Bio 10: Final Exam Review in Class

Big Themes: Tie it all together:

\*\*How does SA improve the function?

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| Cells | Molecules | Ecology | Plants | Animals |
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How does the structure of a \_\_\_\_\_\_\_\_\_\_\_\_ fit its function?

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| DNA | Enzyme | Water | Root Hair | Animal Blood Vessel |
| Structure:  Function:  How does structure fit function: | Structure:  Function:  How does structure fit function: | Structure:  Function:  How does structure fit function: | Structure:  Function:  How does structure fit function: | Structure:  Function:  How does structure fit function: |

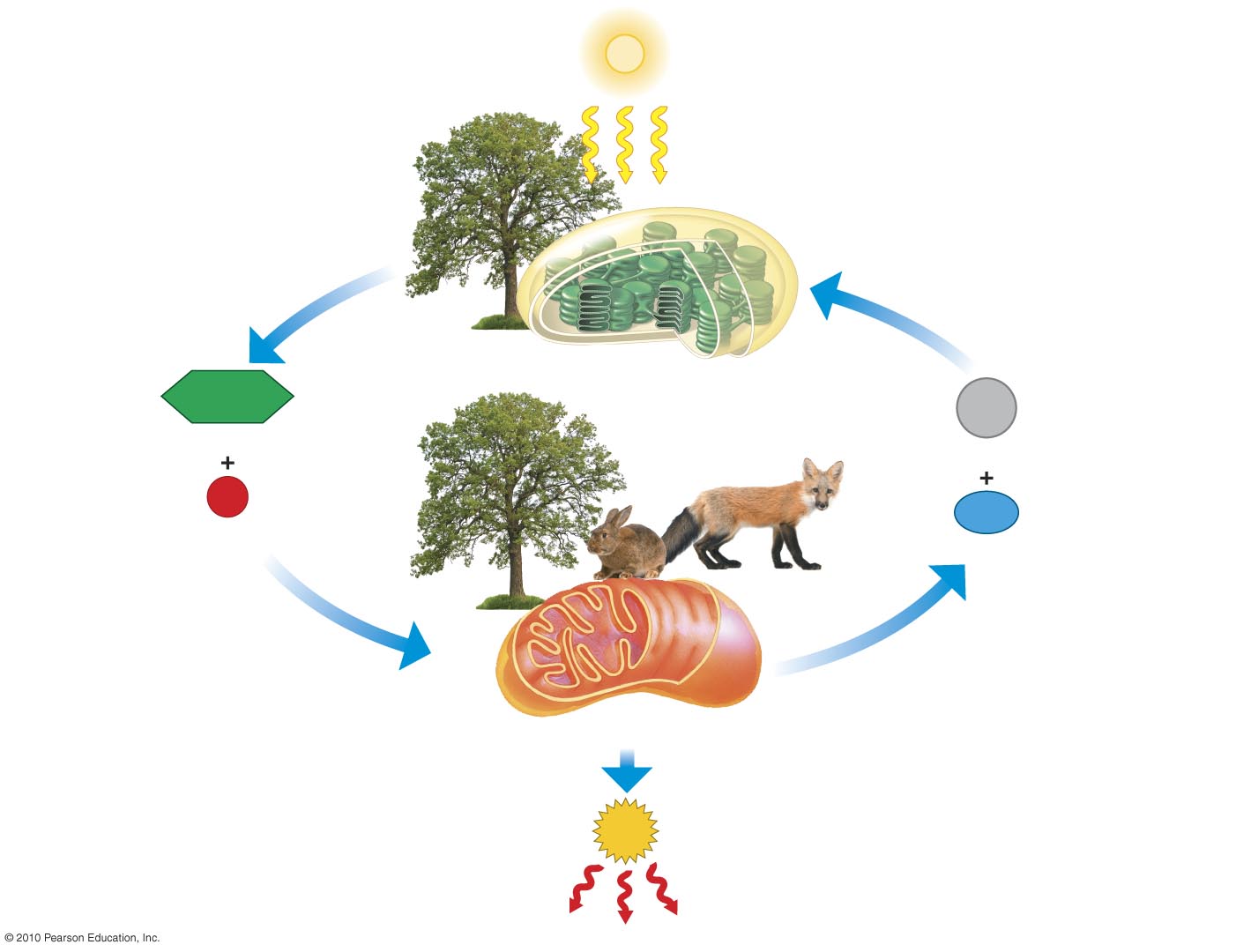
\*Prokaryotic cells/organisms Vs Eukaryotic cells/organisms

* Which came first?
* How can you tell?
* If one evolved from the other, why do they both still exist?

\*\*BBQ3: Draw two water molecules, and label any parts or interactions.

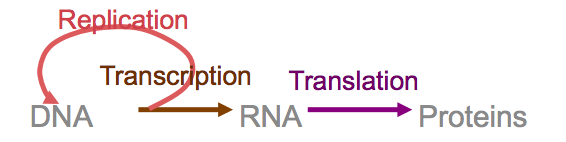
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| \*\*BBQ7: *What is the cellular currency of energy?*   1. *Draw it* 2. *How and where does it store energy?* 3. *Plants use what organelle to make energy?*   *Why is it important to me – a predator what plants do, in regards to energy?* |

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| \*BBQ8: *Explain osmosis and how it affects a salty (hypertonic) cell.*   * + *Is the movement of water passive or active transport? Explain.* | MacHD:Users:Zannie:Desktop:Screen Shot 2015-02-24 at 5.28.40 PM.png |

BBQ9: Explain the exchange between plants and animals shown in this picture.

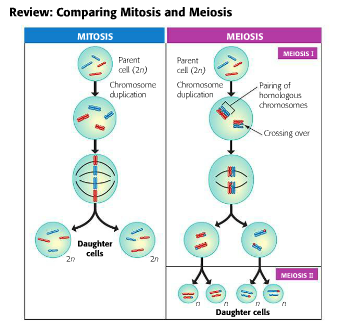
*- Be sure to discuss cellular respiration, photosynthesis, mitochondria, chloroplasts and the gasses involved.*

\*BBQ14: *Explain the steps (and sub steps) needed to turn DNA into Protein*

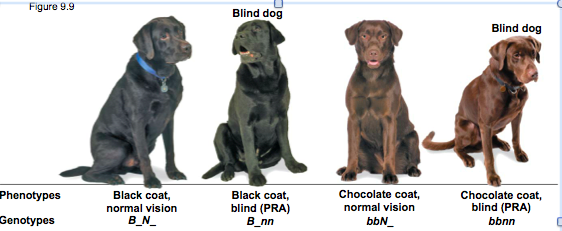


\*BBQ16: Your friend tells you she recently had testing done at the doctor’s office, and the doctor discovered a *malignant* tumor in one of her breasts that has *metastasized*. She is too upset to listen what the doctor has to say, and asks you to help her make sense of it all.

* Based on your understanding of malignancy, what treatment option do you recommend to her and why?

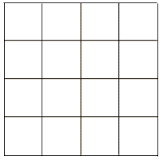
*\*BBQ17: Compare and contrast the* ***PURPOSE****, STEPS and CELLS of Mitosis vs. Meiosis*

* BBQ18: *Describe the advantages and disadvantages of asexual and sexual reproduction.*



\*\*BBQ19: A black lab who is blind, had a mother who was chocolate brown. This black lab mates with a chocolate brown lab with normal vision, whose mother was blind.

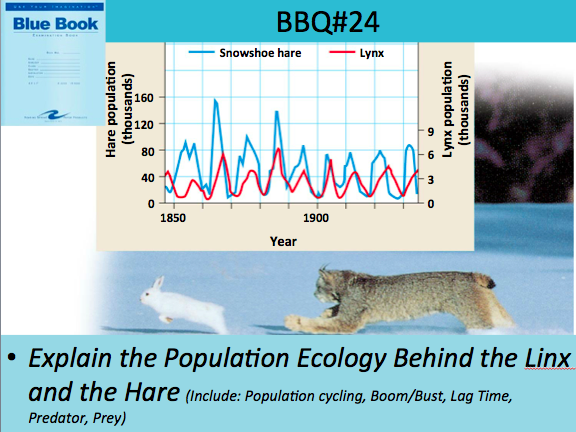
* + Draw the punnett square



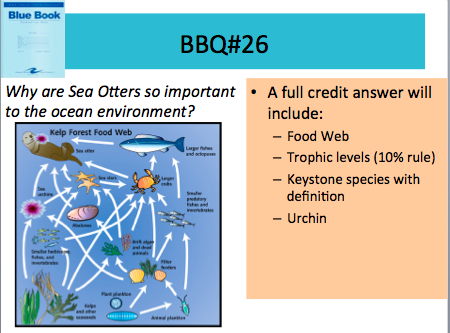
* + What is the phenotypic ratio of their offspring?

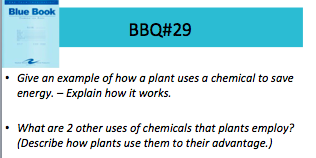
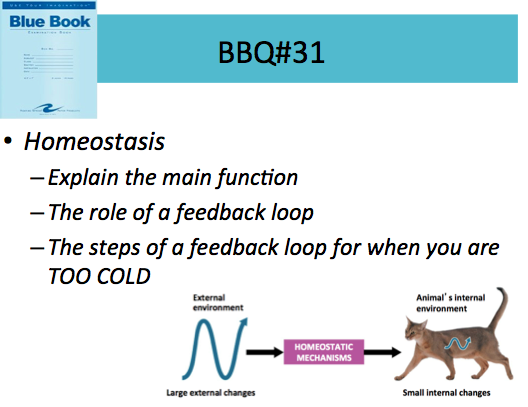
\*\*BBQ20: *Explain how pesticide resistance in mosquitoes (or rubber duckys) is actually an example of natural selection*

\*\*Tell me about sexual selection and how it reduces survivorship but still causes natural selection?



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| Be Able to distinguish between the two of these:  **Ecological Succession Vs. Eutrophication** | |
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\*\*What is a keystone species? Give an example that exemplifies their importance.

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| Endosperm | Flower | Why is advantageous for flowers to be able to reproduce sexually and asexually? |
| Purpose:  How is it made: | Purpose:  Pro:  Con: |