

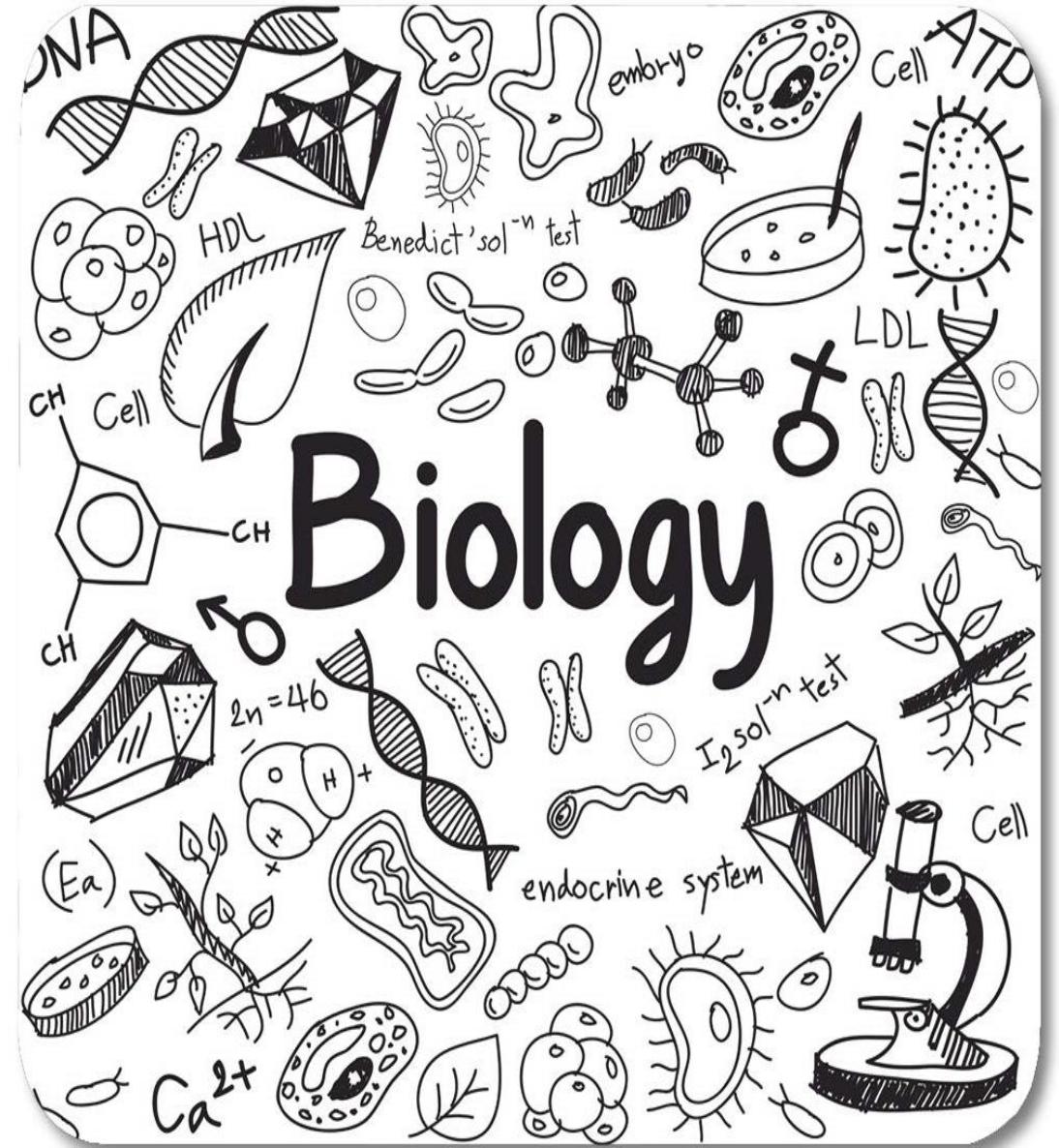


The National
Orthodox School
Shmaisani

Lesson: **Review questions**
6,7,8,9

Scholastic Year: 2022 -2023

Grade: 8 CS



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Review question 6

1. Breed varieties A and C together.
2. Select the offspring with the shortest stems and highest mass of grain, and breed these together.
3. Repeat the process over many generations.

6 A plant breeder wants to produce a new variety of maize. It must have short stems and produce a high mass of grain. None of his existing varieties has both these characteristics.

| Variety | Stalk length | Mass of grain |
|---------|--------------|---------------|
| A | short | low |
| B | long | low |
| C | long | high |

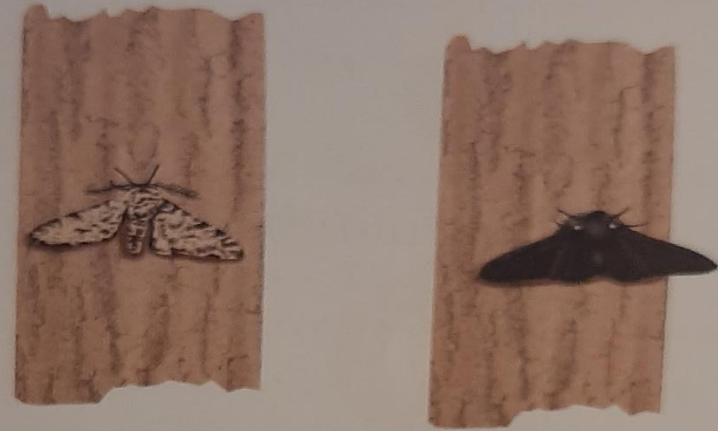
Describe three steps the breeder should take to produce the new variety.

[3]

Review Question 7 page 227 :

- The population of black moths increases and the population of white moths decreases .
- white moths.
- white moths could be seen more easily on the darker tree trunks so birds caught more of them. The black moths were more likely to survive and produce offspring.

7 Peppered moths rest on tree trunks during the day. Their main predators are birds. The moths come in two forms – dark and light. The light forms are well camouflaged on clean tree trunks. [3]



The percentages of dark and light moths were measured in the years 1700 and 1840.

| Moth colour | % of total population of moths | |
|-------------|--------------------------------|------|
| | 1700 | 1840 |
| black | 1 | 90 |
| white | 99 | 10 |

- Describe how the population of moths changed between 1700 and 1840. [2]
- Between these dates the use of coal increased. Smoke from the burning coal turned tree trunks black. Which type of moth would birds see more clearly on the dark tree trunks? [1]
- Suggest how the change in the colour of tree trunks could change the population of moths. [2]

Review question 8 page 227:

Which of these statements about natural selection are true? [2]

- a** Natural selection occurs when some individuals are more suited to their environment. True
- b** Natural selection causes individuals to evolve. False
- c** Natural selection explains how species can evolve. True

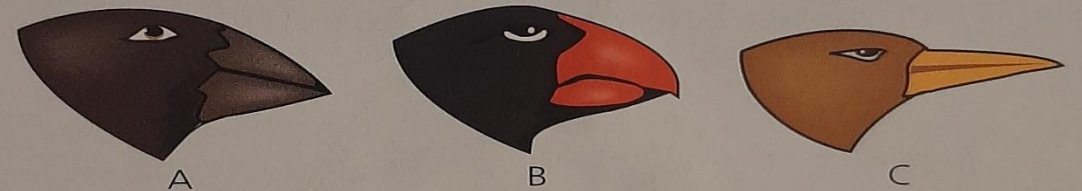
Review Question 9 page 227 :

- a. A
- b. C
- c. Genes.
- d. Different foods were available on each island. The birds with the best adapted beaks survived and passed the genes that controlled their beak shape to their offspring.
- e. The finches evolved from the same group of finches.

9 Darwin found small birds called finches on each of the Galapagos Islands.



On each island the birds ate different foods and had different beak shapes.



- a Which finch has the most useful beak for crushing hard seeds? [1]
- b Which finch has the most useful beak for pulling insects through narrow gaps? [1]
- c What controls the shape of a finch's beak? [1]
- d How could natural selection produce birds with different beak shapes on each island? [2]
- e The finches on the Galapagos Islands have different beak shapes, but most of their genes are very similar. Suggest why. [1]