

STAAR Spring 2024 Biology Answer Key

Item Position					Category	Readiness and Supporting
1	Multiple Choice	B.6(A)	1	C	2	Readiness
2	Multiple Choice	B.12(C)	1	B	5	Readiness
3	Multiple Choice	B.10(C)	1	B	4	Sup /P 92R3oc B.7(E)
5	Multiple Choice	B.6(F)	1	B	2	Readiness
6	Multiple Choice	B.11(B)	1	D	5	Readiness
7	Hot Spot	B.5(A)	1	See Appendix 1.1	1	Readiness
8	Multiple Choice	B.10(B)	1	C	4	Readiness
9	Multiple Choice	B.5(C)	1	A	1	Supporting
10	Multiple Choice	B.10(A)	1	D	4	Readiness
11	Multiple Choice	B.12(D)	1	B	5	Supporting
12	Multiple Choice	B.4(C)	1	C	1	Readiness
13	Multiple Choice	B.6(E)	1	B	2	Readiness
14	Multi Part	B.12(E)	2	D, D	5	Readiness

15	Multiple Choice	B.11(A)	1	C	5	Supporting
16	Multiple Choice	B.8(B)	1	D	3	Readiness
17	Short Constructed Response	B.4(B)	2	See Appendix 1.2	1	Readiness
18	Multiple Choice	B.9(A)	1	B	4	Readiness
19	Multiple Choice	B.7(A)	1	D	3	Readiness
20	Drag and Drop	B.7(B)	2	4 See Appendix 1.3	3	Supporting
21	Multiple Choice	B.6(D)	1	A	2	Supporting

Cellular
respiration 0.48 ref B.6(D) 491.04 0.481 0.48

22 Drag and Drop B.9(B) 2

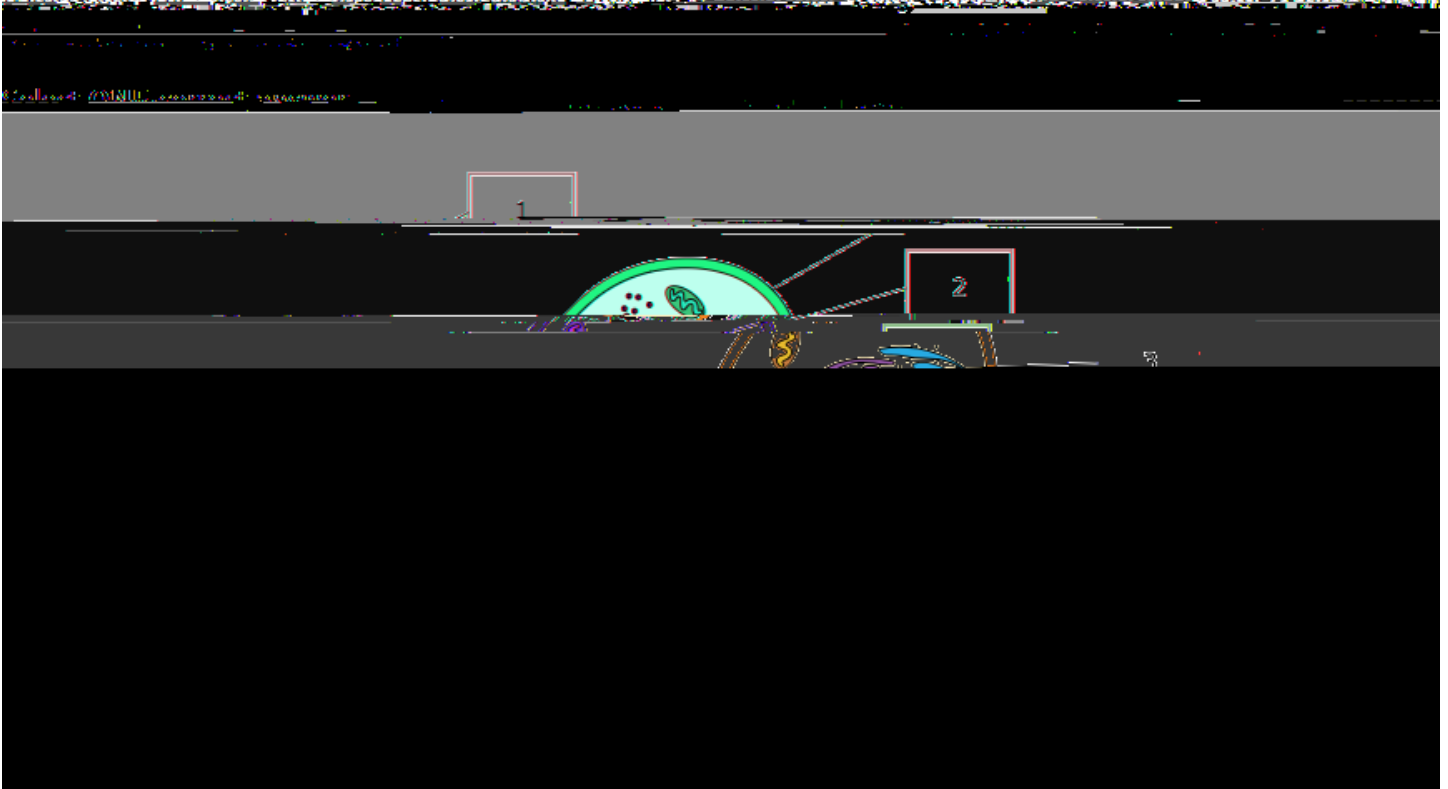
29	Multiple Choice	B.4(B)	1	B	1	Readiness
30	Multiple Choice	B.4(C)	1	D	1	Readiness
31	Multi Part	B.10(A)	2	A, A	4	Readiness
32	Drag and Drop	B.6(A)	2	Base pair, Nucleotide, Phosphate See Appendix 1.6	2	Readiness 4

44	Multiple Choice	B.8(B)	1	B	3	Readiness
45	Multiple Choice	B.7(E)	1	D	3	Readiness

STAAR Spring 2024 Biology Appendix

1.1

Dogs have 39 pairs of chromosomes in their somatic cells. In which part of the cell are these chromosomes



1.2

In animal cells, the sodium-potassium pump moves sodium and potassium ions against a concentration gradient across the cell membrane.

What type of transport is used, **AND** why is this type of transport necessary?

Read the question carefully. Then enter your answers in the box provided.

Active transport is used in the process. **AND** The movement of sodium and potassium ions requires energy (ATP) because they need to be pumped against their concentration gradient from an area of low concentration to an area of high concentration.

1.3

Scientists can use the fossil record to determine changes in an environment. What does the abrupt appearance of

new life forms

indicate about the environment?

More life forms appeared

The abrupt appearance of new organisms is evidence of an increase in biodiversity and a stable environment.

an unstable environment

OR

The abrupt appearance of new organisms is evidence of an increase in biodiversity and a stable environment.

an increase in biodiversity

1.4

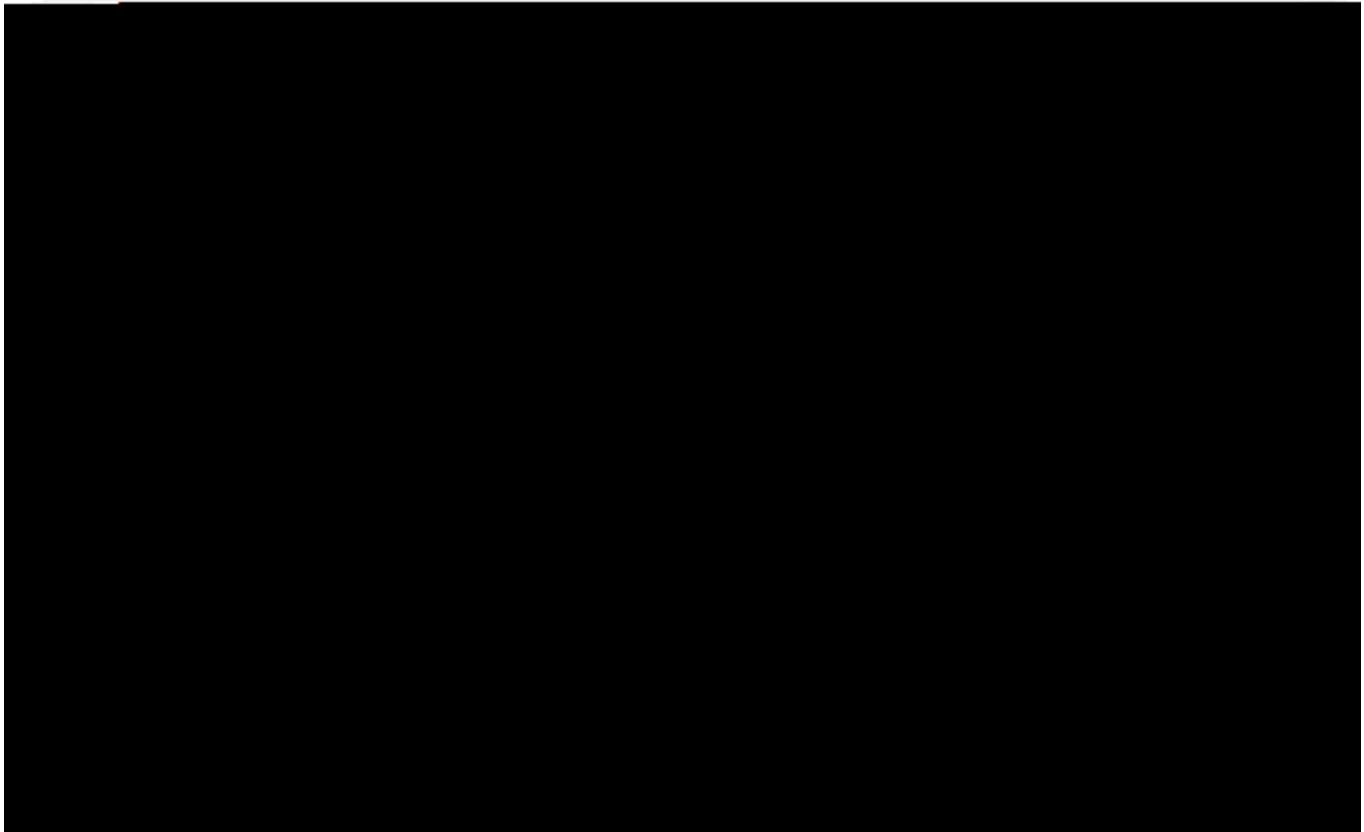
1.5

The student should describe example 1 as mutualism. The bees are benefiting by getting food (energy and nutrients) from the flowers. The flowering plants are benefiting by being pollinated (or cross-pollinated) resulting in fertilization or seed production (or increased biodiversity). **AND**

1.6

Identify the components of DNA.

Move the correct answer to each box. Not all answers will be used.



1.7

Giraffes (*Giraffa camelopardalis*) have 30 chromosomes in their somatic cells. How many chromosomes will each daughter cell have after the final step of meiosis?

Enter your answer in the box. Your answer must be a whole number.

15

