Components of Activity

Earth 47& Earth 48

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 47 Student led Topic

This topic is set aside for students to pursue one or more areas of personal interest related to Earth science. The instructor may optionally require individual pursuits or small team pursuits to accomplish this topic. Suggested end-product deliverables include: a presentation, a science model, an experiment-demonstration, a research-findings paper, an art-piece, or a student-made video production. *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? >> _____
_____

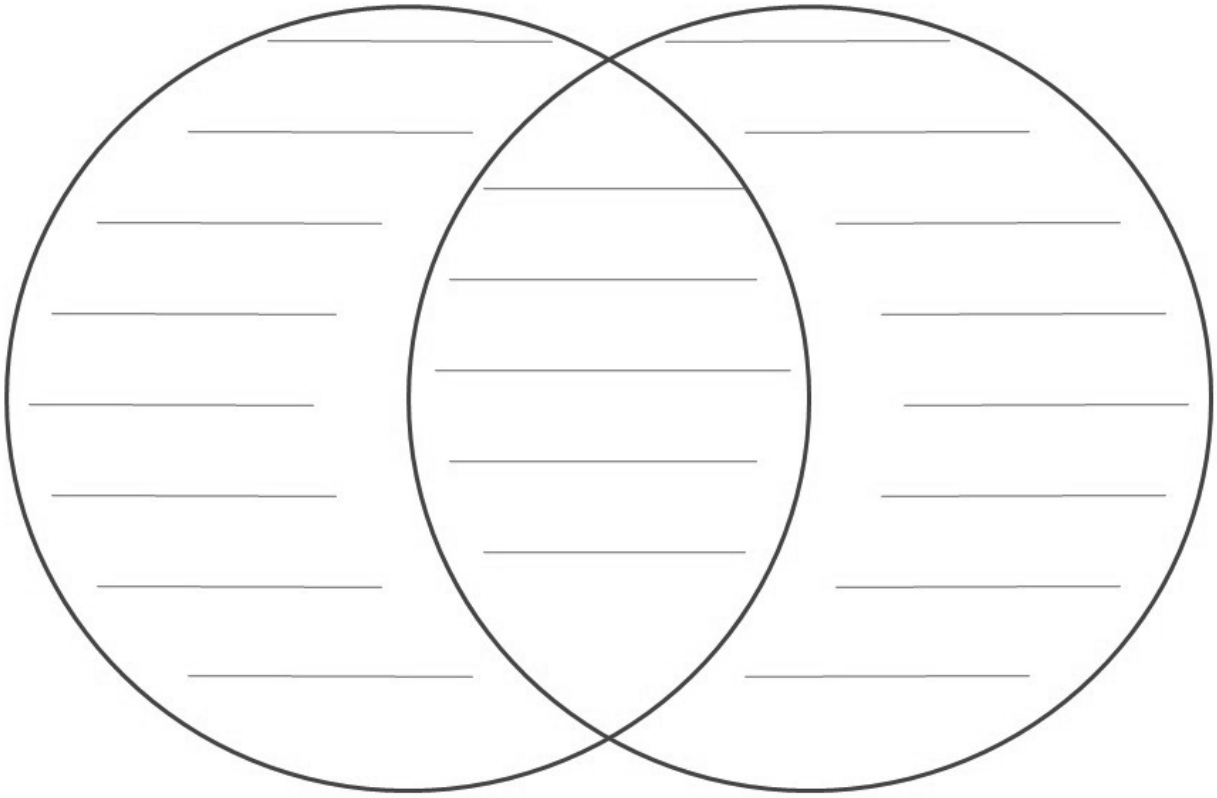
Earth 48 Summary Review

Today we live in a time when the Earth and its inhabitants face many challenges. Our climate is changing, and that change is being influenced by human activity. Earth scientists recognized this problem and will play a key role in efforts to resolve it. We are also challenged to: develop new sources of energy that will have minimal impact on climate; locate new sources of metals and other mineral resources as known sources are depleted; and, determine how Earth's increasing population can live and avoid serious threats such as volcanic activity, earthquakes, landslides, floods and more. These are just a few of the problems where solutions depend upon a deep understanding of Earth science. (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? >> _____
_____

Student led Topic **Summary Review**



Write a 50 Word Essay about the topic paragraphs here …

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