

Tobermory High School

Standard Grade Biology

Investigating Cells

Enzymes

1. What is an enzyme? (2)
2. Give three reasons why enzymes are required cells. (3)
3. Name 2 factors which affect the rate at which enzyme work. (2)
4. Explain, using diagrams, how an enzyme operates. (3)
5. Copy and complete the table.

Substrate	Enzyme	Product(s)
starch		
	pepsin	
lipids		
		water + oxygen
	urease	
		starch

(12)

6. Define the following:

- | | |
|---------------|------------------------|
| (a) substrate | (e) product |
| (b) catalyst | (f) degradation |
| (c) synthesis | (g) optimum conditions |
| (d) co-enzyme | (h) inhibitor |

(8)

7. Design an experiment to show the effect of pH on the activity of the enzyme amylase.

(6)

8. The table shows the effect of temperature on an enzyme.

Use the information from the following table to construct a line graph.

Temp (° C)	5	10	15	20	25	30	35	40	45	50
Time (min)	6	5.4	4.1	3.6	2.3	1.8	1.5	2	3.5	7

(4)

Total - 40