



Useful STEAM lesson plan

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Class: 8

Topic	Enzymatic specificity of salivary amylase
Purpose of the lesson	To experimentally carry out tests to identify the ideal temperature and pH conditions for the action of salivary amylase.
Didactical purpose	To understand the importance of enzymes to catalyze chemical reactions in living organisms. To teach students how to use correctly laboratory equipment in carrying out an experimental activity. By working in group, students will discuss experimental results, using their scientific knowledge to improve their critical thinking.
Real problem/Problematical situation	Salivary amylase or ptyalin is an enzyme found in saliva that catalyzes the breakdown of starch into maltose. Will the action of amylase depend on factors such as pH and temperature?

Team work (tick) Yes
 No

Teaching about critical thinking	Students, while working in groups, will observe the effects of different testing conditions, write down results and discuss the outcomes. By using a control sample, students use critical thinking to avoid false positives or false negatives and reach correct conclusions.
Integrated subjects	Biology, Chemistry
Possible/expected result	Students are able to critically evaluate the ideal values of temperature and pH for salivary amylase actuation.
Student 's reflection	Students will answer five questions using their phones on Microsoft Forms.