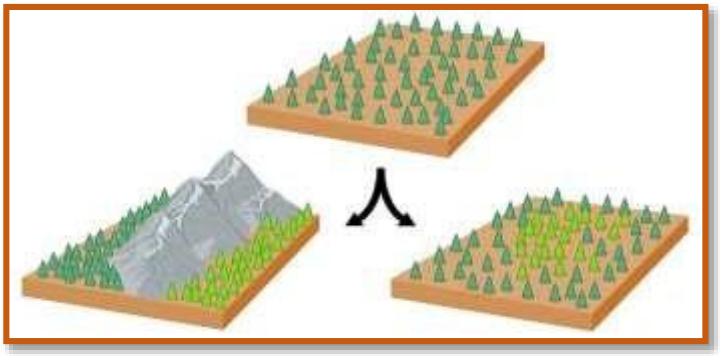
COVID HOLIDAY ASSIGNMENT

WORKSHEET 5

DAY 1

1. The diagram given below shows the two types of speciation. Name and differentiate between the two with examples.

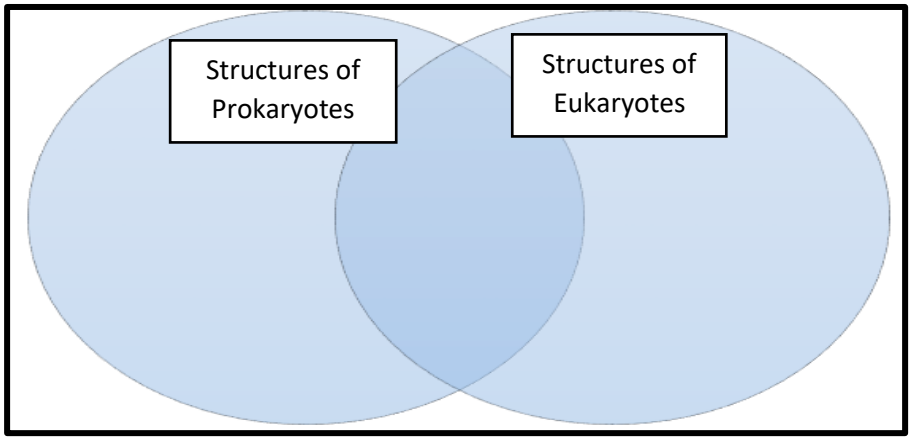


2. Using the diagram given below, **explain** the differences in beak shape among Galapagos finches.

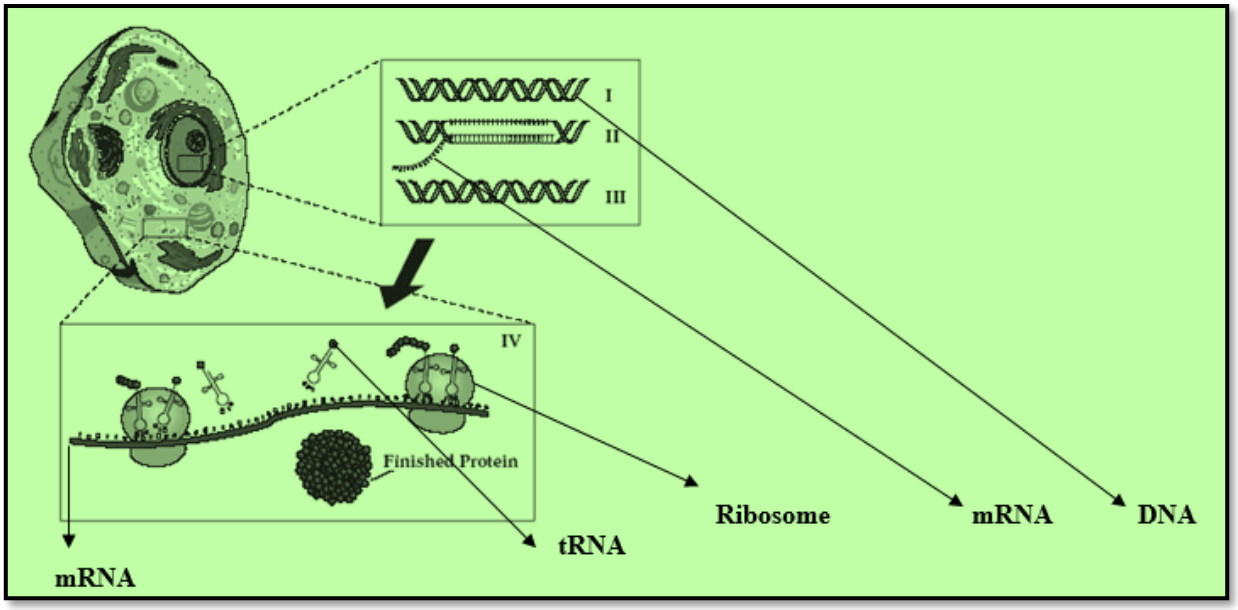
Type of Finch	Food Source
	Seeds
	Fruits
	Insects
	Grubs

DAY 2

1. Fill in the Venn diagram to compare and contrast the structure of prokaryotic and eukaryotic cells.



2. Use the diagram below and answer the questions that follow:



(i) Where does the first step of protein synthesis occur?

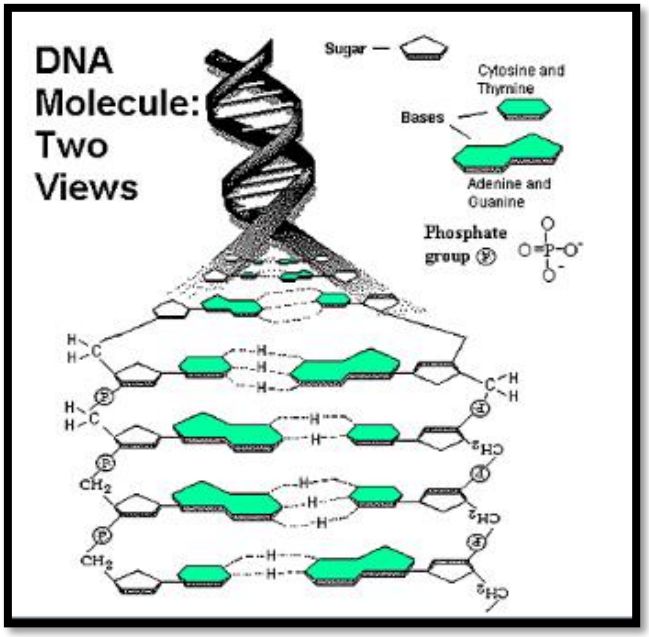
(ii) Nitrogen bases are read _____ bases at a time.

(iii) A set of 3 bases on the mRNA strand is called_____.

(iv) What is the purpose of the start and stop codons?

DAY 3

Use the diagram given below to answer the following questions.



1. What do the letters DNA stand for?

2. Two scientists are given credit for discovering the structure of DNA. What is the name of those two scientists?

3. DNA is a polymer, which means that is made up of many repeating single units (monomers). What are these monomers called?

4. The "backbone" of the DNA molecule is made up of two components, what are these?

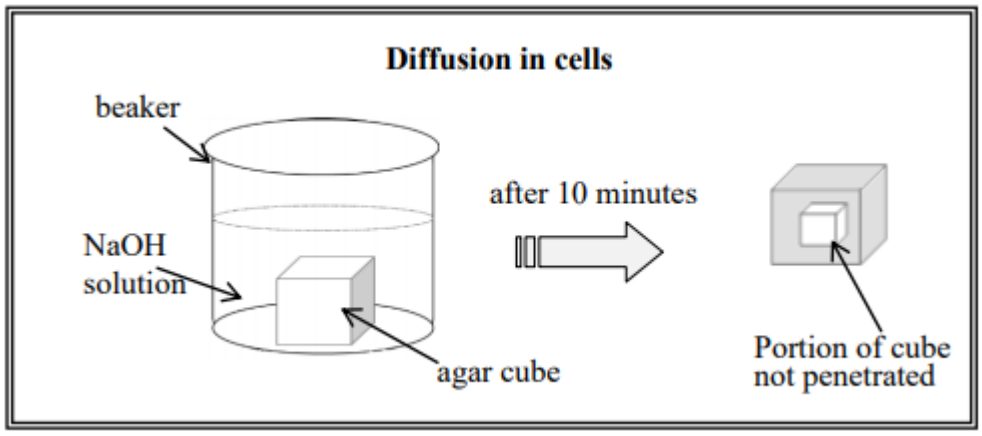
DAY 4

1. Complete the table below by entering the correct name of the major cellular organic compounds suggested in the "types" column (choose from carbohydrates, lipids, proteins, and nucleic acids).

Cellular Organic Compounds	***Types***
	Phospolipids
	Enzymes
	Genes
	Glycogen, starch, cellulose, and chitin
	Saturated and unsaturated fats
	Sterols, oils, and waxes
	Glucose and fructose

DAY 5

1. In an experiment to observe diffusion in cells, Year 12 Biology students placed an agar phenolphthalein cube (10 cm x 10 cm x 10 cm) into a beaker containing sodium hydroxide (NaOH) solution for 10 minutes as shown in the diagram given below.



When the agar cube was removed from NaOH solution, the students saw that the centre portion of the cube (5 cm x 5 cm x 5 cm) was not penetrated by the NaOH solution and remained colourless. The outer portion was pink in colour.

(i) Calculate the volume of the cube that is not penetrated.

(ii) Calculate the total percentage (%) volume penetration of the cube.

THE END.