**Bozeman Biology**

**Compartmentalization video**

<http://bit.ly/UrsRai>

1. Why are cells small?

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1. What is the difference in magnitude of size between eukaryotes and prokaryotes?

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1. If a cell is cut up, what happens to the surface area and volume?

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1. What is Mr. Anderson's analogy for surface area to volume (wood)

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1. Why aren’t cells infinitely small?

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1. What are the two strategies of life?

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1. How are eukaryotes able to be bigger?

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1. What does compartmentalization give eukaryotes the freedom to do?

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1. What are the two types of cells?

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1. What are the two types of prokaryotes? How do they differ?

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1. What are the two advantages of compartmentalization?

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1. Give an example of an organelle that has both these advantages

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1. What ties Archaea and eubacteria together?

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1. In eukaryotes we have a particular organelle the same size as archaea and bacteria. What is it?

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1. What is the unique thing about mitochondria?

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1. Why is Kleenex a great example of compartmentalization?

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1. List the organellese and their functions
   * 1. Mitochondria

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* + 1. Lysosome

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* + 1. Golgi apparatus

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* + 1. Nucleus

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1. What are the two types of endoplasmic reticulum?. What are the differences between them?

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1. What is the function of the RER?

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1. How are proteins made using ribosomes and the RER?

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1. What are the functions of the SER?
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   2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   3. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   4. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
   6. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. What is an organelle?

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1. What is the interesting fact about SER?

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