Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Cellular Processes Study Guide**

What is the difference between osmosis & diffusion?

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What is a concentration gradient & how do molecules naturally move in one?

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What is the difference between PASSIVE & ACTIVE transport?

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Endocytosis moves particles \_\_\_\_\_\_\_\_\_ the cell.

Exocytosis moves particles \_\_\_\_\_ \_\_\_ the cell.

List two examples of active transport. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ & \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

List two examples of passive transport. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ & \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Please draw a diagram below that illustrates what is happening during Endocytosis & Exocytosis

|  |  |  |
| --- | --- | --- |
| Stage 1 | Stage 2 | Stage 3 |

Label the following diagrams as ISOTONIC, HYPERTONIC, or HYPOTONIC



\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

If you sprinkle sugar on fresh strawberries, juice will appear on the strawberries within a few minutes. Explain why this happens (in terms of osmosis & diffusion).

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Cell membranes are semi-permeable. What does that mean & why is this important?

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Why can gargling with salt water when you have a sore throat relieve some of the pain?

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Please explain the diagram below and how it can help you remember the different types of transport.

Label what each side represents and why. Also label examples of each type and the direction of the concentration gradient.



How do photosynthesis and cellular respirations compare to each other?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Where does the energy for photosynthesis come from?

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What plant pigment is involved in photosynthesis? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

How does your body get the energy it needs from the food you eat (what process allows cellular energy to be made)?

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In what organelle of a plant cell does photosynthesis take place? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What are the products of photosynthesis?

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Write the equation for photosynthesis?

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What is the overall reaction (formula) for cell respiration?

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Write the equation for cellular respiration.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

In what organelle of a cell does cellular respiration take place? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

What are the reactants of cellular respiration?

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