Components of Activity

Biology 16 & Biology 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.**

Biology 16 Prokaryotic and Eukaryotic Cells

Prokaryotes are unicellular organisms that lack organelles or other internal membrane-bound structures. Prokaryotic cells preceded eukaryotic cells on the evolutionary timeline. Eukaryotes are organisms whose cells have a nucleus enclosed within membranes.*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? >> _____
_____

Biology 17 Mitosis and Cytokinesis

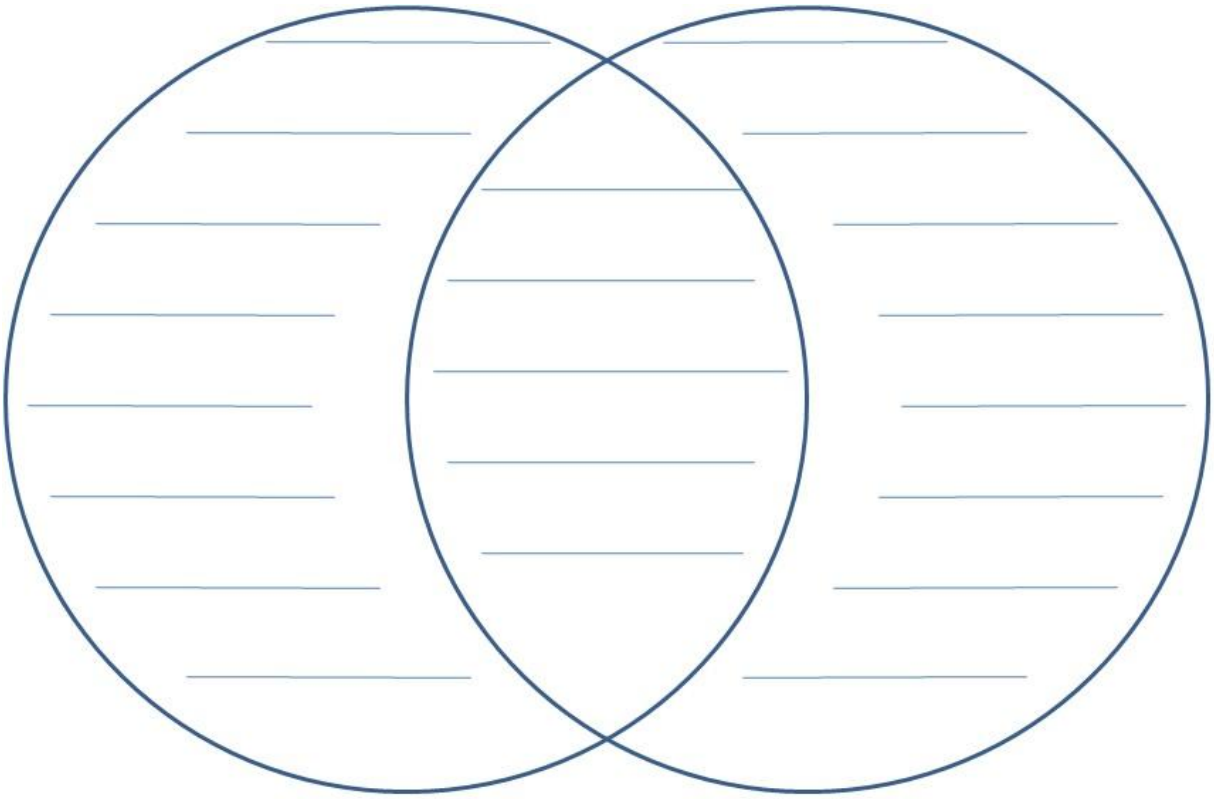
Mitosis is a type of cell division that results in two daughter cells each having the same number and kind of chromosomes as the parent nucleus, typical of ordinary tissue growth. Cytokinesis is the cytoplasmic division of a cell at the end of mitosis, bringing about the separation into two daughter cells. *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? >> _____
_____

Prokaryotic and Eukaryotic Cells **Mitosis and Cytokinesis**



Write a 50 Word Essay about the topic paragraphs here …

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