

Components of Activity

Earth 36& Earth 37

WHAT THIS ACTIVITY IS ABOUT: This activity is about cross-cutting concepts in science.

Crosscutting Concepts represent common themes that span across science disciplines. These concepts identify universal properties and processes found in all the science disciplines.

INSTRUCTIONS:

1. Briefly scan through each paragraph before starting.

2. Carefully read the 1st paragraph. Underline and/or circle key ideas and words.

Circle either YES or NO for each of the cross-cutting concepts on that page that apply.

3. Carefully read the 2nd paragraph. Underline and/or circle key ideas and words.

Circle either YES or NO for each of the cross-cutting concepts on that page that apply

4. Return to the 1st paragraph. Write a brief response for each cross cutting concept marked YES.

At bottom of page, circle the number of the cross-cutting concept which BEST fits the paragraph.

5. Return to the 2nd paragraph. Write a brief response for each cross cutting concept marked YES.

At bottom of page, circle the number of the cross-cutting concept which BEST fits the paragraph.

6. At the bottom of each page, describe WHY you selected that cross-cutting concept as the BEST fit.

7. Complete a VENN diagram on the back page for the two topic paragraphs.

8. Write a 50 word essay. Summarizing your discoveries, ideas, and conclusions about the paragraphs.

Earth 36 Big Waters and the Oceans

Oceanography is the study of Earth's oceans – their composition, movement, organisms and processes. The oceans cover most of our planet and are important resources for food and other commodities. They are increasingly being used as an energy source. The oceans also have a major influence on the weather, and changes in the oceans can drive or moderate climate change. Oceanographers work to develop the ocean as a resource and protect it from human impact. The goal is to utilize the oceans while minimizing the effects of our actions (topic) Does this paragraph mention, describe, imply, refer to, or convey:

1. (YES) (NO) any **patterns**?
in what way >> _____

2. (YES) (NO) any **cause and effect**?
in what way >> _____

3. (YES) (NO) a **quantity, numeric scale, or proportion**?
in what way >> _____

4. (YES) (NO) a **system, or organized structure**?
in what way >> _____

5. (YES) (NO) about **energy or matter?** (*Especially flows, cycles, and conservation*)?
in what way >> _____

6. (YES) (NO) the **structure or function** of something?
in what way >> _____

7. (YES) (NO) concepts of **stability and/or change**?
in what way >> _____

Circle the number which BEST represents the paragraph? (1) (2) (3) (4) (5) (6) (7).

Why did you choose this number? >> _____

Earth 37 Ocean Basins

Oceanography, or marine science, is the interdisciplinary study of the sea. Oceanographers may study currents, storms or waves. Oceanographers may use sophisticated technology to map the ocean floor or evaluate whether movement of subsea tectonic plates might cause rifting and tsunami waves.

Oceanographers are frequently biologists who seek to understand and protect marine ecosystems.

(topic) Does this paragraph mention, describe, imply, refer to, or convey:

1. (YES) (NO) any **patterns**?
in what way >> _____

2. (YES) (NO) any **cause and effect**?
in what way >> _____

3. (YES) (NO) a **quantity, numeric scale, or proportion**?
in what way >> _____

4. (YES) (NO) a **system, or organized structure**?
in what way >> _____

5. (YES) (NO) about **energy or matter**? (*Especially flows, cycles, and conservation*)?
in what way >> _____

6. (YES) (NO) the **structure or function** of something?
in what way >> _____

7. (YES) (NO) concepts of **stability and/or change**?
in what way >> _____

Circle the number which BEST represents the paragraph? (1) (2) (3) (4) (5) (6) (7).

Why did you choose this number? >> _____
