

# Components of Activity

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## Earth 46& Earth 47

**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 1<sup>st</sup> 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 2<sup>nd</sup> 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 1<sup>st</sup> 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 2<sup>nd</sup> 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 46 Research and Investigation

To study the materials and forces that shape our planet, many colleges and universities offer research programs that span the earth sciences. Important current trends in these areas include climate history and impacts, the geosciences, environmental geology and hydrology, and marine geology and geophysics. Some universities separately emphasize planetary geoscience – with active research throughout the Solar system. (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 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 >>* \_\_\_\_\_  
\_\_\_\_\_

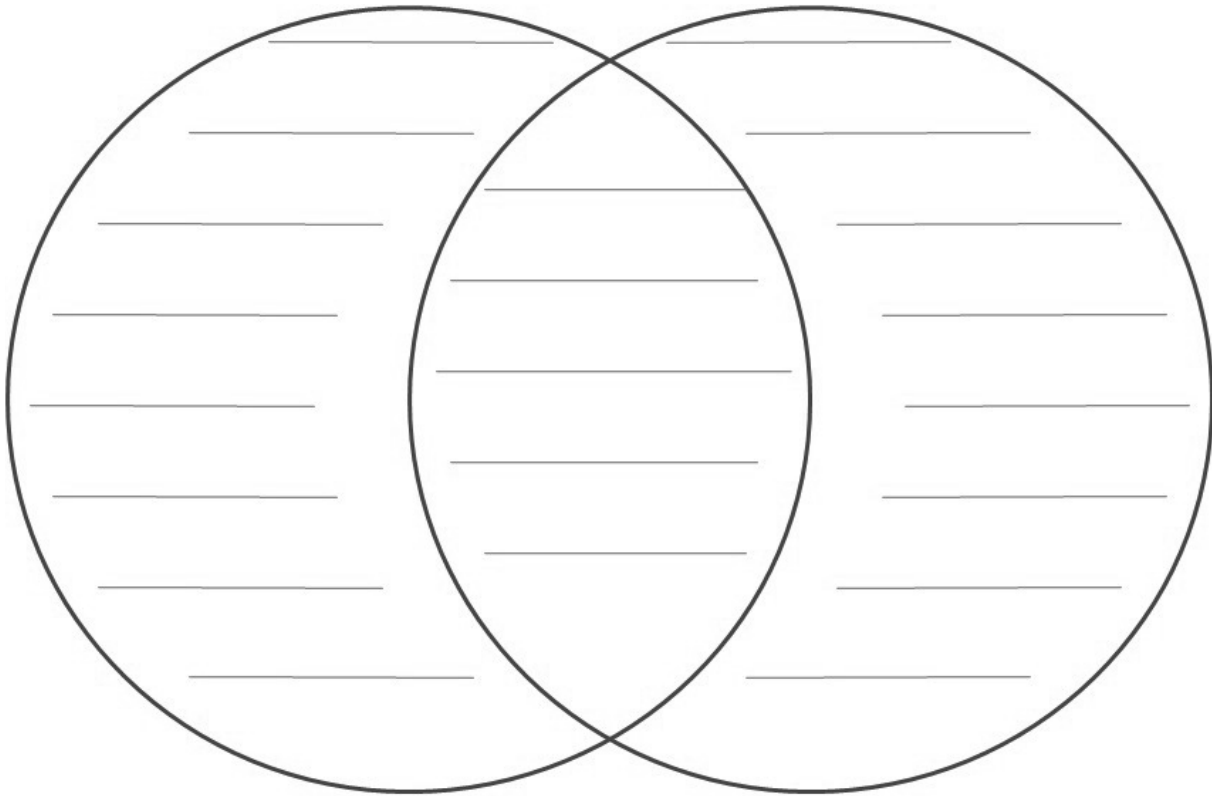
7. (YES) (NO) concepts of **stability and/or change**?  
*in what way >>* \_\_\_\_\_  
\_\_\_\_\_

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

*Why did you choose this number? >>* \_\_\_\_\_  
\_\_\_\_\_

**Research and Investigation**

**Student led Topic**



**Write a 50 Word Essay about the topic paragraphs here ...**

Eleven horizontal lines provided for writing a 50-word essay.