



# 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:

**01401**

Lesson Topic:

## ENZYMES

**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: “Enzymes”.
- Answer the questions on the student homework task sheet.

## IN-CLASS TASKS

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**ROLE-PLAY:** Students work in groups and create a role-play showing how enzymes break down substrates. The nature of the role-play will vary from group to group but a suggestion would be to have a student representing the enzyme and holding their arms into a specific shape to represent the active site, while other students representing various molecules “collide” with the enzyme until the correct substrate “binds” with the active site.

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	Listen to instructions. In <b>pairs</b> discuss ideas for the role-play.	Gives task instructions.
20	Get into groups and share their ideas for the role-play. Create and rehearse their role play	Groups students into groups of 4-6.
10-15	In turns, groups perform their role-plays.	Monitors and gives feedback.
10	<b>Plenary:</b> Get into pairs with a member of a different team. Discuss two strengths and two targets for improvement in each other’s role-play.	Monitors and gives feedback.

## ANSWERS TO STUDENT TASK

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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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