Ecology Flip Book

Environmental Effects

ENVIORMENTAL DISASTERS:

1. A **Natural Disaster** is a naturally occurring event that causes devastation and/or destruction to its surrounding environment and ecosystem. A **Man-Made Disaster** is an event caused by human interference (accidental or intentional) that causes devastation and/or destruction to its surrounding environment and ecosystem.
2. Obtain the Environmental Disasters Table and worksheet.
3. Cut out each disaster picture and glue them into Disaster Column on your Table
4. Decide if the disaster would be considered a Natural Disaster, Man-Made Disaster, or both and place your decision in the next column.
5. Cut out the Environmental Effect Blurbs and match it to its appropriate disaster. Glue it onto your table in the proper column.
6. Obtain a blank sheet of paper and title it "Environmental Disasters"
    a. . Cut out your Environmental Disasters Table and glue it onto your page.

GREENHOUSE EFFECT:

1. Obtain a blank sheet of paper and title it "Greenhouse Effect".
2. Find a computer station and visit the following website. Watch the brief animation about the Greenhouse Effect.

    http://environment.nationalgeographic.com/environment/global-warming/gw-overview-interactive

    a. In your own words underneath the title of your Page, summarize what the Greenhouse Effect is and what causes it.

    b. Add a chart to the left side of your page. Include all greenhouses gases and a list of the fossil fuel(s) that create them

    Ex:

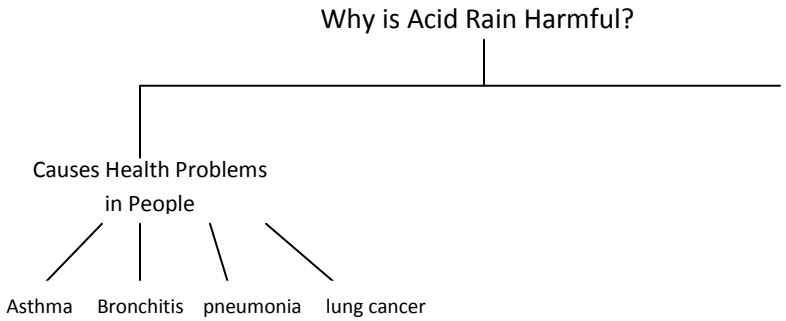
Greenhouse Gas	Action that Creates It
Chlorofluorocarbons	Coolant from Fridges

3. Obtain a picture of the earth from your teacher. Cut out the picture and glue it onto the right side of your Greenhouse Effect page.
4. Add arrows in black to your picture to show where the Sun's Radiation goes.
5. Add arrows in red to show where the heat from Earth is released goes.
6. Add arrows in green to show where the greenhouse gases are located in the atmosphere.

ACID RAIN:

7. Obtain the Article, *Acid Rain*. You will be using this article to make your next 2 pages.
8. Read Section 1 of the article- *What is Acid Rain?*
9. Obtain a blank sheet of paper and title it "Acid Rain"
    a. Underneath your title write your definition of Acid Rain and include in it the two types of acid deposition (acidic material that falls from the sky).
    b. Read Section 2 of the article - *Acidity Review*.
    c. Obtain a blank pH scale from your teacher.
    d. Label the 0 on the scale as Acidic, 7 as neutral, and the 14 on the scale as Basic. Using the pH scale from the article, label <u>your</u> pH scale with the following: Sulfuric Acid, Acid Rain, Acidic Lake, Clean Rain, Healthy Lake, and Pure Water.
    e. Glue your pH scale <u>under</u> your definition of Acid Rain on the <u>left</u> side of your paper.
    f. Read Section 3 of the article- *What causes Acid Rain?*
    g. Obtain a Real Life Environment Picture and a Diagramed Environment Picture from your teacher. Using the Real Life Environment Picture label all sources for Acid Rain and color code them red. Label the Acid Rain and color code it purple. Label all affected areas and color code them brown.
    h. Cut out your Diagramed Environment Picture and add it to your Acid Rain Page to the right of your pH Scale.
    i. Add a key for your diagram to the right of your picture. Leave space below your picture and scale. Return the Real Life Environment Picture.
    j. Read Section 4 of the article- *Why is Acid Rain Harmful?*

k. After reading make a tree map at the bottom of your Acid Rain page of all the reasons Acid Rain is harmful and include an explanation of why. Here is an example of how to set up a tree map:



RENEWABLE AND NON-RENEWABLE RESOURCES:

10. Obtain the article, *Energy in our Lives/ Energy Problems*. Use this article to help you start the next page in your Flip Book.

11. Obtain a blank sheet of paper and split it in half. Title one side Renewable Resources and the other side Non-Renewable Resources.

    a. Read the article, Energy in our Lives/ Energy Problems. When you are done reading define what a renewable resource is under its title and what a non-renewable resource is under its title.

    b. On the Non-Renewable Resources side of your paper, list 3 non-renewable resources and draw a picture of where we use the resource. Ex: Coal- burned in furnaces or fireplaces.

    c. In your own words, write a paragraph describing problems associated with using non-renewable resources. Give examples to back up your argument.

12. Return the Energy Article to your teacher and obtain the article, *The Sun's Energy/ Catching the Heat*.

    a. Read the article, *The Sun's Energy/ Catching the Heat.*

    b. Add the renewable resource Bio-gas to your page as well as an explanation of how it works.

    c. Add the renewable resource Wind Power to your page as well as an explanation of how it works.

    d. Add the renewable resource Solar Power to your page as well as an explanation of how it works. Underneath Solar Power, add two ways in which we currently use solar energy.

e. In your own words, write a paragraph explaining the value of using renewable resources, why they are beneficial, and how they will save us in the long run.

13. Return the article to your teacher and obtain a blank sheet of paper.

14. After reading about Renewable and Non-renewable Resources, stop and think about our state of Arizona. What do you think is our most valuable renewable resource and why?

15. After deciding the most valuable renewable resource in Arizona is, make a Bulletin Board Advertisement persuading Arizonian's to use this resource. Be sure to include the following in your Advertisement:

    a. The Renewable Resource Name

    b. Why it is the most valuable renewable resource in Arizona?

    c. What are the benefits of Arizonian's using this resource?

    d. Why is the use of this resource beneficial for the state as a whole?

    e. A picture of the resource in use. Could be from a magazine, hand drawn, or clip art.

**Remember bullet points, slogans, and pictures make effective Advertisements!!!