Grade 9, 10
Distance Learning Module 4: Week of: 4/20th - 4/24th

Science: Biology Level 2 - *Modified from Unit 3 - Cell Transport*

Targeted Goals from Stage 1: Desired Results

Content Knowledge:

1. Because diffusion depends upon random particle movements, dissolved molecules move along a concentration gradient across the cell membrane without requiring energy.
2. Osmosis is the diffusion of water through a selectively permeable membrane
3. Cells also move dissolved molecules against a concentration gradient across the cell membrane in a process called active transport

Vocabulary:

Mixture, solution, solute, solvent, cell membrane, concentration, concentration gradient, diffusion, semipermeable, equilibrium, osmosis, isotonic, hypertonic, hypotonic, facilitated diffusion, active transport,

Skills:

Use a model to illustrate the organization of interacting systems that provide a specific function within a multicellular organism

Expectation: ***Link to FinalSite calendar to help gauge modules***

Description of Task (s):	Resources and Materials:	Daily Checks (Return to Google Classroom or snapshots from a cell phone)
Monday: ● Students will review the concept of diffusion ○ Students view video on diffusion ○ Students complete Edpuzzle on diffusion as evidence	❑ Amoeba Sisters: Introduction to Diffusion ❑ Teacher may include recorded or LIVE instruction	Options for evidence: ❑ Amoeba Sisters Edpuzzle on Diffusion

Description of Task (s):	Resources and Materials:	Daily Checks (Return to Google Classroom or snapshots from a cell phone)
Tuesday: ● Students learn that osmosis is a form of simple diffusion (passive transport) ○ Students complete a Process Oriented Guided Inquiry Lesson. (POGIL) ○ Students submit responses to POGIL as evidence	❏ POGIL - Transport in Cells ❏ Amoeba Sisters: Introduction to Diffusion ❏ Teacher may include recorded or LIVE instruction	Options for evidence: ❏ Edulastic assessment questions for the POGIL activity. ❏ Hard Copy assessment questions for the POGIL activity ❏ Google Form assessment questions for the POGIL activity ❏ Edpuzzle covering concepts
Wednesday: ● Students will reinforce the introductory terms related to passive transport and osmosis ○ Students complete an Edpuzzle ○ Students complete an Amoeba Sisters activity on osmosis for evidence	❏ Bozeman Science: Osmosis demonstration ❏ Edpuzzle: Amoeba Sisters Osmosis ❏ Teacher may include recorded or LIVE instruction	Options for evidence: ❏ Amoeba Sisters Edpuzzle
Thursday: ● Students will **revise** their visual model of what is happening in the Osmosis Lab Activity. ○ Students complete revisions to original models as evidence ■ Revisions to model must include new knowledge learned from activities	❏ Osmosis Lab - Distance Learning Activity ❏ Google Draw ❏ Printer Paper ❏ Notebook Paper ❏ Teacher may include recorded, LIVE instruction, or time to collaborate with students while they work on revising their models	Options for evidence: ❏ Student **revised** model - written form, or using Google Draw, uploaded to the assignment in Google Classroom.
Friday: ● Students complete a culminating weekly check-in on concepts covered	❏ Edulastic assessment questions	Options for evidence: ❏ Edulastic assessment questions

Description of Task (s):	Resources and Materials:	Daily Checks (Return to Google Classroom or snapshots from a cell phone)
in passive transport and osmosis ○ Students complete an Edulastic on Assessment and Understanding questions related to passive transport		

Week criteria for success (attach student checklists or rubrics):

Students will reinforce the content covered during modules 1 and modules 2. Students will learn additional content that will provide them new knowledge that can be used to help better understand the principles of diffusion observed in the osmosis anchoring phenomenon.

Supportive resources and tutorials for the week (plans for re-teaching):

- ❑ Video chats with the teacher to answer questions.
- ❑ Amoeba Sisters instructional and assessment videos
- ❑ Bozeman Science instructional video series Link to Bozeman Science cahnnel
- ❑ Pre-recorded instructional videos from the teacher