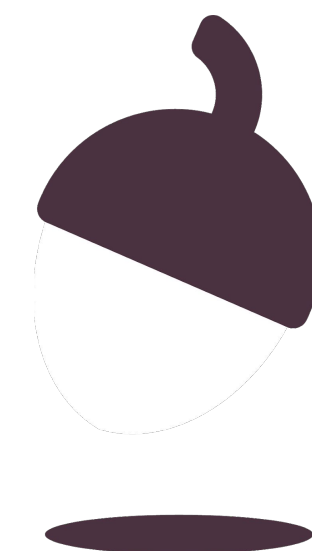


Combined Science - Biology - KS4
Organisation

pH and Enzymes 1

(Downloadable student document)

Mr Humphries



OAK
NATIONAL
ACADEMY

Independent Task

Answer the questions:

- 1. How does increasing pH above the optimum affect enzyme activity?**
- 2. How does decreasing pH below the optimum affect enzyme activity?**
- 3. What is the pH when enzyme activity is highest called?**



Independent Task

Answer the questions:

Raheem wants to investigate how the pH of a buffer solution affects enzyme activity

- 1. What is the independent variable in this investigation?**
- 2. What is the dependent variable in this investigation?**
- 3. Give two control variables for this investigation**



Independent Task

Write down the steps in the correct order.

- Repeat steps 1-6 with pH 6, pH7, pH8 and pH 9 buffer solutions
- Place 2cm³ of amylase, starch and pH 5 buffer solution in 3 different test tubes and place in a water bath for 10 minutes.
- Add one drop of iodine to each spotting well
- Use a stirring rod to transfer the solution to an iodine well every 30 seconds.
- Record the time at which the iodine no longer changes colour.
- Add all the test tubes together and start a stopwatch

