




PGISD Priority Standard Summary Chart

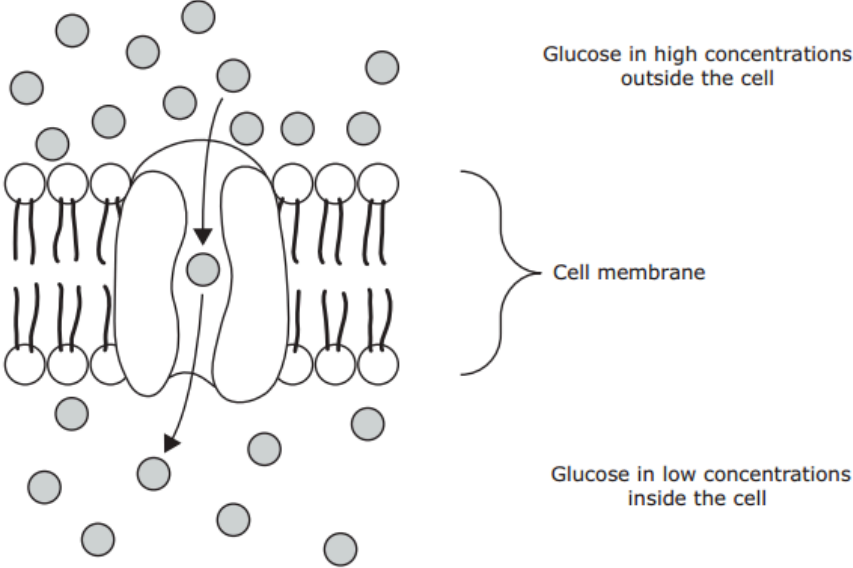
Priority Standard: B.4B Investigate and explain cellular processes, including homeostasis and transport of molecules.

Ladder: Top rung is the standard in its entirety. Please write in the learning target for each rung until you reach the top rung. Add rows if needed.

	Priority Standard	I can investigate and explain cellular processes, including homeostasis and transport of molecules.
	Step 6 to Proficiency	I can define active transport and compare and contrast it with passive transport.
	Step 5 to Proficiency	I can define osmosis and explain how water would move when a cell is placed in different solutions (iso, hypo, and hypertonic)
	Step 4 to Proficiency	I can describe the process of diffusion and other types of passive transport.
	Step 3 to Proficiency	I can explain what a concentration gradient is.
	Step 2 to Proficiency	I can define homeostasis and explain why it is important to cells and organisms..
	Step 1 to Proficiency	I can describe cellular structure, including the cell membrane.



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Grade: 9	Subject: Biology
<p>Example of Rigor: What does proficient work look like? What DOK level? Provide an example or description.</p>	<p>This diagram shows cellular activity across a cell membrane.</p>  <p>The diagram illustrates a cross-section of a cell membrane, represented by a phospholipid bilayer with hydrophilic heads and hydrophobic tails. Two large protein channels are embedded in the membrane. On the left side, representing the outside of the cell, there is a high concentration of small grey circles representing glucose molecules. On the right side, representing the inside of the cell, there is a low concentration of these molecules. Arrows indicate the movement of glucose molecules from the outside, through the protein channels, and into the cell. Labels include "Glucose in high concentrations outside the cell" at the top right, "Cell membrane" in the middle right, and "Glucose in low concentrations inside the cell" at the bottom right.</p> <p>Which two processes does this diagram most directly model?</p> <ul style="list-style-type: none">A. Energy conversions and synthesis of new moleculesB. Synthesis of new molecules and homeostasisC. Transport of molecules and energy conversionsD. <u>Homeostasis and transport of molecules</u>



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Prerequisite Skills: What prior knowledge, skills and/or vocabulary are needed for a student to master this standard?	Vocabulary; cell structure and function, homeostasis, concentration of solutions
When Taught: When will this standard be taught?	unit 2
Common Assessments: What assessments will be used to measure student mastery? (CFA and Unit assessment) Link them here.	CFA- in Eduphoria CUA- in Eduphoria
Extension What will we do when the students have already learned this standard?	Performance Assessment: Using a model of a cell membrane, demonstrate examples of diffusion, osmosis, active transport, and endo- and exocytosis. For each example, explain the movement of molecules in terms of homeostasis. Additionally, evaluate and explain the limitations of the model.
Additional Instructional Materials (Link here)	