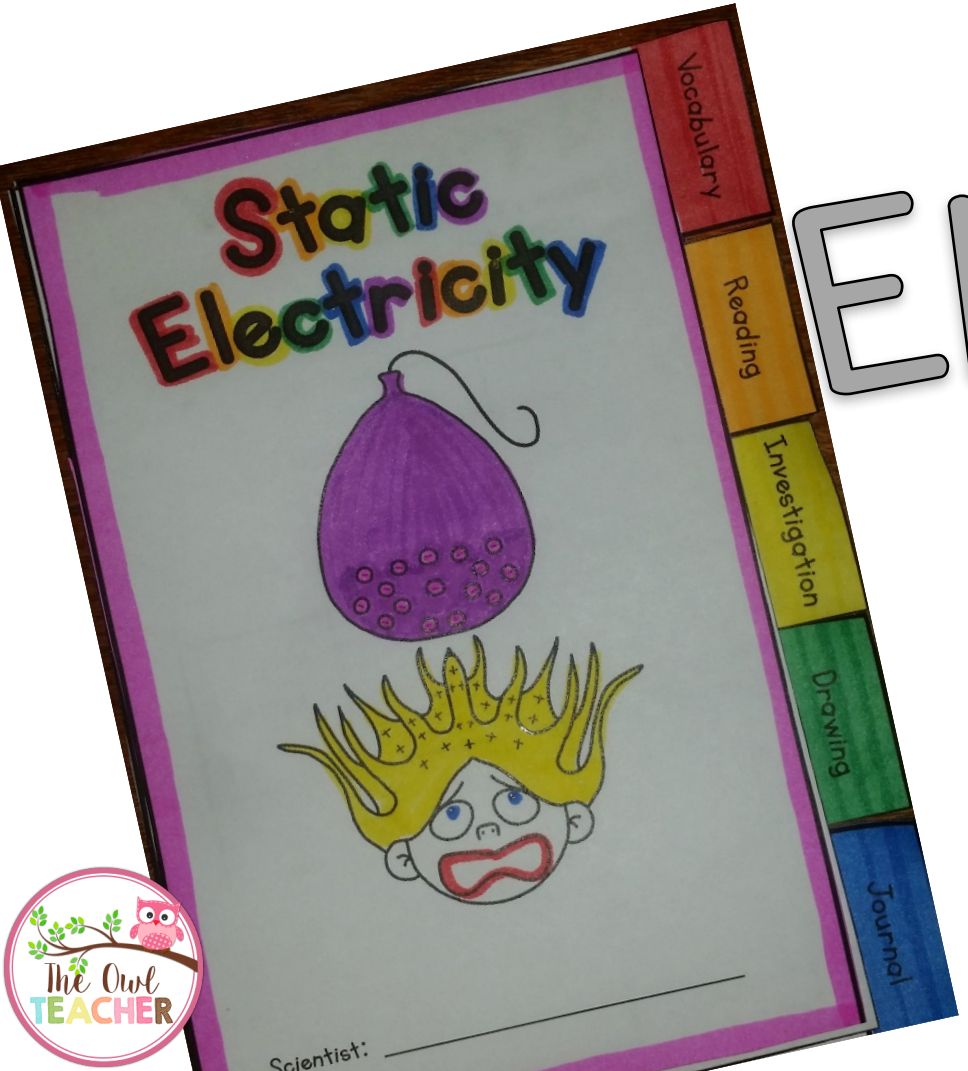
Science Booklets

Differentiated & Student Centered



Static Electricity

The Owl TEACHER

Teacher's Page

Unfortunately, with the large demands on reading and math from Common Core, science is often pushed to the side. If your district is like mine, you often have very little time to dedicate to science, yet are still expected to fully cover the entire curriculum. This packet was created to help save time and to cover the all important science concepts - all while still meeting the nonfiction criteria of Common Core.

In this packet you will find a mini-book for students to assemble and explore the critical science concepts. It can be used to teach, reinforce, and/or challenge students, all while meeting their needs and learning styles. The reading page has been differentiated for your students with one being a higher level (HL) and the other being a lower level (LL).

The tabs in this booklet can be used as science stations. The first tab contains an important vocabulary activity related to the science concept of static electricity and corresponds with the reading piece provided. The second tab asks comprehension questions related to the reading piece and requires students to support their answers with textual evidence. The third tab focuses on an investigation to deepen the understanding of static electricity and how it works. The fourth tab asks students to draw while the fifth tab prompts students to respond to a thought-provoking journal question.

I personally use all of my products in my classroom and can testify to the effectiveness of them.

Easy Use:

*Print pages 3-5 single sided (two sided copying will not work). Also print page 9 and/or 10 for students to use as their reading piece and page 11 for station use.
*After making class copies, provide each student with scissors and a glue stick. You can also staple or tape if you prefer.
*Have students color before cutting - including the tabs. This makes the piece look attractive.
*Have students cut out all flipbook pages. The cover page goes first. Then the students should line up the tabs for each page, in view, similar to steps.
*Have students run a line of glue along the left edge of each sheet. When finished the final product should resemble a small tabbed notebook.
*Have students complete each page individually, in pairs, in groups, or as a whole class. This can also be used in small groups with your direction.

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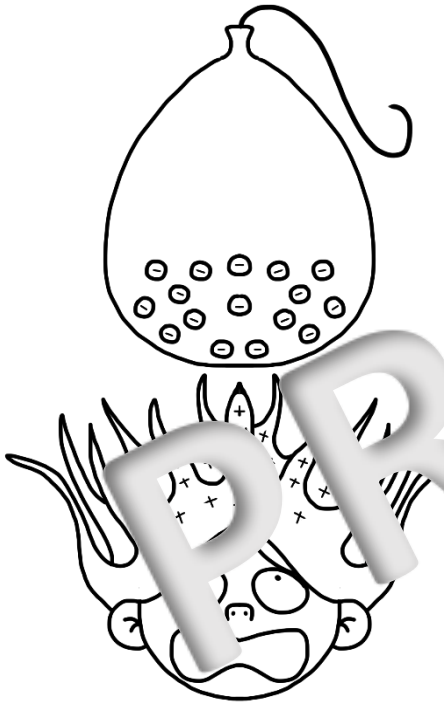
Static Electricity



Scientist: _____

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Vocabulary

Vocabulary

Directions: There are four vocabulary words in your reading piece. Below write what each word means and draw it.

	Definition	Drawing
static electricity		
attract		
repel		
discharge		

PREVIEW

Reading

Directions: Read the sheet titled "Feeling Ec"static" About Lightning" and then answer the following questions with complete sentences. Be sure to support your answers.

1.) In your own words, what is static electricity?

_____

_____

_____

2.) How does static electricity work?

_____

_____

_____

3.) Give at least two examples of static electricity.

_____

_____

_____

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Reading

Investigation

Directions: Follow the directions on the Investigation sheet and then write your response below.

1.) Predict what will happen if you place a charged balloon on the bottom of a light bulb.

_____

_____

What did you observe happen?

_____

_____

3.) Why was the electrical charge "jumping" from the balloon to the bulb?

_____

_____

4.) How is this like lightning?

_____

_____

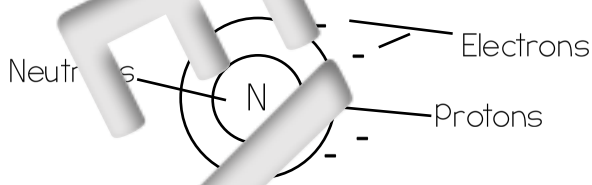
Investigation

PREVIEW

Feeling Ec"static" About Lightning

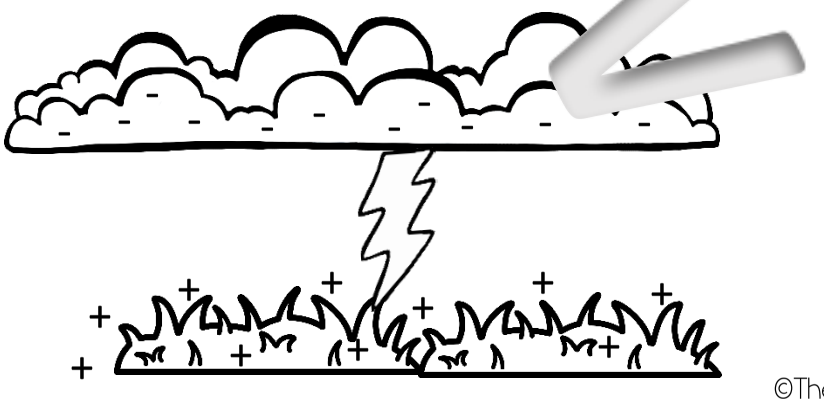
Did you know that electricity has been around a long time - long before Ben Franklin decided to fly a kite during a storm or Thomas Edison discovered the light bulb? Electricity is not [illegible] the form of electronics and power cords as we are most familiar with [illegible]ay. O[illegible] type of electricity, called static electricity, has been around since [illegible] of t[illegible].

Everything is made up of m[illegible]r and matter is made up of atoms. Inside these tiny atoms are particles [illegible]ons, protons, and electrons. These create positive and negati[illegible]s tha[illegible]ther make an object **attract** (pull toward) to another object or **repel** (pu[illegible] **Static electricity** is the build up of these charges that make some [illegible]ects attract and repel one another. These charges collect on the surface [illegible]n object u[illegible]ddenly, it **discharges** (releases or jumps) to another object.



We experience static electricity [illegible] basis. Have you ever gone down a slide and your hair was standing up? As you are go[illegible] down the slide, your hair is picking up the charges that were built up on th[illegible]. I'm sure you have rubbed your feet across carpet, picking up char[illegible]y to get zapped when you touched a metal doorknob. The charges that co[illegible]ied on y[illegible]t were attracted to charges on the doorknob, causing it to quickly [illegible]r dis[illegible]arge. That's when you will feel a slight "zap" and see a little spark.

Streak lightning is a powerful, but dangero[illegible] form of s[illegible] electricity. In the clouds, little particles are moving around and bumping i[illegible]e another. Each collision creates an electrical charge. Over time the clouds h[illegible] up with charges and eventually release by being attracted to charges [illegible]



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PREVIEW

Lightning in a Bulb

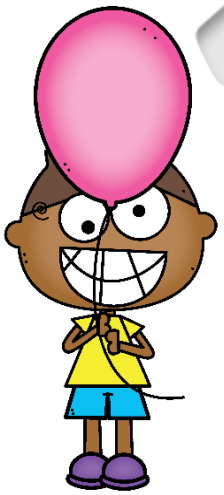
Your teacher has provided you with needed materials to complete your investigation page. These materials should be treated with care and left in the station.

Step 1 - Predict what will happen if you placed a charge balloon on the bottom of a lightbulb.

Step 2 - Using the wool cloth provided, rub it gently but quickly across the balloon to build up a charge.

Step 3 - Very quickly touch the metal part found at the bottom of a light bulb with the balloon. If it doesn't light up, try rubbing the balloon again for a bit longer.

Step 4 - Complete the 'Investigation' section of your booklet. Return all materials as you found them in this station.



PREVIEW

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