

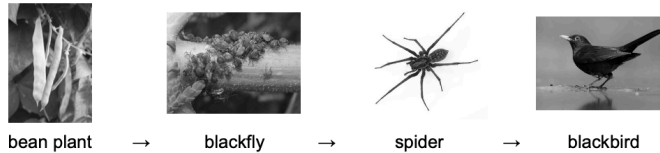
Levels of organisation (food chains, webs, predator–prey cycles)

Q1. (2019)

05.1

Figure 4 shows a food chain in a garden.

Figure 4



A)

05.1

Which term describes the spider in this food chain?

[1 mark]

Tick (✓) **one** box.

Primary consumer

☐

Producer

☐

Secondary consumer

☐

Tertiary consumer

☐

B)

05.2

Many of the spiders in the garden died.

What is likely to happen to the number of blackflies in the garden?

[1 mark]

Tick (✓) **one** box.

Decrease

☐

Increase

☐

Stay the same

☐

C)

05.3

Give a reason for your answer to Question 05.2

[1 mark]

Q2. (2021)

03

Figure 2 shows one species of bird on a bird feeder.

Figure 2



The birds use their beaks to reach nuts inside the bird feeder.

Cats sometimes eat the birds.

A)

03.1

Give the food chain for the birds, cats and nuts.

[2 marks]

B)

03.2

Which organism in the food chain you gave in Question 03.1 is the primary consumer?

[1 mark]

Q3. (2024)

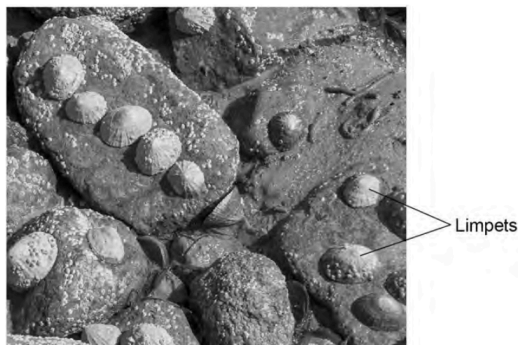
05

Limpets are small animals with shells.

Limpets attach to rocks on sea shores.

Figure 9 shows limpets on rocks.

Figure 9



05.1

Limpets eat algae.

Limpets are prey for crabs.

Give the food chain for algae, crabs and limpets.

[1 mark]

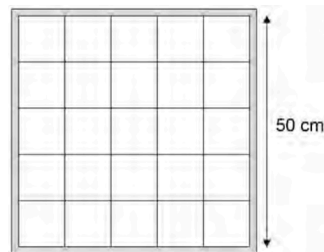
Q4. (2024)

Students estimated the population of limpets on a sea shore.

The students were given a square quadrat.

Figure 10 shows the quadrat.

Figure 10



A)

0 5 . 2 Calculate the area of the quadrat in m^2 .

[2 marks]

Area of quadrat = _____ m^2

B)

0 5 . 3 The total area of the sea shore was 1800 m^2 .

The students sampled 2% of the total area of the sea shore.

Calculate the number of times the students needed to use the quadrat for the 2% sample.

Use your answer from Question 05.2

[2 marks]

Number of times = _____

C)

0 5 . 4 Explain why throwing a quadrat is **not** a random method to estimate population size.

Do **not** refer to safety in your answer.

[2 marks]

D)

0 5 . 5 Describe **one** method the students could use to plan where the quadrat should be randomly placed each time.

[2 marks]