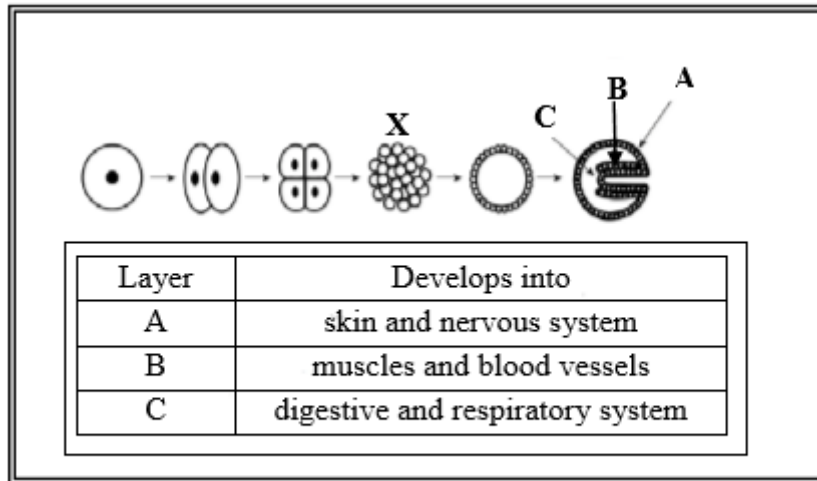


# COVID HOLIDAY ASSIGNMENT

## WORKSHEET 4

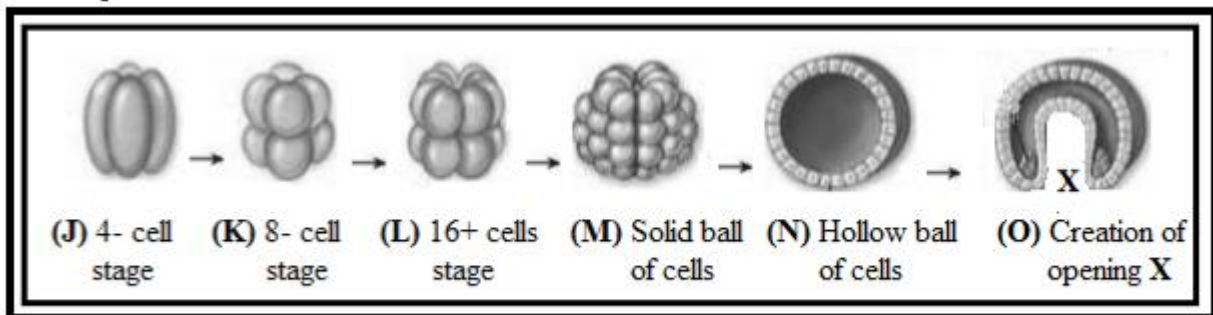
### DAY 1

1. Study the diagram given below of a developing embryo and answer the questions that follow.



Source: <https://www.google.com.au>

- i. State the names for layers A and B.
- ii. Identify and describe the stage labelled X.
2. Study the diagram given below of embryonic development in animals and answer the questions that follow.



Adapted from: <https://www.schoolbag.info>

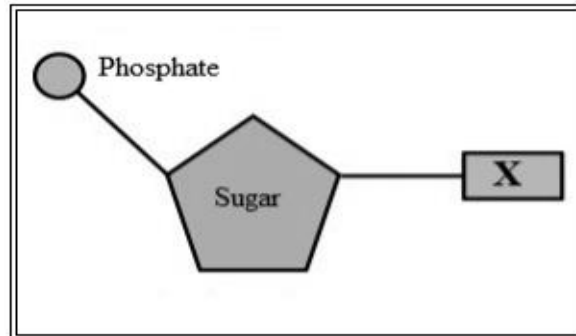
- (i) State the name of the process that is taking place from stages (J) to (M) in the above diagram.
- (ii) Name opening X (diagram (O) above) and describe how it forms.

### DAY 2

1. In the process of photolysis, the light energy trapped by pigments is used to
- split water molecules.
  - reduce coenzyme NADPH.
  - transport ATP to the Calvin cycle.
  - add phosphate to ADP to form energy.

2. One product of anaerobic respiration in bacteria and animals is
- alcohol.
  - pyruvic acid.
  - lactic acid.
  - a disaccharide sugar.

3. The diagram given below shows a nucleotide.



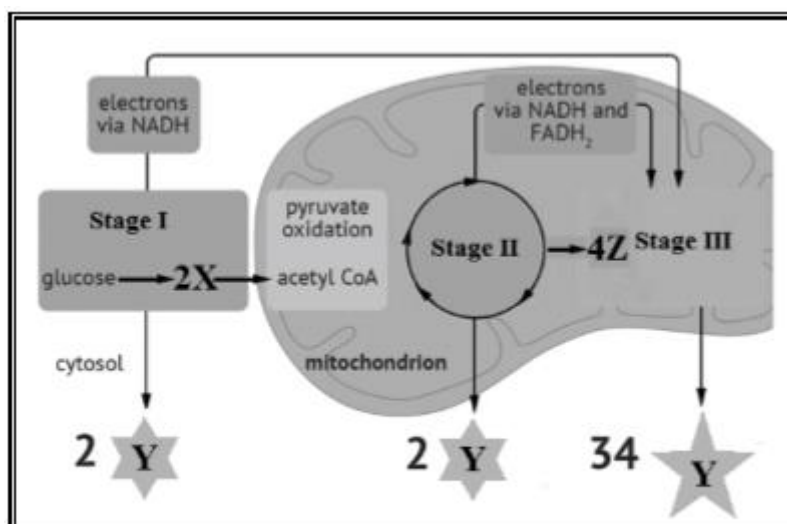
Adapted from: <https://www.tes.com>

The structure labelled X is a

- glycerol.
- fatty acid.
- disaccharide
- nitrogenous base.

### DAY 3

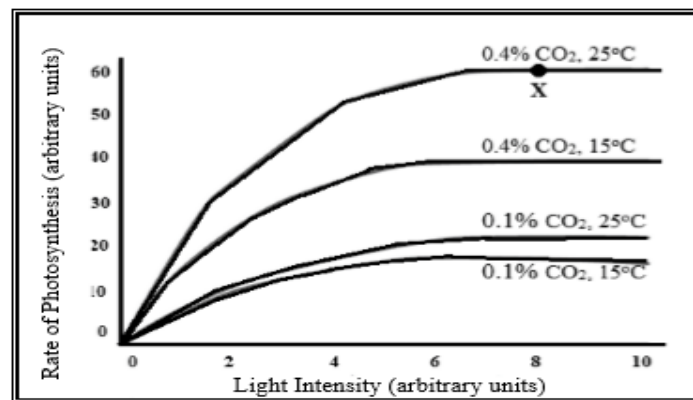
1. The diagram given below shows a summary of the process of respiration.



Adapted from: <https://alevelbiology.co.uk/notes>

- Name molecules X and Z in the diagram.
- Name and describe the process occurring in Stage II of respiration.

2. The graph given below shows the effect of carbon dioxide concentration and temperature on the rate of photosynthesis. Study the diagram to answer the questions that follow.



Adapted from: <https://socratic.org>

(i) Name the organelle responsible for photosynthesis.

(ii) Make an inference about the effect of carbon dioxide concentration on the rate of photosynthesis. Give a reason for your inference.

(iii) At point X, the rate of photosynthesis is constant. Suggest how it may be increased further.

#### DAY 4

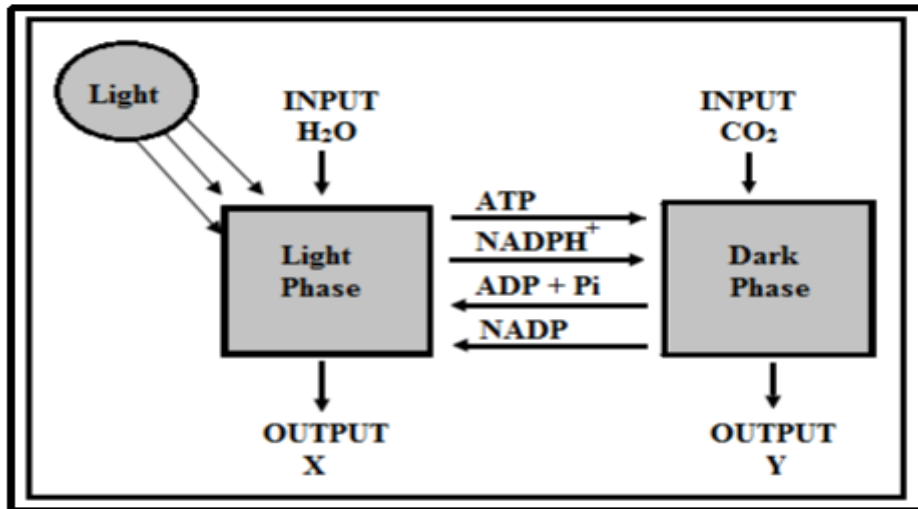
1. The light independent reactions of photosynthesis occur in the

- A. thylakoid membranes.
- B. stroma and cytoplasm.
- C. inter membrane space.
- D. lumen of thylakoid membrane.

2. Which of the following is a characteristic of enzymes?

- A. Lowers activation energy
- B. Unaffected by temperature
- C. Insensitive to altering pH levels
- D. Ability to develop into cell organelles

3. Study the summarized diagram of the process of photosynthesis given below and answer the questions that follow.

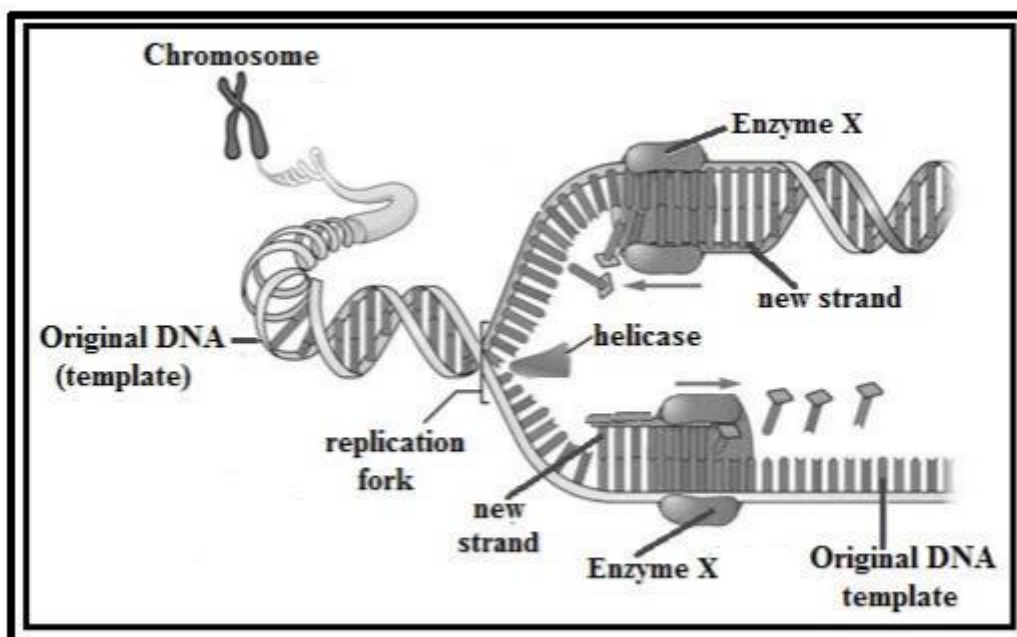


Adapted from: <https://www.google.com.au>

- (i) Name Outputs X and Y.
- (ii) Describe how Output Y is produced.
- (iii) Name and explain any one factor that affects the rate of photosynthesis.

## DAY 5

1. Explain one advantage of anaerobic respiration over aerobic respiration.
2. The diagram below shows an overview of the process of DNA replication.



Adapted from: <https://www.thoughtco.com/dna-replication>

- (i) Name Enzyme X.
- (ii) State one function of Enzyme X in replication.
- (iii) Explain why replication is said to be semi conservative.

**THE END**