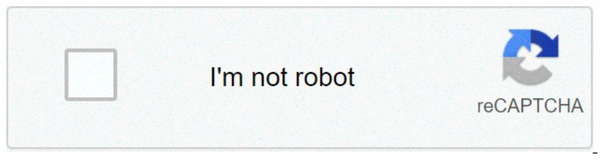

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Student exploration osmosis assessment answers

Complete the following task and send your work along with your classmates' comments to your student. Record two everyday examples of diffusion and two osmosis and place them. (Remember that osmosis involves transferring water through a cell membrane.) Don't use examples from an interactive learning activity. Exchange papers with two classmates. Is there anything you disagree with? If so, why? Do you have any questions or comments that you would like to make? Can you add anything? Sign your name next to your comments. Complete the following task and send your work to your teacher. Download the Student Study Guide and complete previous knowledge questions, Gizmo warm-up, and Exercise A. Fill in four evaluation questions. Review the results of the assessment and answers to questions you haven't answered correctly. Complete the following task and send your work to your teacher. Download the Student Study Guide and fill out previous knowledge questions, Gizmo warm-ups, and Activities A and B. Fill in four evaluation questions. Review the results of the assessment and answers to questions you haven't answered correctly. Unless otherwise stated, all images in this case are in the public domain or © clipart.com or Microsoft graphics and are used with permission. It's a cautionary tale. External resources will open in a new window. Not responsible for external content. Student Research: Osmosis Vocabulary: Cell Membrane, Concentration, Diffusion, Dynamic Equilibrium, Osmosis, Semi-Permeable Membrane, Solvent Previous Questions of Knowledge (Do so before using Gizmo.) 1. Suppose you are trapped on a desert island with no sources of fresh water. Should I drink water from the ocean? Explain why or not. 2.What do you think will happen if you water your homes with salt water? Gizmo Warm-Up Cell Membrane is the thin skin that surrounds the cell. It's a semi-permeable membrane, which means some particles pass easily through the membrane, while others can't. Osmos Gizmo™ the cell (red square) in a solution of purple particles dissolved in a green particle solvent. Press Play ( ) and watch. 1. What particles can pass through the cell membrane? 2. What particles can not pass through the cell membrane? 3.Click reset ( ), and then click Play again. What have you noticed about the cell size? How do dissolution concentrations affect cell volume? 1. Observe: Use the external Solute slider to change the concentration of particles dissolving outside the cell. Click Play. In each case, focus on whether the cell becomes larger or smaller. AV In what situation is the cell bigger? B. In what situation the cell is smaller Calculate: The concentration of dissolution is the number of dissolution particles in the specified amount of solvent. To calculate the percentage concentration, divide the number of dissolution particles by the total number of particles (solvent + solvent), and then multiply by 100: % concentration = (soluble ÷ the total number of particles) × 100 Select the TAB DESCRIPTION. Set Solute outwards to 10 and make sure the volume of the Initial cells is 40%. (Note: The cell volume is expressed as a percentage of the container size.) A. How many soluble particles are found inside the cell? B.How many solvent particles are found inside the cell? C.What is the total number of particles inside a cell? D.What is the concentration of dissolution inside the cell? E.What is the concentration of dissolution outside the cell? 3.Watch: Click play and watch the numbers shown in the DESCRIPTION panel. How does each number change over time? Write increases, decreases, or stays the same (or the same) in each 4.Observe space: Wait for the numbers to change a lot. What have you noticed about the concentrations of dissolution inside and outside the cell? 5.Experiment: Click Reset. Make sure Solute is outside 10 and the starting cell volume is 40%. To calculate the concentration of solvent, divide the number of solvent particles by the total number of particles, and then multiply by 100. (Note: Gizmo displays only dissolution concentrations.) A.What is the concentration of solvent inside the cell? B.What is the concentration of solvent outside the cell? C.Where is a higher concentration of solvent? Click Play. Does most of the solvent particles move into or out of the cell? (Hint: does the cell unfold or shrink?) 6.Experiment: Click Reset and set Solute outwards to 1. A.What is the concentration of solvent inside the cell? B.What is the concentration of solvent outside the cell? C.Where is a higher concentration of solvent? D.Do do you think the cell will become bigger or smaller? E.Click Play to confirm your predictions. Were you okay? 7.Summarize: You have observed examples of osmosis—solvent diffusion (e.g., water) through a semi-permeable membrane. Summarize what you observed by filling in the blanks in the following paragraph: During osmosis, solvent particles move from __higher_ concentration to the _lower_. When there is a higher concentration of solvent particles inside the cell, most of the solvent particles will move the cell and the cell will be . When there is a higher concentration of solvent particles outside the cell, most solvent particles will move the cell and the cell will . How does changing cell volume affect dissolving concentrations? Experiment: Click the BAR CHART tab, and then turn on Show numeric values. Based on dissolving concentrations, do you expect the cell to swell or shrink? Click Play and Watch. Was it prediction is correct? Correct? Click Reset. Move the Start cell volume slider back and forth. How does the initial volume of cells affect the concentrations of dissolution inside and outside the cell? 3.Experiment: With Solute outwardly set to 5, predict whether the cell will swell, shrink or stay the same with each of the following initial cell volume settings. Then use Gizmo to check each forecast. 4.Analysis: Why do solvent particles flow into a cell when the initial volume is below 50%? 5.Expand your thinking: In Osmos Gizmo, the cell is placed in a very small chamber. Suppose the cell is placed in a large container of water with a very low dissolution concentration. What do you think is going to happen? Explain your answer. Response.