Bozeman AP Environmental Science | Big Idea #2 - Living World
008 - Energy Flow in Ecosystems

Name: _____ Block/Period: ____ Date: _____

Students: It is recommended that you watch the video with subtitles ON; be prepared to pause and rewind. The video is ~10 minutes long, but this worksheet will take you around ~30 to 35 minutes to complete. There will be a review / discussion afterwards requiring you to record corrections AND summarize additional material / information.

Description (-½ point for each time the rubric is not followed)	Point Value
Each question has been answered	0 | ½ | 1
Each question has been answered in a full sentence	0 | ½ | 1
Each answer has avoided 'it' or 'they' statements, by being clear on the topic of the answer	0 | ½ | 1
Review: Answers that were incorrect are corrected, *in a different color*	0 | ½ | 1
Discussion: 2 OR more *summary* statements of the additional material / information, *in a different color*	0 | ½ | 1
Score:	_____ / 5

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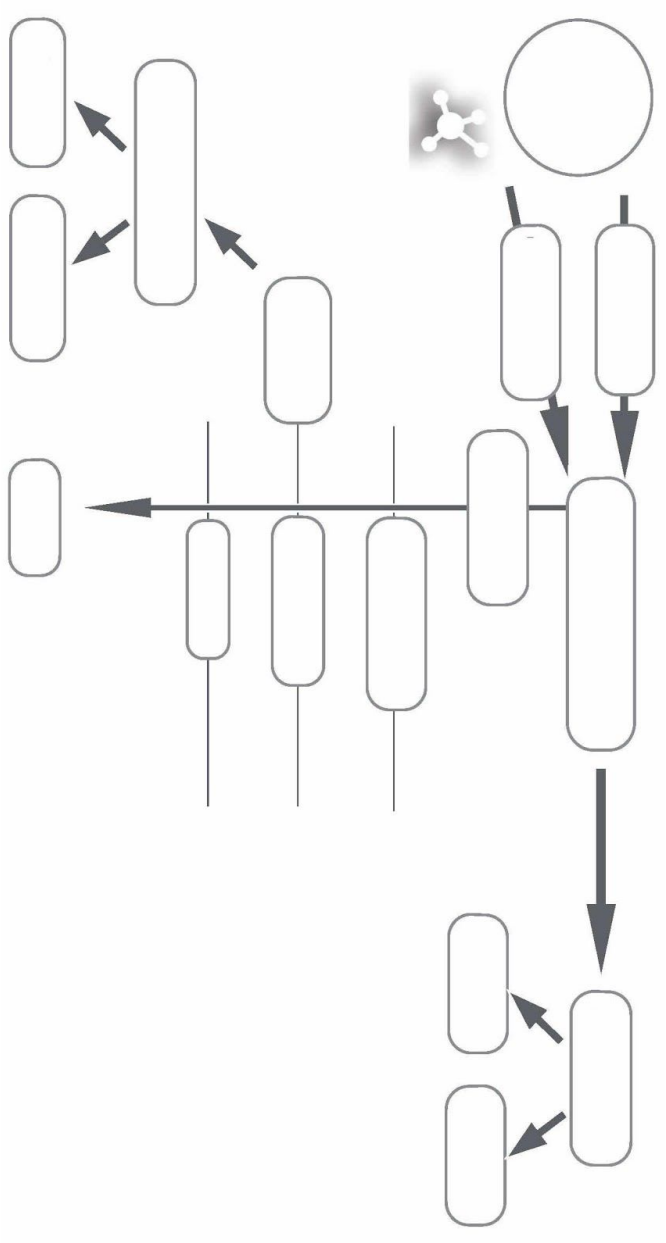
1. The major energy source on our planet is the _____.

2. When we use energy we are _____ energy to _____ at each step along the way.

3. Listen to Mr. Anderson describe the various parts of the concept map, and pause after he reveals a new word, and filling in that word.



4. **Draw** a diagram with labels showing Photosynthesis and Respiration, make sure to include the chemical formula for both. Then **explain** the processes in a paragraph below.

   - _____

     _____

     _____

     _____

5. **Draw** a diagram with labels showing the Chemosynthesis of H_2S (Hydrogen Sulfide) and Respiration, make sure to include the chemical formula for both. Then **explain** the processes in a paragraph below.

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     _____

     _____

     _____

6. **Define** Gross Primary Productivity (GPP).

   _____

   _____

7. **Define** Net Primary Productivity (NPP).

   _____

   _____

8. **Explain** why the Net Primary Productivity (NPP) of Earth shifts up and down on the globe from year to year (the green animation).

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9. **Explain** why only 10% of energy is transferred from one level of the trophic pyramid to another.

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10. **Define** Ecological Efficiency.

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_____

11. **Define** Standing Crop.

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