

Name: _____

Handout on Membrane Transport Methods

There are multiple ways that a membrane can use to get material across it. However, the method used by the membrane depends upon the type of material crossing it. To determine how any molecule would cross a membrane, consider the qualities of the material in question. The item to cross the membrane could be an ion, a small molecule, a large molecule, or even an entire cell. For whatever transported item you are trying to understand at any moment, just answer the following questions to end up with the appropriate method of its transport.

1. Is the item hydrophobic? *If yes*

If no

This is: *(circle)*
passive transport
active transport
Specific type of transport:

2. Is the item larger than a monomer? *If yes*

If no

This is: *(circle)*
passive transport
active transport
Specific type of transport:

3. Is the item water? *If yes*

If no

This is: *(circle)*
passive transport
active transport
Specific type of transport:

4. Is the item moving along its concentration gradient? *If yes*

If no

This is: *(circle)*
passive transport
active transport
Specific type of transport:

This is: *(circle)*
passive transport
active transport
Specific type of transport:

Now figure out how each of the following would cross the membrane of the cell below. Gradients, where necessary, can be inferred from the information in the diagram. All you have to do is put the number for the type of transport on each arrow.

1. simple diffusion
2. facilitated diffusion
3. osmosis
4. active transport using pumps
5. active transport using vesicles

