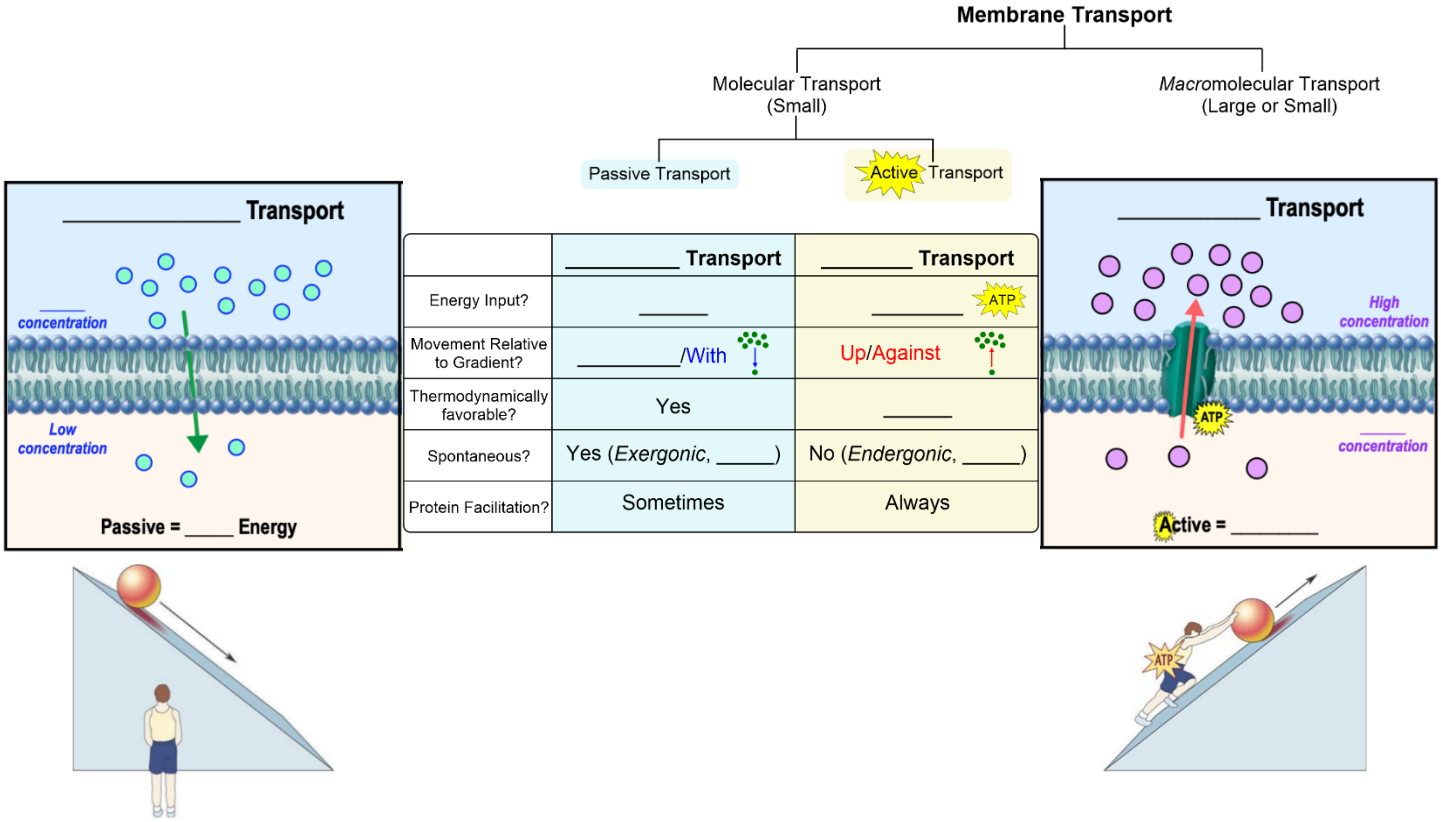
CONCEPT: PASSIVE VS. ACTIVE TRANSPORT

●_____ general types of processes transport molecules across biological membranes: 1) *Passive* & 2) *Active*.

EXAMPLE: Passive vs. Active Membrane Transport.



PRACTICE: Passive membrane transport processes include_____.

a) Consumption of ATP for energy.
b) The use of transport proteins to move a substance from low to high concentration.
c) Movement of a substance down its concentration gradient.
d) Movement of a substance up its concentration gradient.

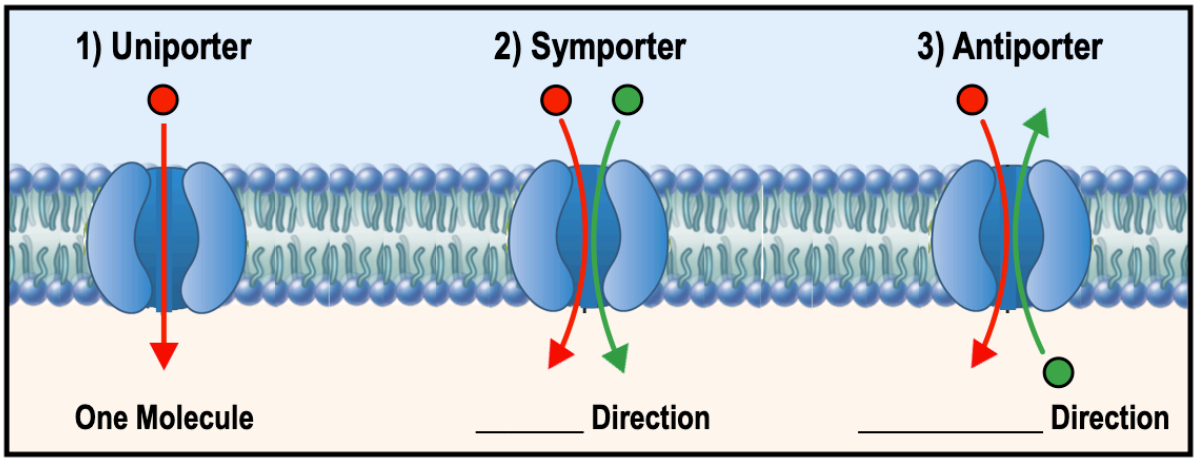
PRACTICE: What is the difference between active and passive transport across a plasma membrane?

a) Active transport is used to move substances down their concentration gradient, where passive transport is used to move substances against their concentration gradient.
b) Active transport is ATP dependent, whereas passive transport does not require energy for movement across the plasma membrane.
c) Active transport implies that the cell is working with other cells, whereas passive transport implies that the cell does not cooperate with other cells.
d) Active transport means that the cell is aggressively going after substances that it wants to bring into the cell, whereas passive transport means that the cell just waits for the substance to cross the membrane.

CONCEPT: PASSIVE VS. ACTIVE TRANSPORT

Classes of Passive/Active Membrane Proteins

- _____ types of *passive/active* membrane proteins are classified according to how they operate:
  - **1)** _____porters: transport _____ molecule at a time in just _____ direction.
  - **2)** _____porters: cotransport ≥ 2 molecules at a time in the _____ direction.
  - **3)** _____porters: cotransport ≥ 2 molecules at a time in _____ directions.



PRACTICE: A transport protein that simultaneously transports two different molecules in different directions is called:

a) A uniporter.
b) A symporter.
c) An equilibrium protein.
d) An antiporter.
e) A simple diffuser.

PRACTICE: Which option below best describes a transporter that requires ATP to move molecules A and B out of the cell?

a) An active antiporter.
b) A passive antiporter.
c) A passive symporter.
d) An active uniporter.
e) An active symporter.