



Science Sauce Online

A source for free flipped learning lessons

Flipped learning reverses the traditional classroom process of “learn it in school, practice at home”. Flipped learning involves students learning new content at home through a video, reading, listening or other activity. They then come to class with the foundation knowledge, ready to really engage with the topic. This is a flipped learning lesson with self-study materials and suggested class activities.

Resources for this lesson, including the student tasks, can be found at:

ScienceSauceOnline.com

Enter lesson code:

01200

Lesson Topic:

DIFFUSION AND OSMOSIS

Age: 14-16

Self study input method: Video

Self study task: Question sheet

Classwork prep time: Near zero

STUDENT PRE-CLASS TASK

- Watch the video: “Osmosis and Diffusion”.
- Answer the questions on the student homework task sheet.

IN-CLASS TASKS

Group demo: Students work in medium-sized groups to demonstrate the processes of osmosis and diffusion. Students will be marked according to **marking criteria - see additional handout**. (Alternatively, teachers may choose to make their own criteria to match specific learning objectives)

Time (mins)	Students...	Teacher...
2	In groups of about 4 or 5, review answers to the homework task.	Monitors.
3	Review answers (and make corrections if necessary).	Gives answers to the student task sheet.
5	Get into medium size groups (7 to 10). Elect a team leader and review the marking criteria.	Sets the task, groups the students, gives out marking criteria.
15	In groups, prepare and practice their presentations. Students are expected to work as a group to show how the process of both osmosis and diffusion works. They may approach this in any way they choose but typically students will use individuals to represent particles, and several others may hold hands to represent cell walls/membranes.	Monitors and gives feedback.
(dependent on number of groups)	Give group presentations.	Observe and mark using criteria handout.
5-10	Receive feedback.	Feedback to the students on scores.
10	Plenary: Write a multiple choice question involving diffusion/osmosis. Ask the question to other students in the room.	Takes turns answering some of the questions. Asks own question(s) to the students.

ANSWERS TO STUDENT TASK

Answers to the student task sheet will be relatively obvious for subject teachers, and can all be found by reviewing the student self-study resources.

Answers are not published here, as these sheets are easily accessible by students. If you need clarification on any of the questions please feel free to email me and I'll get back to you ASAP.

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