**Station 1: Transport Vocabulary**

**Honors - Use Blue Cards/Academic -Use Yellow Cards**

1. Take all cards out of the bag. Read through all of the terms and definitions dealing with transport across a cell membrane.

 2. You should create a three x three square where each term is paired with the correct

 description. Ask the teacher for a key to check yourself.

 3. Make notes on your paper of any terms you need to study/review for the test.

 4. Write two cellular transport **multiple choice** style test questions from this material that

 you would expect to see on the test. Share with your neighbor and see if they can

 answer them correctly. Mark the correct answer.

**Station 2: Cell Organelles - Who am I haikus?**

A haiku is a Japanese poem that has three lines. Each line has a specific number of syllables- Five, Seven, Five. Usually haikus are written about something in nature.

Read these Cell Organelle haikus. Try to determine what organelle is described in the haiku. Write the organelle on your review stations sheet.

**Haiku A Haiku B**

Photosynthesis All eukaryotes

Sunshine to carbohydrates Glucose converts in all cells

Lean, green plant machine ATP for me!

**Who am I? Who am I?**

**Haiku C Haiku D**

Rectangle, box, cube Sometimes I float free

It is hip to be a SQUARE Polypeptides made on me

Structure and support See me? Tiny dots

**Who am I? Who am I?**

**Haiku E Haiku G**

Homeostasis Write your own Cell Organelle Haiku.

Like the bouncer at a club Read the haiku to your neighbor

Needed bilayer & see if they can name the organelle.

**Who am I?** Remember the format!

**Station 3: \*\*\*Throwback\*\*\* Station**

**Biochemical Families:**  Re-create this chart on your station paper. Complete the information!

|  |  |  |  |
| --- | --- | --- | --- |
| **Macromolecule** | **Building Block Molecule (subunit)** | **Atoms** | **Uses**  |
| Carbohydrate |  |  | Quick Energy |
|  |  |  |  |
|  | Amino Acid |  |  |
|  |  | C,H,O,N, P |  |

**Enzymes:**  Read the experimental design. Using what you know about enzymes, answer the thinking questions on your station sheet. Please use complete sentences.

A biologist prepared three flasks in a lab to test the activity of the enzyme **amylase**. **Amylase**  breaks down polysaccharides into monosaccharides. The three flasks each contain 5 milliliters of **starch** in water. The biologist then added **amylase to two flasks and water to the third.** The experimental set-up is shown in the diagram below:

Add 5 drops of **Amylase** Add 5 drops of **Water** Add 5 drops of boiled **Amylase**

  

 4% Starch in Water 4% Starch in Water 4% Starch in Water

 **FLASK A FLASK B FLASK C**

1. pH and temperature can both affect enzyme activity. Which factor is being tested in this lab experiment?
2. Amylase breaks down starch into monosaccharides best at room temperature. At the end of the experiment, which flask would have the MOST simple sugars? Explain your answer.

 3. If amylase is optimal at room temperature, which flask would have DENATURED

 enzyme? Explain your answer.

**Station 4: Cell Types**

Complete the Prokaryotic coloring and questions.

**Station 5: Membrane Structure and Transport**

Watch the video at <https://youtu.be/Ptmlvtei8hw?list=PLwL0Myd7Dk1F0iQPGrjehze3eDpco1eVz> and answer the following:

1. How does the cell membrane maintain homeostasis in cells?
2. Draw the phospholipid bilayer and label which parts are polar and which parts are non-polar.
3. What do all molecules that can pass through the cell membrane via diffusion have in common?
4. Add proteins to your diagram. How do proteins help with diffusion?
5. How does the structure of the membrane allow for molecules to move? (hint: think “fluid mosaic”)
6. For large molecule transport, the membrane acts differently. What does it do? List the two main examples of large molecule transport.