

**Bozeman AP Environmental Science | Big Idea #5 - Energy Resources & Consumption  
 022 - Energy Concepts**

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
<i>Review: Answers that were incorrect are corrected, in a different color</i>	0   ½   1
<i>Discussion: 2 OR more summary statements of the additional material / information, in a different color</i>	0   ½   1
Score:	____ / 5

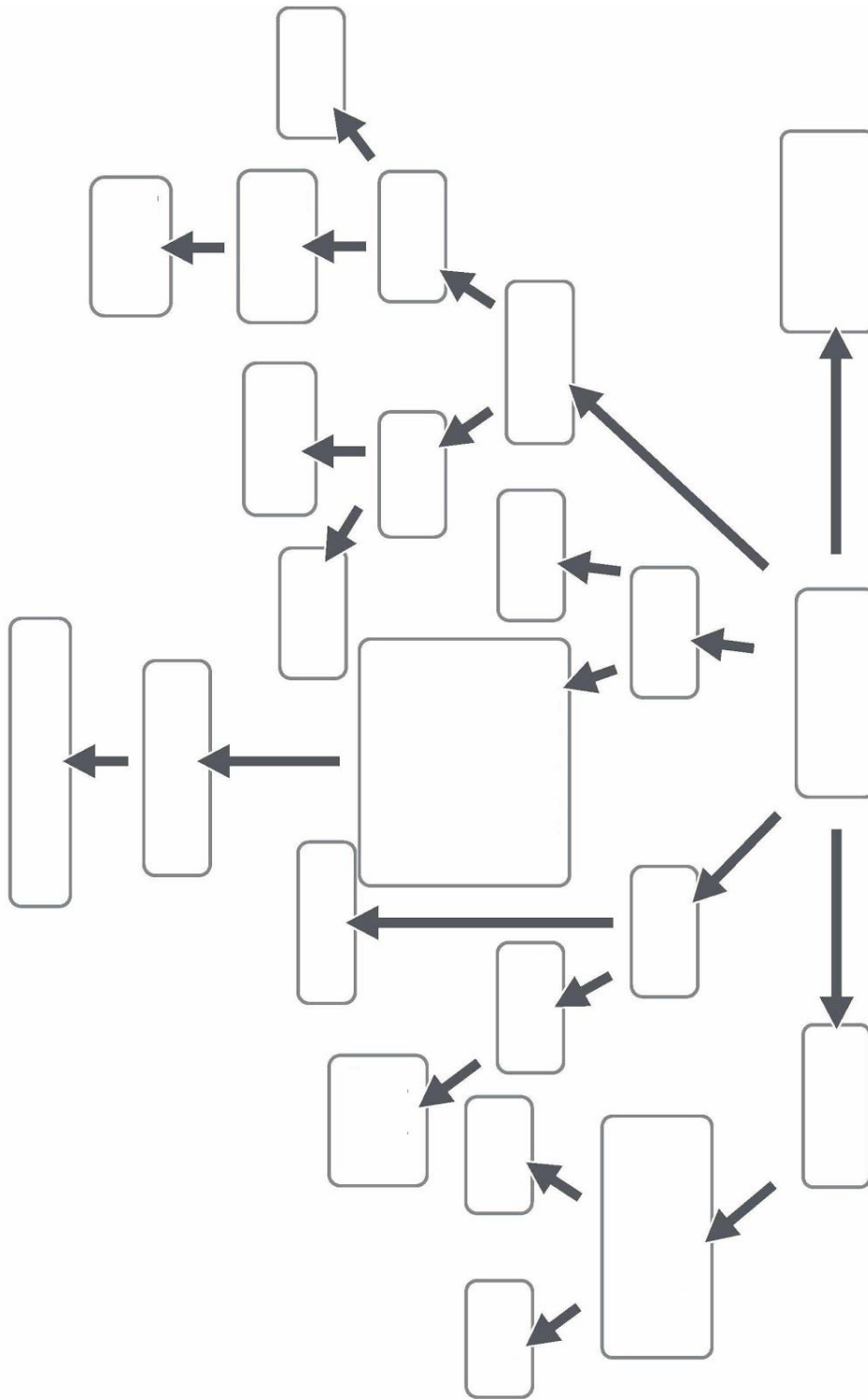
**1. A Google Search takes:**

- Time = \_\_\_\_\_
- Energy = \_\_\_\_\_

**2. Follow along with Mr. Anderson as he goes through the dimensional analysis problem.  
 (It is important that students understand why variables are crossed off)**



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. **List & Describe** two of the four types of energy overviewed in the video.

i. \_\_\_\_\_

\_\_\_\_\_

ii. \_\_\_\_\_

\_\_\_\_\_

5. **Define** the 1st Law of Thermodynamics.

\_\_\_\_\_

6. **Define** the 2nd Law of Thermodynamics.

\_\_\_\_\_

7. The unit for energy is the: \_\_\_\_\_

8. **Explain** how a joule (J) is related to the movement of a 1 Newton (N) apple from the example in the video.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

9. The unit for power is the: \_\_\_\_\_

10. **Explain** how a Watt (W) is related to the movement of a 1 Newton (N) apple from the example in the video.

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11. **Fill-in** the following chart. (*You will not need to memorize these, they are typically given to you on the AP Environmental Science Exams, but you should write them to 'get them in your brain' now*)

<i>Energy Conversions</i>	
For a joule (J)	For a Watt (W)

12. Follow along with Mr. Anderson as he goes through the dimensional analysis problem. (*It is important that students understand why variables are crossed off*)

*How much energy (kJ) would this (75 W) lightbulb use in 24 hours?*

