

Exploring Creation with Biology, 3rd Edition – Errata File

This file contains the corrections for the 1st (March 2020) and 2nd (July 2020) Printings, of the **Solutions and Tests Manual**. The printing for the Textbook and Student Notebook may not be the same as the Solutions and Tests Manual. Corrections for the Textbook and Student Notebook are in separate files. (Updated 8/15/2022).

Clarifications:

Page 55 – Module 6 Study Guide answer to #23 – See the helpful notes that were added on the last page at the end of this file.

Page 69 – Module 7 Test, Question #23 – Change the 2nd sentence to the following:

For our purposes, the presence of attached earlobes is caused by a recessive allele (*e*) and is shown by the filled in squares and circles.

Please Note: this should also be changed on page 29 of the Test Pages.

Page 111 – Module 12 Study Guide answer to #5 – The answer should not refer to Figure 12.29a or b. The two underlined answers should read:

The top image in the figure is from a monocot.

The bottom image in the figure is from a dicot.

Corrections:

Page 1 - #1h. Change the Term to: Scientific theory. Change the Definition to:

“An explanation of some part of the natural world that has been thoroughly tested and is supported by a significant amount of evidence from observations and experiments.”

- #1i – Change the Definition to:

“A description of a natural relationship or principle, often expressed in mathematical terms, and supported by a significant amount of evidence.”

Page 3 - #8 – Replace the last 2 sentences of the answer, “After the hypothesis has been tested...could become a scientific law.” With the following:

“Once a large amount of consistent data is collected from testing one or many hypotheses related to a subject, an explanation is formed called a scientific theory. If, however, an explanation isn’t possible from the data but the data is used to describe a natural event (often using mathematical equations), a scientific law is formed. In either case a lot of significant evidence is needed to support a theory or law.”

Page 3 - #9 – change the words ‘law’ and ‘laws’ to ‘theory’ and ‘theories’ respectively.

Page 11 – #4. Add the following sentences for the 3rd part of the question:

Isotopes are atoms that have the same atomic number but different atomic masses. Isotopes of the same chemical element differ in the number of neutrons they have.

Exploring Creation with Biology, 3rd Edition – Errata File – Page 2

Page 12 – Answer to #16 – 3 corrections as follows:

On the first image at the right: add an O to the H so that the C bonds with an OH instead of an H.

The underlined answer should be molecule c (not b)

At the very right of the second image, again, add the O to the farthest H so that the C bonds to an OH.

Page 22 – 2 corrections as follows:

#11. Add the answer for the second part of the question:

Carbon dioxide enters the air by volcanoes, decomposition of organic material, combustion, and cellular respiration.

#17. Change “nitrifying” to “nitrogen-fixing” in the first line.

Page 24 – Module 3 Test, question #8, the word should be spelled **taigas**. Please Note: This will also need to be corrected on the test in the packet of Test Pages, page 9.

Page 28 – #22 – Add to the underlined portion of the answer as follows:

but the hawk will either be a tertiary, quaternary, or sometimes higher (such as quinary) consumer.

Page 30 – Term t. – change Chromatic to Chromatin

Page 41 – Remove question #25.

Page 45 – At the end of answer 7. Change Krebs to Calvin.

Page 46 – Answer to Study Guide #15, row 7:

Column 1: Final electron acceptor of ETC

Photosynthesis column 2: NADPH

Cellular Respiration column 3: Oxygen

Page 53 – Term n. – Change Fermentation to Mitosis.

Page 55 – See page at the end, which has corrected images for the Meiosis column, with explanation.

Page 60 – Answer to Test question 23d should be:

Met-Cys-Arg: there are 3 amino acids in the polypeptide. The last codon is a stop codon.

Page 63 – two corrections as follows:

#6 Punnett square – the **2nd column** should have an A on the outside. Row 1 should be AA. Row 2 should be Aa.

#7 Punnett square – the **1st row** should have an r on the outside. Column 1 should be Rr. Column 2 should be rr.

Page 64 - #9 – Remove the 3rd sentence – “This means that at least one of them is homozygous.”

Page 71 – Answer to test question #12 should be (c) not (b).

– Answer to test question #18 should be (d) not (a).

Exploring Creation with Biology, 3rd Edition – Errata File – Page 3

Page 72 – #22 in the first Punnett square, the bottom left square should contain Tt (not TTt)

Page 72 - #22 b. In the Punnett square – Change the following headings and square:

1. In the heading at the top, the 2nd column should be Yt (not Ty)
2. In the heading at the side, the 4th row should be yt (not ty)
3. The square in Row 4, Column 1 should contain YyTt (not YyYy)

Page 88 – Add the following to the bottom of the page:

m. Vaccine – A weakened or inactive version of a pathogen that stimulates the body's production of antibodies that aid in destroying the pathogen.

Page 89 – In #3, the first sentence, change 'cell' to 'cells' and underline Eukarya domain.

– In #5 *sapien* should be *sapiens*.

Page 96 – Module 10 Study Guide answer to #15, change microscopic to **macroscopic**.

Page 124 – Module 13 Study Guide answer to #20 – The second sentence should read: “**Five aortic arches** pump blood through vessels that run through all body segments.”

Page 140 – Module 15 Test, questions #4 and #5, change loves to **lobes**. Please Note: This will also need to be corrected on the test in the packet of Test Pages, page 53.

Page 142 – the answer to #2 is (i) and the answer to #9 is (b).

Page 144 – Add the following to the bottom of the page:

I. Conditioning – A type of learning in which a stimulus or response is linked to a reward or punishment.

Page 149 – Change the answer to #14 to read: (changes are underlined)

(2 pts – one for identifying learned behavior and one for explanation) Although young geese have an innate urge to follow moving objects they see during the first several days after hatching, imprinting is a learned behavior that lasts for a specific time. This specific time is called... The rest of the answer is correct.

Test Pages:

Page 27 – Module 7 Test, question #9 should be: Genetically modified organism.

(it is correct on page 67 of the Solutions Manual)

19. Prior to meiosis there were 2 diploid parent cells each with 7 pairs of homologous chromosomes (14 chromosomes). Each chromosome consists of 2 sister chromatids since chromosomes are duplicated just before meiosis. After meiosis I there were 4 haploid daughter cells. Each haploid daughter cell contains 7 chromosomes (1 from each pair of homologous chromosomes) and each chromosome still consists of sister chromatids (since homologous chromosomes are separated in meiosis I). In meiosis II, the 4 haploid cells have the sister chromatids separated, producing a total of 8 haploid cells with all chromosomes having only one chromatid. Thus, there are 8 cells, there are still 7 chromosomes in each, but the chromosomes have not yet been duplicated so they consist of only 1 chromatid.
20. Male gametes are called sperm, while female gametes are called eggs. Sperm have flagella: thus, the male gamete can move on its own.
21. Male animals produce 4 useful gametes with each meiosis, while female animals produce only 1.
22. A polar body is a non-functional female gamete, because it is far too small to function properly. An egg is the one female gamete produced by meiosis that is large enough to function properly.

