

# Components of Activity

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## Earth 42& Earth 43

**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 42 Our Solar System

Planetologists study the planets of our solar system and beyond. Space probes send photos and data from distant systems. In our own solar system the robot probe Curiosity crawls the surface of Mars to analyze soil samples and transmit data to Earth. (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 43 Deep Space

Astronomy is the study of the universe. Here are some examples of why studying space beyond Earth is important: the moon drives the ocean's tidal system, asteroid impacts have repeatedly devastated Earth's inhabitants, and energy from the sun drives our weather and climates. A knowledge of astronomy is essential to understanding the Earth. Astronomers can also use a knowledge of Earth materials, processes and history to understand other planets – even those outside of our own 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? >>* \_\_\_\_\_  
\_\_\_\_\_

