

## *Exploring Creation with General Science, 3<sup>rd</sup> Edition – Errata File*

This file contains the clarifications and corrections for the 1<sup>st</sup> Printing: March 2019, of the Textbook. (Updated 7/29/2024).

You can find which printing you have by going to the publications page in the front of your book. The printing for the Textbook, Solutions and Tests Manual, and Student Notebook may not be the same. Corrections for the Solutions and Tests Manual and Student Notebook are in a separate files.

### Clarifications:

In our effort to provide families with accurate science that glorifies God, this course went through thorough and detailed editing. Yet, although scientific accuracy is a major goal, as with any large instructional work there will be places where information can be clarified.

**Page 99** – In the 2<sup>nd</sup> to last paragraph changes were made in the bold sentences as shown:

Let's compare those numbers to the New Testament. **It is supported by over 5,800 different copies and the earliest was written only 25-40 years after the original.** The differences between these 5,800 copies are extremely small, which indicates that the New Testament we have today **is faithful** to the original text.

**Page 100** – Figure 4.13 – change the New Testament Time Span number to **25-40**.

**Page 100** – two sentences in the last paragraph were revised as shown in bold:

Now, the last events of the Old Testament were supposed to have occurred sometime around 450 BC, which means that there is a notable span of time between the original writings and the first available copies. **But between 1947 and 1956, the Dead Sea Scrolls were discovered. Among the manuscripts there are at least 223 copies of the Old Testament.** In fact, one of the scrolls has a complete copy of the Old Testament book of Isaiah.

**Carbon-14 dating – pages 104-105 and 180-181** – no edits made.

Carbon-14 could *technically* allow scientists to identify dates that could be tens of thousands of years old. However, to *accurately* date an item, it has to be calibrated with dendrochronology (discussed on pages 102-104). That just means that the carbon-14 dates are supported by dates confirmed using dendrochronology.

**Oort cloud – page 133** – these edits made in later printings.

Last paragraph in the Kuiper Belt and Oort Cloud section, replace with the following:

At the farthest points of our solar system, the Oort cloud is a *theorized shell* of objects made of lots of ice. Named after Jan Oort, who first suggested its presence, the Oort cloud is still yet to be confirmed; *there is no direct observational evidence for its existence*. Scientists have inferred its presence from long-period comets.

In the Comets section – 2<sup>nd</sup> sentence:

They do not have circular orbits, but travel around the sun in noticeable elliptical paths.

**Page 9** – What To Do section

Create a **formal lab report** with the headings Title, Introduction, Materials and Procedure, Results, Conclusion, on pages 413-414 in your Student Notebook.

In Figure 1.9, change the Results box to Data and Results.

In the first paragraph beneath Figure 1.9, sentence 2 should say “...by **creating a formal lab report**.”

**Page 10** – What To Do section continued

Final paragraph should read: “A sample formal lab report for this experiment is at the end of this module on page 29. I recommend...do a formal lab report.”

**Page 36** – What To Do section

First sentence should read: You will not have to a formal lab report for these first two experiments, but you should do one formal lab report per module.

**Page 43** – What To Do

Create a **formal lab report**

Go ahead and do a formal lab report...

**Page 54** – OYO 2.5 – Add the following sentence at the end of the answer:

The answer would also be the same for a scientific theory.

**Page 67** – What To Do – first sentence

You are not required to do a formal lab report for Experiment 3.2...

**Page 183** – OYO 6.1:

The answers listed by letter are:

- A. oceanic crust
- B. Moho
- C. mantle
- D. outer core
- E. inner core
- F. continental crust
- G. lithosphere
- H. asthenosphere

**Page 223** – In the paragraph under Periodic Table of Elements, change “...each box has 1, 2, or 3 letters.” to “...each box has **1 or 2** letters.” This was written prior to elements #113, 115, 117, and 118 were named. When an element is first identified it is given a 3-letter abbreviation. Once it is named, it receives a 2-letter abbreviation.

**Page 223** – Update to Figure 8.8 – Element #117 Ts has been filled in with the red color and the bold line moved to the left of #117.

**Page 342** – **first full paragraph**

After the first sentence, which begins “Sponges grow...” insert: (see Figure 12.8 for one example).

### **Page 369 – Experiment 13.1**

The following note was added at the beginning:

“Note: Depending on the paper products you use for this experiment, your results may differ. This is because the content of newspaper varies by manufacturer, and many papers use already recycled materials which affect the release of carbon during decomposition.”

### Corrections:

**Page 12 – OYO 1.3** – replace the 3<sup>rd</sup> sentence with:

Einstein believed that it would be a very long time before nuclear power would ever be a good source of usable energy.

### **Page 19**

Robert Boyle paragraph, last sentence: “He was a dedicated Christian, often writing materials and sponsoring sermons that used nature to give glory to God.”

**Page 25, 219, 420** – Niels (Bohr) was misspelled.

**Page 27** – In the last line, change Kepler’s first name to: Johannes.

**Page 45** – In the creation connection, change the 4<sup>th</sup> sentence to read:

“They performed experiments showing germs infecting and harming healthy tissue, and after years of further experimentation by Semmelweis and others, Semmelweis’ **hypothesis was accepted as a theory that is still used today.**”

**Page 69-70** - last paragraph on page 69 concluding on page 70 – Replace the entire paragraph with the following:

The burning flame heated the air inside the container, which created high pressure. You may have seen some bubbles escape. When the oxygen inside the glass was used up, the flame went out, the temperature decreased, water vapor condensed on the inside of the glass, and the pressure inside the glass was reduced. Water outside was sucked inside to equalize the pressure. When you study chemistry and physics in high school, you will understand these concepts in greater detail.

**Page 120 – The Sun** – 3<sup>rd</sup> sentence, replace with:

In fact, its diameter is about 109 times larger than Earth.

**Page 122 – first paragraph, second sentence**

Sometimes large eruptions of energy, called **solar flares**, shoot out from the photosphere.

**Page 124 – Solar Eclipses section, sentence with the word “umbra” in bold.**

The inner part of the Moon’s shadow on Earth is called an **umbra** and is just a few hundred miles in diameter.

**Page 139 – Figure 5.30**

The numbers on the y-axis should range from  $10^{-5}$  up to  $10^6$ . Change  $10^2$  to  $10^3$  and the 10 right below it to  $10^2$ .

**Page 142 – OYO 5.9** – Replace the 3<sup>rd</sup> sentence with:

What do you think would happen to Earth if our sun was dense like a neutron star or a white dwarf?

**Page 148 – Figure 6.2**

The bracket for lithosphere should extend upward to encompass the entire crust of the Earth.

**Page 149 – Think About This**

Change the 6<sup>th</sup> sentence so it reads:

And the word *large* is not really helpful, because Greenland is considered an island, even though it is very, very large.

**Page 194** – End of middle paragraph:

Inside the ( ) change  $30^\circ$  to  $5^\circ$ .

**Page 205 – second full paragraph, third sentence**

Change the word "rise" to "drop."

**Page 219 fourth & fifth paragraphs**

Paragraph 4

According to Bohr, electrons spin around the nucleus in orbits, ~~called orbitals~~, much the same way a moon would orbit a planet...The farther away the orbit from the nucleus...So these orbits are also called energy levels.

Paragraph 5 – middle section

...Instead they orbit in clouds, called orbitals, meaning that they can be...

**Page 219 – Figure 8.5**

In the caption, change the word "orbitals" to "orbits"

**Page 225 – Figure 8.9**

Change title to read "Oxygen Molecule."

**Page 258 – Figure 9.21**

Magnets do not have positive and negative sides, but rather north and south poles (refer to figure 9.20). The image should have the letter N in place of the plus signs and the letter S in place of the negative signs.

In the caption, the 3<sup>rd</sup> line should be "...aligned so that all their north pole ends are facing the same..."

**Page 311 – last paragraph, last sentence**

An electron microscope uses beams of electrons instead of beams of light, receiving the images with special electron detectors.

**Page 317** – In Figure 11.13 the width measurement should be (9.8 Feet).

**Page 361 – First paragraph, 5<sup>th</sup> sentence**

Change macroalgae to **multicellular algae** and oxygen to **carbon dioxide**.

**Page 372**

Change “macroalgae” to “multicellular algae” in the following 4 places:

1. 4<sup>th</sup> sentence beneath the definition of Food web.
2. Figure 13.9 at the top left of the Food Web
3. & 4. Twice in the caption of Figure 13.9.