

Year 11 homework – Term 3

In Science, Y11 are provided with a short booklet each week of past paper questions.

It is expected that students attempt the questions and then use the mark scheme at the end of the booklet to self-assess their answers and correct using a different colour pen.

Y11 Homework FT
Adaptations and Potable water

Name: _____
Class: _____
Date: _____


Time: **27 minutes**

Marks: **25 marks**

Comments: _____

Q1. Figure 1 shows one species of bird on a bird feeder.

Figure 1



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

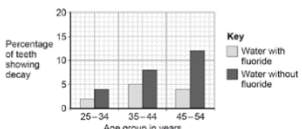
(a) Give the food chain for the birds, cats and nuts. _____ (2)

(b) Which organism in the food chain you gave in part (a) is the primary consumer? _____ (1)

(c) Cats are one biotic factor that affects the size of the bird population.
Which two of the following are biotic factors?
Tick (✓) two boxes.

(g) Figure 2 shows the effect of fluoride in drinking water on tooth decay in different age groups.

Figure 2



Age group in years	Water with fluoride (%)	Water without fluoride (%)
25-34	~3	~5
35-44	~6	~8
45-54	~9	~12

Describe the pattern of tooth decay in Figure 2 for water without fluoride.
Use data to justify your answer.

_____ (2)

(h) Describe the effect of adding fluoride to drinking water for the age groups in Figure 2.

_____ (2)

Mark schemes

Q1.

(a) nut(s) → bird(s) → cat(s)

(b) birds 1

(c) food 1

pathogens 1

(d) 13.60 (mm) allow 13.6 (mm) 1

(e) structural 1

(f) variation 1

mutation 1

reproduction 1

generation 1

(g) birds have a shorter life cycle than humans 1

(h) bacteria can become resistant to antibiotics 1

[13]

Q2.

(a) Desalination 1

Sterilising 1

(b) Chloride ion 1

(c) correct bar for NO₃⁻ 1

(d) D 1

Page 8 of 10

Page 9 of 10