

(Variation and evolution)

Q1.(2018)

a change in a gene

Q2.(2019)

mutation

Q3.(2020)

mutation / mutated

Q4.a)(2020)

eukaryota

Q4.b)(2020)

Carl Woese

Q4.c)(2020)

any **one** from:

- fighting / competing for mates
/ food / territory
- to kill predators / prey

Q4.d)(2020)

(bones or hard tissues) did not decay

Q4.e)(2020)

any **one** from:

- compare to other fossils of known age
- by the age of the rocks
(where fossil was found)

Q4.f)(2020)

0.05 (million years ago)

Q4.g)(2020)

0.2 – 0.05

0.15

150 000 (years)

Q4.h)(2020)

any **two** from:

- drought
- ice age / global warming
- volcanic activity
- asteroid / meteor collision
- (new) predators

- (new) disease

- competition for food
- competition for mates

- lack of habitat **or** habitat change

Q5.a)(2022)

kingdom

genus

Q5.b)(2022)

Linnaeus

Q5.c)(2022)

Elrathia kingii

Q5.d)(2022)

trilobite **A** was found in older
rocks than trilobite **B**

trilobite **B** is more complex than
trilobite **A**

Q5.e)(2022)

sediments

soft parts

minerals

Q5.f)(2022)

any **three** from:

- drought
- ice age
- global warming

- volcanic activity
- asteroid collision

- (new) predators

- (new) disease / pathogen

- competition for food

- competition for mates

- lack of habitat or habitat change

Q5.g)(2022)

no / insufficient evidence

or

cannot perform experiment to find out

Q6.a)(2023)

brambling and chaffinch

Q6.b)(2023)

the brambling and the bullfinch
cannot breed together to give
fertile offspring

Q7.a)(2023)

any **one** from:

- variation of a named /
described (desirable)
characteristic
- not all susceptible to the
same disease / pathogen
- maintain / increase gene pool

Q7.b)(2023)

any **one** from:

- they have the same named
/(desirable) characteristic(s)
- they grow at the same rate
- they ready to harvest at same
time

Q7.c)(2023)

(a group of) cells are grown (into
a new organism)

Q7.d)(2023)

any **one** from:

different

- water
- minerals / ions
- light
- herbivores
- disease
- plant density
- soil pH

Q8.a)(2024)

kingdom

Q8.b)(2024)

genus

species

Q9.a)(2024)

a change in:

- DNA
- base code **or** nucleotide sequence
- base (in DNA)
- gene / allele
- part of a chromosome
- number of chromosomes
- genetic code / material

Q9.b)(2024)

any **three** from:

- variation (between members of a species)
- better adapted survive
- (better adapted or survivors) reproduce
- pass on (favourable) allele(s) / gene(s) / mutation(s)