

# Components of Activity

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## Earth 16 & Earth 17

**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 16 Earth Chemistry

With an atmosphere containing 78% nitrogen and 21% oxygen, the Earth is the only planet in the solar system capable of initiating and sustaining life-forms; the various chemical elements that make up the Earth, from the crust, down to the mantle and core, have a little something to do with that. Eight elements make up 98% of Earth's crust and its core. (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 17 Minerals of the Earth's Crust

A mineral is a naturally occurring inorganic solid, with a definite chemical composition, and an ordered atomic arrangement. Minerals are naturally occurring. They are not made by humans. Minerals are inorganic. Minerals have specific properties that can be measured and compared: color, streak, hardness, cleavage, crystalline structure, transparency, tenacity, and magnetism. (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? >>* \_\_\_\_\_  
\_\_\_\_\_

