

Components of Activity

Physical Science Topic 16 & Physical Science Topic 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 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.

Phys-Sci Topic 16 – The Structure of Matter

Atoms are made from a nucleus of protons and neutrons and a cloud of electrons. Electrons are in constant motion around the nucleus, while the protons and neutrons move within the nucleus. Neutrons and protons are each composed of three quarks. This introductory topic doesn't dwell on "quarks" – but some students may want to pursue this subject area in the student-selected topics provided later.. 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? >> _____

Phys-Sci Topic 17 – Chemical Reactions

Chemical reactions are a process. These reactions involve rearrangement of the molecular or ionic structure of a substance. Chemical reactions are in contrast to a change in physical form (such as liquid water into ice), or a nuclear reaction. 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 >> _____

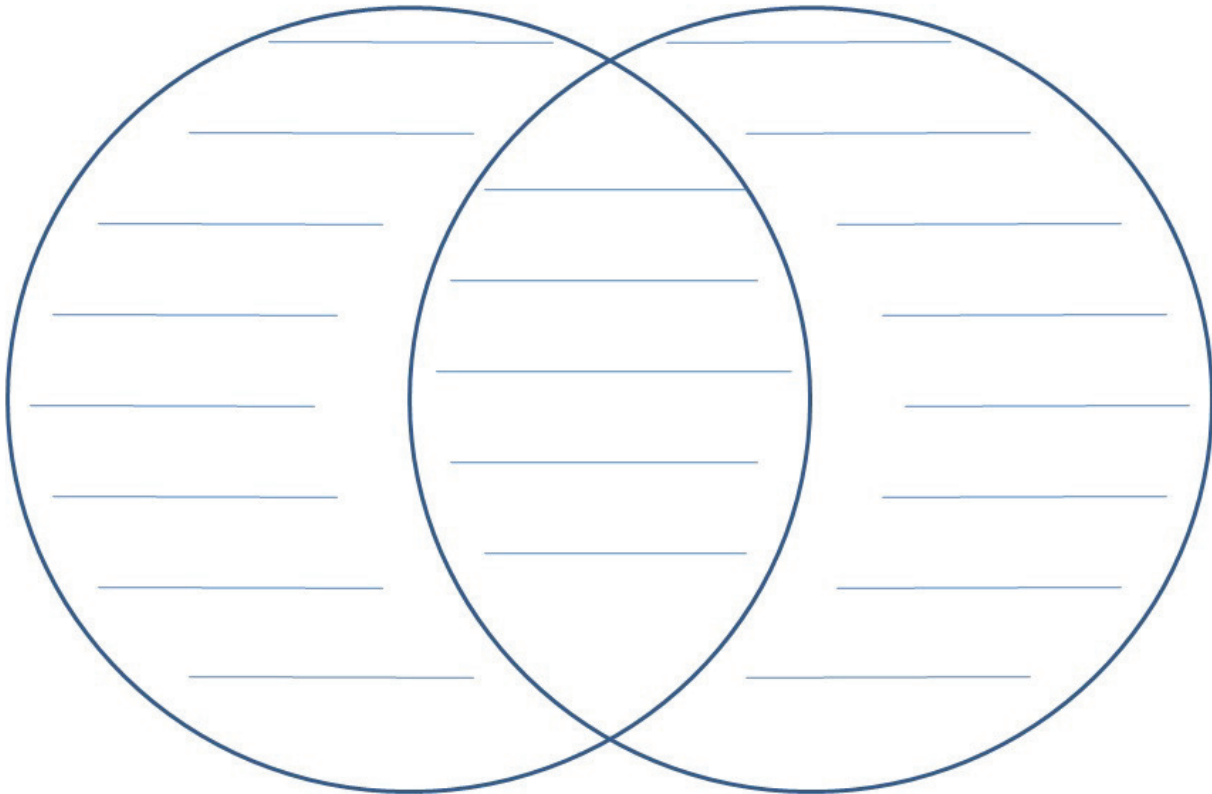
7. (YES) (NO) concepts of **stability and/or change**?
in what way >> _____

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

Why did you choose this number? >> _____

<Phys-Sci Topic 16>

<Phys-Sci Topic 17>



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