

# Easy Peasy All-in-One High School

An extension of the Easy Peasy All-in-One Homeschool

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## **Biology with Lab**

Please contact me if you find a problem with a link.

**Credits: 1**

**Prerequisite:** Middle school biology and chemistry

**Recommended:** 10th

**Test Prep: CLEP Biology** This course covers the basic material for this exam, but this is considered a very hard test, and I would suspect more will need to be studied to learn everything required for this huge exam. It's worth the same as two college courses which is why it covers so much.

**Course Description:** This course is based on Georgia Virtual Learning's High School Biology course, though it pulls in other resources throughout. This curriculum includes topics such as the scientific method, cells, biochemistry, photosynthesis and respiration, mitosis and meiosis, DNA and RNA, genetics, ecology, evolution and creation, taxonomy, viruses and bacteria, protists and fungi, and finally animals. Students will learn through texts, videos, online interactives and through hands-on and virtual lab investigations. (The GVL pages sometimes have links to Discovery Education videos. You will not be using those. Just follow the directions in the course below as to what materials to use each day.)

**Notes:** I believe in a literal six-day creation of the world by our holy, loving, almighty, creative God. This will be discussed in the beginning of the course to give the framework for how evolution will be approached. Natural selection is taught as it corresponds with Biblical truth but not beyond that. Students will gain some understanding of secular evolutionary thought and come away strengthened in their faith. Many of the materials mention millions of years, and I can't get away from that, but the students will not be required to take any of that as fact. There is no test on evolution; instead, students finish that chapter by presenting their beliefs about creation and evolution.

Thanks to Jessica Ryder for her help with this course.

### Materials needed

#### **Day 1**

1. (\*)Print out your First Quarter Grades sheet or use the Excel version.
2. Keep in mind that your success in Biology will be directly proportional to the amount of effort you invest. You should complete every activity assigned to strengthen your understanding of each concept.
3. Expectations
  - o Do your best effort. Be responsible for your own learning.
  - o Read directions carefully.
  - o Believe in your abilities. Confidence is half the battle.
  - o Read all text and supplementary materials as assigned.
  - o Try, and then try again.
  - o Complete all assignments as assigned.
  - o Ask Questions!
  - o Practice. Practice. Practice.
4. Safety Laboratory safety is important. Although many labs are online, students will be conducting some labs at home. All students are encouraged to wear protective equipment at all times while conducting labs.

5. Assignments

- Save all your work to your hard drive or disk and also save it in another location (i.e. disk or flash drive).
- Sometimes things can happen to your computer, and it may be necessary for you to prove that you have completed all assignments.
- Cheating and plagiarism is lying and stealing.

**What is Biology?**

1. Read over the key terms on [page 3](#). Click on each tab. You don't need to learn all of these terms now. Use this to start to refresh your memory about what you've learned previously.
2. This is your [answer key](#) for the course.

**Day 2**

1. Read about the "Study of Life" [page 2](#).
2. Complete Page 4, "Pre-Assessment." Read the page. Write at least three characteristics of living things with descriptions and examples.
3. Record your score out of 10. Take off one point for each incomplete section of the assignment.

**Day 3\***

1. \*Print the "[Characteristics of Living Things](#)" concept map.
2. Read characteristic's 1-3 on [pages 6 – 8](#). (When I say read, I also want you to use the videos on the pages.)
  - All living things are made with one or more cells.
  - All living things must be able to obtain and use energy.
  - All living things react to a stimulus.
3. Start filling out your concept map.

**Day 4**

1. Read characteristic's 4, 5 and 7 on [pages 9, 10 and 12](#). (Yes, I skipped a page. We'll get to that shortly.)
  - All living things reproduce.
  - All living things grow, develop and die.
  - All living things maintain homeostasis.
2. Watch this short video for an overview of the role of [homeostasis](#) in the body.
3. Continue filling out your concept map.

**Day 5**

1. Read over this list and descriptions of the [characteristics of living things](#).
2. How does this compare to what you've learned? What's missing?
3. You can leave number 6 blank on your map. We're going to be covering that shortly.
4. Record your grade out of 30 for completing the concept map. Take off one point for any incomplete blanks, other than number 6 blanks.
5. Play "It's Alive" on page 13. Pay attention to your score.
6. Record your score out of 11.

**Day 6**

1. Read from the beginning through "Diversity of Life" in the "[What is Biology?](#)" chapter. (ck12) (You don't need to use the links in the reading. I will be linking to ones separately that you should use. This site may require you to log in. If you don't have one, please create an account.)
2. Answer questions 1-4.
3. Check your [answers](#). All answers can be found on the answer pages linked on Day 1.

4. Record your score out of 4.

#### **Day 7**

1. Watch this video on [evolution and natural selection](#). When you read about evolution, think about it in terms of natural selection. As a Christian who believes that the earth was created in six days by God, I do believe in natural selection. Of course I do. It exists today. It's something that we can observe happening. I don't accept that somehow these small changes within species somehow, over "eons and eons" made species jump and transform into whole other species. There has never been any observable evidence of that happening. The scientists who believe in that (and not all do) take it on *faith* that that's how all of the many species came to be. I would rather have faith in God. It makes much more sense that 10 million species came to be because they were created by a creative God than to say that those (possibly over 30 million) species developed because they survived best in each ecosystem. If that were the case, don't you think there would be way fewer species if it were really about developing into what survived *best* in that environment?
2. Fill in number six on your concept map. You can see the answers on the answer page.
3. Read the [story of creation](#). You can watch the beginning of the video on the page of read and click on "Next" until you get to the section on the "Fall."
4. Complete the [quiz](#).
5. Check your [answers](#).
6. Record your score out of 8.

#### **Day 8**

1. Watch this video on [faith and evolution](#).

#### **Day 9**

1. Copy [the organization of life terms](#) on page 16 into your notes.
2. Read over the [safety information](#) on the top half of page 10.
3. Complete the lab on page 20, [Do Sugar Crystals Grow](#). Read and follow the directions!
4. Answer the two questions at the end.
5. Score 10 points for completing the experiment and 5 points for answering the questions.
6. Record your score out of 15.

#### **Day 10**

1. [Review](#) the chapter. (This requires shockwave flash player.)
2. Complete the [crossword puzzle](#) for review as well.
3. \*Take this [quiz](#) to see what you remember about your introduction to biology. Always hold onto things like this because they make excellent review materials for later tests and exams.
4. Check your [answers](#).
5. Record your score out of 7.

#### **Scientific Method**

#### **Day 11**

1. Read page 3 on [scientific study](#) and fill in the blanks on the [note page](#). (You don't need to go to the link on understanding science.)
2. Record 6 points for completing each blank on the page. Take off one point for each incomplete blank.
3. Save this sheet for studying!
4. Write a brief paragraph on how you have or could use the scientific method to solve a problem.
5. Record 5 points for completing the paragraph.

#### **Day 12**

1. Read and answer questions three and five about Science and the Natural World. The beginning is review, so you can skim that material.
2. You don't need to use the links on the page, but if the video is working, you can watch it or part of it.
3. Check your answers.
4. Record your score out of 4, up to two points for each question.
5. Do numbers 1-5 on the "Identifying Variables" assignment on page 5.
6. Check your answers.
7. Record your score out of 10.

#### **Day 13**

1. Complete this assignment on developing a controlled experiment.
2. Record your score out of 20. 1 point for each answer +4 points for the graph if it is labeled and complete. Take off one point for any missing answer.

#### **Day 14**

1. Go through the "What is the Scientific Method?" lab.
2. Fill in this answer sheet and follow the directions as you go except that you don't have to record your answers apart from the blanks on the sheet.
3. Click on the numbers and go through the different parts. You will use the arrows to turn the pages. When you see a button with "Lab" on it, click on it and complete the activity.
4. Record 5 points for completion, if you completed the assignment. Take off a point for any missing piece.

#### **Day 15**

1. Review the metric system on page 9. Look it over and try to fill in the blanks. Just answer in your head and then hover with your mouse to see the answer.
2. Watch the videos on the metric system.
  - o Weight vs Mass: What's the Difference
  - o Converting Units in the Metric System: Length
  - o Converting Units in the Metric System: Volume
  - o Measuring Density
3. Record 5 points for completion, if you completed today's assignment.

#### **Day 16**

1. Watch these scientific method videos.
  - o How Do Scientists Work?
  - o The History of Scientific Philosophy
  - o The Nature of Science
  - o Scientific Discovery by Trial and Error or By Accident
  - o The Importance of Careful Observation
2. Review the chapter on scientific investigation by answering the questions on page 11. Just answer in your head and then hover over with your mouse to see the answers.
3. Record 5 points for completion, if you completed the assignment.

#### **Day 17**

1. Do the vocabulary review activities on page 13.
2. Read about the "Organization of Life."
3. Read page 8 on the interdependence of nature and do the activity.
4. Record 5 points for completion.

#### **Day 18(\*)**

1. Read "Science, Technology, and Society" and "Limitations of Science" on page 9.

2. This says that scientists start from two basic assumptions: that the world is explainable and understandable and our understanding must be based on what is truthfully perceived and observed. As a Christian I can see how the world having a Creator makes things explainable and understandable. No one except God saw what happened long ago. The Bible is the only record we have of what happened. The Bible is an extremely accurate history book. The scientists who say we must observe in order to know have never, ever observed one species evolving into another, in any way, shape, or form. It's not "real" science. I wasn't there to observe the world's creation, but God was, and we have His record of it.
3. (\*)Click on the "Types of Questions" icon. You don't have to print this. Just think through the answers to the questions.
4. Record 5 points for completion.

#### Day 19

1. Read the [Hierarchy of Life](#). (This mentions billions of years, as you will come across in this course. You do not ever have to take that as fact.) *(If this link does not work you can skip this step and go to #2 and read the information on page 6)*
2. Do the [activity](#) on page 6.
3. Read the [Structure Fits Function](#) assignment. (You will complete this on Day 20. If you want to start now, way to go!)

#### Day 20

1. Complete the [Structure Fits Function](#) assignment. You can do additional research to answer the questions.
2. Look over the [answers](#) on the answer pages.
3. Record a score of 20. Take off a point for any incomplete or just plain wrong answers.

#### Day 21

1. Review all of your notes and quizzes from the course so far.
2. Take the [scientific method quiz](#).
3. Record your score out of 10.

#### Cells

#### Day 22\*

1. [Intro to Cells](#) Read and answer the review questions.
2. Check your [answers](#).
3. Record your score out of 3.
4. \*Print out these [note pages on cells](#). As you read, fill in the missing pieces. (They may not be found in order. Hint: check the words at the end.)
5. Read number 1 on [page 4](#) about cells. (You'll know you're done because you'll get to number 2.)

#### Day 23

1. Finish reading and taking notes on page 4 about [cells](#). (When it tells you to click on something, do it.)
2. [Watch](#) this guy talk really fast about this stuff.

#### Day 24

1. Watch the [videos](#) on page 5 and take the quiz on cells. You can answer the questions as you go.
2. It will give you a score out of 69 (on the right). Add one to your score, divide it in half. *(ie.  $69+1=70$ ,  $70/2=35$ )*
3. Record your score out of 35.

#### Day 25

1. Look at this [lab report template](#). core your lab report according to this [rubric](#).
2. Start [Osmosis Lab](#) on page 6
3. Write a lab report according to the template. (You can do the first parts of this today.)

4. Here's how you will your lab report, according to this [rubric](#). (You aren't grading it today; I'm just showing you how you will be grading your lab.)

#### Day 26

1. Continue lab observation.
2. [Review cells](#). Click on the different parts to read about them.

#### Day 27

1. Finish your lab and report.
2. Score your lab report according to this [rubric](#).
3. Record your score out of 20.

#### Day 28

1. Watch this guy talk really fast about [plant cells](#).
2. Do the click and drag activities on [page 8](#).

#### Day 29\*

1. If necessary, [review cells](#) one more time!
2. Take the [quiz](#).
3. Record your score out of 7.
4. Complete this [cell project](#). You can use any websites/notes necessary.
5. Score your cell project out of 20. Take off a point for any missing pieces or any obviously wrong answers.
6. Hold onto your project!

#### Day 30

1. Explain to someone why you chose the jobs you did on your cell project. Present your project.
2. Score up to 10 points for confident, clear explanations.
3. Read about [cell diffusion](#) on page 9.
4. Read about [diffusion](#) and answer the review questions.
5. Check your [answers](#).
6. Record your score out of 2.

#### Day 31

1. Do the [quiz activities](#) on pages 12 and 13 and keep track of your scores.
2. Record your total score out of 20. (potential for extra credit)
3. Read "[What Are Stem Cells?](#)"
4. Read "[The Continuing Controversy Over Stem Cells: A Christian View.](#)"

#### Day 32

1. Read about [method of transport](#) on page 15.
2. Watch the guy talk fast about [cell transport](#).

#### Day 33 (Materials: spoon of vinegar, paper towel-or piece of cloth, plastic bag; If possible: celery, food coloring)

1. Here are two [models/explanations](#) of how osmosis works. (You can just use one, whatever works for you.)
2. Try the "[Try It Out](#)" on page 17.
3. You will complete the osmosis lab on [page 16](#) if possible.
4. If you don't have celery (it's not found where I live), you can watch this [video](#) of the experiment.
5. Complete a lab report, collecting and recording data and answering the questions on the page.
6. Score your lab report according to this [rubric](#).
7. Record your lab score out of 20.

#### Day 34

1. (\*)Answer the questions on page 18 about [osmosis for review](#). Use the links on the page as necessary to *find* the answers.

2. Also answer the three questions about osmosis on page 19.

#### Day 35

1. Do the review activities on pages 20 and 21.
2. Review all of your notes and materials from this chapter on cells.

#### Day 36

1. Take the quiz on page 22. Complete the crossword puzzle as a quiz as well.
2. If you don't see a quiz, click on "Quiz Group."
3. The matching counts as 10 points.
4. Record your total score for the page out of 25. There is potential for extra credit.
5. Watch "The Inner Life of a Cell" on page 24. (If you have trouble viewing this, it can be found on youtube.)  
Can you recognize any parts of a cell and their functions?

#### Biochemistry

##### Day 37\*

1. \*Print these notes and fill in the blanks on the first couple of pages by reading page 3 of the Biochemistry chapter.
2. You don't need to read all of the links on the page, but please go to these two to learn more.
  - how water bonds
  - Read about the nature of water.
3. If you need help with acids and bases, here's a link to talk you through it.

##### Day 38

1. Use these two applets to look at water bonded into a droplet and a piece of ice.
2. Make observations. What's different about the liquid and ice models? (Change it by clicking over on the left.)
3. Answer questions 1-20 on page 5.
4. Check your answers on the page.
5. Record your score out of 10 for completion.

##### Day 39

1. Explore molecules. You don't have to understand everything going on in all of these. What can you observe?
2. Build two molecules as described on page 5.

##### Day 40\*

1. \*Print out the chart for your lab.
2. Read the directions on page 6 for the virtual ph lab.
3. Use the ph balance scale on this site to fill in the chart.
4. Score up to 16 points for the 16 items on the list.
5. Record your score out of 16.

##### Day 41

1. On Day 37 you printed out notes on vocabulary for this chapter. Get those out. While you read, take notes. You can use that last page with lots of blank room.
2. Read slowly through the beginning of page 7 on Macromolecules and don't use the links on the page while you are reading. Take notes.
3. Read through the carbohydrates section.
4. Then go to this link and read more on carbohydrates and look at their structure and makeup. (Here's an explanation for younger students. Don't feel bad about looking up things on kid sites to get a general idea before you tackle harder material. It can be a smart practice.)

5. Read about the chemistry of water.

#### Day 42

1. Read slowly through the next two sections of page 7 on Macromolecules and don't use the links on the page while you are reading. Take notes.
2. Read about lipids and nucleic acids.
3. Now read this page on lipids. (site for younger students)

#### Day 43

1. Read slowly through the next section of page 7 on Macromolecules and don't use the links on the page while you are reading. Take notes.
2. Read about proteins. (site for younger students)
3. Then read about enzymes.

#### Day 44

1. Complete the assignments on page 8. Read over the study questions on macromolecules. Read over the outline/concept map assignment at the bottom of the page. This is basically just organizing your notes about macromolecules. Watch the videos and look for the answers as you watch. You can also be working on the assignment at the bottom of the page.
2. Check your answers to the questions.
3. Score 10 points for correctly answering the questions. Take off one point for any answer you didn't find.
4. Score up to 15 points for completing the outline/concept map section. There are 5 parts to complete each for carbohydrates, proteins, and lipids. Take off a point for any point missed.
5. Record a total score out of 25.

#### Day 45(\*)

1. (\*)Print out the lab worksheets.
2. Complete the four labs, starting by clicking on carbohydrates. Fill out the worksheets as you go.
3. Record the steps AS you go through the labs.
4. Score up to 12 points for completing the 12 blank sections. Take off a point for any missing part of your answer.
5. Record your score out of 12.

#### STOP

This is the end of the first quarter. If you are using a paper grading sheet, divide your total score by the total possible. It should be less than 1 (unless you have a perfect or better than perfect score). Multiply your result by 100. (Just ignore decimals.) That's your grade percentage (eg. 87%). Your goal is 90% or better. Place your graded work and labs in a safe place to be included in your portfolio.

#### Day 46(\*)

1. (\*)Print out your new grading sheet or use the Excel version.
2. Watch the presentation on macromolecules.
3. Complete page 12 about the structure of protein.
4. Use the animation link and 3-D structure video.
5. Watch the videos on the page.
6. Can you tell someone about what you learned?

#### Day 47

1. Choose one property of water and describe what would happen if water didn't have that property. Write a paragraph. (Make sure you know what cohesion is.)
2. Record 5 points for a paragraph that completes the assignment.

3. Review cells.
4. Review biochemistry.

#### Day 48

1. Read from the jump through Cell Theory to review macromolecules.
2. Review for a quiz. Review your definition sheet.
  - Carbon can have how many bonds?

#### Day 49

1. You may not know all of the answers on this quiz. I didn't write it, but I have scored it accordingly, so don't get upset. If you do know all the answers, you will get bonus points, but you can get a perfect score even if you miss some of them.
2. Take this quiz. Record your score out of 6.
3. Define: polarity, cohesion, solvent, organic compounds.
4. Check your answers. (I know it says Day 48 after it says Day 49. Just ignore that.)
5. Score your definitions, up to two points for each definition. (total possible: 8)
6. Add up your scores and add one point. Record your total out of 14.
7. Study your note pages from these three chapters we've completed so far. You could also see the same vocabulary at the beginning of each online chapter.
  - Scientific Methods
  - Cells
  - Biochemistry

#### Day 50

1. When you are ready, write the definitions of the terms on this test. You may not use notes when you are taking this test. You do not have to get the exact words that are in the answers, but you need to get the meaning correct.
2. Check your answers.
3. Score up to 2 points for each answer. (This leaves room for getting one point for a partially correct answer.)
4. Record your score out of 24.

#### Photosynthesis and Respiration

##### Day 51\*

1. \*Print out the notes for this chapter. What's familiar? What's foreign?
2. Learn about photosynthesis.
  - Quick reminder
  - Explanation
  - Read the top paragraph and stop after the picture near the top of the page showing photosynthesis. Look at the equation. What does it say? Read it in English. 6H<sub>2</sub>O would read, "Six water molecules."
  - Complete the photosynthesis lab.
  - Complete the table and answer the lab questions.
3. Score 1 point for each answer to the five questions. Score 1 point for each entry in the chart. There are fifteen data points to fill in.
4. Record your score out of 20.

##### Day 52

1. Go through the cellular respiration notes on page 3.
2. Take your time. Take notes. Draw pictures. You can take extra notes on the note pages you printed out.
3. We'll be looking more at the concepts here in this chapter. You don't have to get it all today.

**Day 53**

1. Read page 4 on energy and ATP.
2. Take notes. Draw pictures.
3. Listen to this guy talk fast about ATP and cellular respiration.
4. We're going to keep looking at these topics, so have no fear.

**Day 54**

1. Read page 5 on photosynthesis.
2. Take notes. Draw pictures.
3. Listen to this guy talk fast about photosynthesis.
4. We're going to keep looking at this topic, so have no fear.

**Day 55**

1. Watch this presentation on energy and ATP.
2. Use the photosynthesis interactive (or the printable version). Use all three tabs along the top.
3. When you get to the equation for photosynthesis, write it down. Read it as an English sentence. Explain to someone what it says.
4. Watch this presentation on cellular respiration and ATP.
5. Draw a diagram of cellular respiration.

**Day 56\***

1. Go through the interactive on "Harvesting Energy."
2. \*Cut and paste and complete the worksheets on cellular energy and photosynthesis.
3. Act out (somehow) cellular energy and photosynthesis. Use people, props, puppets, whatever.
4. Do it for an audience. They should know something by the time you are done!

**Day 57**

1. Read and complete the review questions, Light-Reactions-of-Photosynthesis. You don't have to do the practice section.
2. Read and complete the review questions, Chloroplasts. You don't have to do the practice section.
3. Check your answers. (Sorry, it says Day 48 on the answer sheet.)
4. Record your score out of 6.

**Day 58(\*)**

1. (\*)Answer these questions as you watch the video. Read them before you start the video!
2. Watch "The Powerhouse of the Cell."
3. Take the quiz on page 12.
4. Record your score out of 9.
5. Do the word insert activity. Do it carefully. It's keeping score.
6. Record your score out of 10.

**Day 59**

1. Work through the cellular respiration lab.
2. Take the quiz at the end.
3. Record 16 points for completion of the four parts to the lab (listed on the notebook on the first page), up to four points for each part.

**Day 60**

1. Watch the video on page 14 on photosynthesis and respiration.
2. Who was the "determined scientist"? What "clever experiment" did he design? What new fact about plants did he discover?

3. Watch the videos and complete the crossword puzzle.
  - [Energy and bonds](#)
  - [ATP](#)
  - [Photosynthesis](#)
  - [Cellular Respiration](#)
  - [Crossword Puzzle](#)
4. Record up to 8 points for eight correct answers in the crossword puzzle.

#### Day 61\*

1. \*Complete the [study guide](#). Use the site as necessary.
2. Check your [answers](#).
3. Record up to 14 points for completing the guide. Take a point off for any missing answer.

#### Day 62

1. Complete the four parts of the [chromatography lab](#).
2. Score up to four points for each of the four parts of the lab. Just do part I, the chromatography lab.
3. Record your score out of 16. Take a point off for any incomplete section or incorrect quiz answer.

#### Day 63

1. Answer the [questions](#) on page 19 ([printable version](#)). Use the links on page 19 to help you find the answers if you are unsure.
2. Check your [answers](#). (# 11 [correction](#))
3. Score 1 point for each of the 19 questions.
4. Record your score out of 19.

#### Day 64

1. Write a poem or song about photosynthesis or cellular respiration for extra credit. Record 5 points for acceptable completion after your song or poem has been performed before an audience.
2. [Study](#) for the test.
  - Read the list or use the flashcards.
  - Use the learn, scatter and space race buttons until you know the answers.
3. When you are ready, take the [test](#). DIRECTIONS! Uncheck “written” and then click on the “reconfigure test” button.
4. Record your score out of 20.

#### Mitosis and Meiosis

##### Day 65\*

1. \*Print and read the [vocabulary sheet](#) for the chapter. What’s familiar? What’s foreign?
2. Watch this [presentation](#) on these topics.

##### Day 66

1. Complete the activity on page 3 by reading the page about [chromosomes](#).
2. Do the interactive on [how cancer grows and spreads](#) or use the printable version.

##### Day 67

1. Read about and answer review questions on [Asexual and Sexual Reproduction](#). (You don’t have to watch the video.)
2. Check your [answers](#).
3. Record your score out of 4.

##### Day 68

1. Read pages 5 and 6 on [mitosis](#). Use your vocabulary note page and take notes yourself.
2. Do the activity on page 6.

**Day 69**

1. Do the [cell division interactive](#).
2. Read about [DNA](#).
3. Take notes!

**Day 70**

1. Read the article on [breast cancer and genetic testing](#).
2. Answer the three questions on [page 9](#).
3. Record up to 6 points, 2 points for each thoughtful answer.

**Day 71\***

1. Practice for the [mitosis investigation](#) on page 10.
2. \*Complete this [mitosis timeline activity](#).
3. Score one point for each portion of the chart filled in (15 possible).
4. Record your score out of 15.

**Day 72\***

1. \*Answer the [questions](#). You can find them, along with links to help, on [page 11](#).

**Day 73**

1. Read about [meiosis](#) on page 13.
2. Read through the [meiosis tutorial](#). (Use the next button.)
3. Do the [fun dragon activity](#). (Make sure you click on next to keep doing the next thing.)

**Day 74\***

1. \*Print the [questions](#) and answer them without using your notes.
2. Now, you can use your notes for anything you couldn't answer.
3. Now, you may check your answers on [page 16](#).
4. Score 2 points for every question you got right on your own. Score 1 point for every question you had to use your notes for.
5. Record your score out of 24. (potential for extra credit)

**Day 75**

1. Do the [mitosis and meiosis interactive](#).
2. Write out what happens during mitosis and meiosis.

**Day 76**

1. Read through the [list of characteristics](#).
2. Go through the [cell division interactive](#). As you do, label your sheet with what refers to mitosis and what refers to meiosis.
3. Do [mitosis & meiosis understanding check](#) on page 20.
4. There will be quizzes on Day 77 on mitosis and meiosis. You can review your notes.

**Day 77**

1. Do [mitosis](#) quiz.
2. Do [meiosis](#) quiz.
3. Record your score out of 20.

**DNA and RNA****Day 78\***

1. \*Print out your [vocabulary notes](#) for the next chapter on DNA and RNA.
2. Go through the [DNA notes](#) on page 3.
  - [Griffith's Experiment Animation](#)
  - [The Hershey-Chase Experiment](#)

**Day 79\***

1. \*Print the DNA workshop questions.
2. Read the overview of what you will be learning on page 4.
3. Follow the directions and use the DNA workshop interactive to answer the questions.
4. Check your answers.
5. Record your score out of 35. (potential for extra credit)

#### Day 80

1. Complete the DNA lab.
2. Write up the lab AS you go through it so that you can write down the procedure.
3. Here's a reminder of what a lab report looks like.
4. Finish your lab and report.
5. Score your lab report according to this rubric.
6. Record your score out of 20.

#### Day 81

1. Watch the video on protein synthesis. Take notes as you listen.
2. Read the top of page 8 on RNA. Read through the transcription section of the page and stop at the video on protein synthesis.
3. Read this page on DNA to RNA transcription.

#### Day 82

1. Read and complete review questions about RNA.
2. Check your answers.
3. Record your grade out of 3.
4. Complete this RNA activity.
  - o templates
  - o DNA orders (you can choose one from the easier group)
5. Record up to 10 points for completion.
6. Hold onto your model. (You could take a picture for your portfolio.)

#### Day 83

1. Finish reading page 8 on translation and mutations in genes.
2. Go through the animations on transcription and translation.
3. Complete this translation activity with your RNA model.
4. Record 5 points for completion.

#### Day 84\*

1. \*Print out this chart to complete.
2. Follow the directions on page 10 and use the DNA code website to complete the chart.

#### Day 85

1. Answer the study guide questions on page 11. You can use the links on the page to help you find the answers.
2. Check your answers.
3. Record your score out of 15.

#### Day 86

1. Review your notes and listen to the audio notes on page 12.
2. Use the chromosome viewer.

#### Day 87

1. Take the six DNA quizzes. Record your two best scores.
2. Record your total for the two quizzes out of 20.

#### Day 88(\*)

1. (\*)Read and answer the questions about molecular biology as best as you can. This is review.
2. Check your answers at the end of the packet.
3. Record your score out of 10. (potential for extra credit)

## Genetics

### Day 89

1. Play Thingdom.

### Day 90

1. Take the tour of basic genetics. Do each one on the list. Work your way down.

## STOP

This is the end of the second quarter. If you are using a paper grading sheet, divide your total score by the total possible. It should be less than 1 (unless you have a perfect or better than perfect score). Multiply your result by 100. (Just ignore decimals.) That's your grade percentage (eg. 87%). Your goal is 90% or better. Place your graded work and labs in a safe place to be included in your portfolio.

### Day 91(\*)

1. (\*)Print the Grading sheet for this quarter or use the Excel version.
2. Watch the presentations in the list under "Inherited DNA and Chromosomes."
3. Take notes.

### Day 92(\*)

1. (\*)Print out your vocabulary for this chapter and read it over.
2. Play this genetics game. Choose two flowers to pair up to produce the next generation. Work towards the target flower by using the Genes Guide to see what is the dominant trait. If the dominant gene is present, then that characteristic will be in the flower. Keep going through the levels.

### Day 93

1. Read more about genetics on page 3.
2. Do the genetics practice problems as you go along.
3. Extra credit: Up to five points of extra credit for getting up to five of these genetics problems correct.

### Day 94

1. Watch and take notes on the recorded lectures.
  - o Mendel's experiments
  - o Genetics
2. Complete the Furry Family.

### Day 95

1. Read page 5 about Di-hybrid crosses. Follow the directions and use the tutorial.

### Day 96

1. Complete this virtual lab using Punnett Squares.
2. As you work, answer these questions. (You should read these before you begin, right?)
3. Record up to 10 points for 10 completed questions. Take off a point for any answer not complete.

### Day 97(\*)

1. Complete the lab on hereditary problems on page 7. Read the directions carefully.
2. (\*)Start with the "pre-lab" questions.
3. Complete the lab.
4. Answer the conclusion questions.
5. Record your score out of 18. Take a point off for any missing or incomplete answer.

### Day 98\*

1. (\*)Print and complete the monohybrid problems from page 8.
2. Check your answers.

3. Record up to 20 points (up to 2 points each).
4. Watch the videos and answer the questions on page 9.
  - [The Historical Background of the Science of Genetics](#)
  - [The Genetic Work of Mendel](#)
  - [Chromosomes and Inheritance](#)
5. Answer the [questions](#).
6. Check your [answers](#). (This is listed as Day 99.)
7. Record your score out of 7.

#### Day 99

1. Create a [transgenic plant](#).
2. Answer the question for thought on [page 10](#), should scientists be allowed to continue with genetic engineering?
3. Write a paragraph.
4. Here are some articles for reading/thinking about genetic engineering from a Christian perspective.
  - [one](#)
  - [two](#)
  - [three](#)

#### Day 100

1. Complete the [study guide](#) on page 11.
2. Check your answers from the study guide. (answers: Number one isn't on the page; it's genetics.)
3. Record 10 points for completion, but only if you completed all of the questions! Don't give up until you find all the answers. Use the links to help you if you need the help.

#### Day 101

1. Read about the [genetic disorders](#) on page 14.
2. Do the [genetic disorders symptoms match](#) on page 18. ([printable version](#))
3. Do the interactive [genetics practice problems](#).

#### Day 102

1. Do the [crossword puzzle](#). ([printable version](#))
2. Read about [pedigree's](#) on page 17.
3. If you like, create the [mystery animal](#). Click on Perform the Cross. Then drag the correct trait onto each square. Then click on check. Do it for each trait.

#### Day 103

1. Complete the [Cats Genetics Lab](#) on page 12.
2. Check your [answers](#).
3. Record your score up to 24 points.
4. There are two quizzes on Day 104. Now would be a good time to read over the vocabulary notes from this chapter.

#### Day 104

1. Use your notes or anything from this chapter to review.
2. When you are ready, put away your notes and close everything else and take your quizzes.
  - [Genetics quiz](#)
  - [Punnett squares quiz](#) (You only get one point per question.)
3. Record your score out of 15. (potential for one extra credit point)

#### Ecology

#### Day 105\*

1. \*Print out and read over the notes for this chapter on ecology.
2. Read over the project on page 3. You will be choosing an endangered species to learn about. You will create a project that includes the criteria listed on this page. On the bottom of page 3 it lists ideas for how to present your information. Be creative. You don't have to use one of those ideas.
3. This project is due on Day 115.
4. You can start exploring to be thinking about what animal you want to choose.

#### **Day 106\***

1. \*Print the biosphere study guide. Complete it as you read.
2. Read about the biosphere on page 4.

#### **Day 107**

1. Read page 6 about symbiosis.
2. Use the links on the page to learn more.
3. Complete the activity.
4. Tell someone an example of each time of symbiotic relationship.
5. Have you chosen your animal? You should be learning about it. Make sure to keep track of your sources. (Your directions on Day 105.)

#### **Day 108**

1. Read page 7 about energy flow in an ecosystem.
2. Use the links on the page.
  - o camouflage website (It took me a few tries to get the animals to get accepted by their right columns. Don't give up.)
  - o plants in motion
  - o video raven's learning behavior
3. Learn about your animal. Take organized notes! How are you going to present your information? Be thinking.

#### **Day 109**

1. Complete the activities on page 8 and use the links to learn more. (Below are the links and activities from the page.)
  - o fill in the blanks (printable version)
  - o explore the deep sea
  - o sea floor geology
  - o chemosynthesis
  - o vocab match
  - o herbivore, carnivore, omnivore match
  - o energy level picture
2. Explain to someone how deep sea plants can get energy without sunlight.
3. You can work on your project any day without me telling you. It's due on Day 115.

#### **Day 110**

1. Complete the food web lab.
2. Then follow the directions on page 9 and create a food web using the names of the organisms and drawing arrows towards the organism receiving the energy.
3. Record up to 20 points. 10 points for completing the online portion and 10 points for completing the drawing portion.
4. Work on your project. (Directions are on Day 105.)

### Day 111

1. Play the game. Choose your animals and 14 turns. Your animals will be sharing the habitat. You will place things in the habitat by clicking on them. The black number tells you the population of whatever it is. Once it hits zero, it will disappear. (Remember what starts a food chain.) Once the habitat will support your animal, add it into the habitat so it can start to grow its population. You'll see the word, predation. "In ecology, predation is a biological interaction where a predator (an organism that is hunting) feeds on its prey (the organism that is attacked)." Only the ones that say "no predators" don't have anyone consuming them. If one or more of your animals isn't around at the end of the game, try again. One more thing, try to pay attention to what changes when something new is added into the habitat.
2. What was happening in this game?
3. Read about population on page 10. (You don't need to use the link on the page, but you can if you are interested.)
4. Listen to the teaching on population.

### Day 112

1. Complete the population study guide on page 11. (Click on quiz group to reveal the questions.)
2. Check your answers on the page and use the links as necessary.
3. Record only your quiz score out of 8.

### Day 113

1. Read these four pages on human population.
  - o introduction
  - o effects of overpopulation
  - o phenomena
  - o science
2. Write a paragraph (or discuss with a parent) the conclusions of this article. What do you think of overpopulation? Do you think anything should be done? (You can read my opinion below.)
3. Personally, I have a problem with the word, "overpopulation." It means there are too many people. Who decides what number is too many? God gave humans dominion over the earth. We were in charge and we've messed up. We haven't been good stewards with what God gave us. Christians should be environmentalists. This is God's creation and we should be taking care of it. HOWEVER, many who call themselves environmentalists put the earth and animals before humans. They think it's okay to kill babies through abortion because it will help the earth! Christians always value human life above any other *thing*. I don't think the problem is too many people. It's selfishness and greed, basically sin, that is destroying the earth. The good news is that God is going to create a new earth for us one day.
4. Record 5 points for your paragraph/discussion.
5. Project...

### Day 114

1. Complete the crossword puzzle. (printable version)
2. Today would be a good day to finish your project! (Day 105, directions)

### Day 115

1. Finish your project. Make sure you are complete and ready to be grading using the criteria given.
2. Present your project to an audience or at least someone.
3. Score your project. Where it says 10%, that's 10 points. 5% is 5 points, etc.
4. Divide your score in half.
5. Record your score out of 50.
6. Review your notes/study guide.

7. Take the population quiz.
8. Record your score out of 10.

#### Day 116\*

1. \*Print and read over the vocabulary notes for the chapter.
2. Watch these videos from page 3.
  - consumers and producers
  - energy
  - carbon cycle
  - competition
  - succession
  - human effect
  - Take the quiz, answer questions 3-9. Use page 3 to help you if you are unsure of an answer. (You can pause the video.)
3. Play the Carbon Cycle Game.

#### Day 117

1. The game mentions the earth getting warmer because of an increase in carbon emissions. This is referred to as global warming. Read this page and use the links to learn more. No matter what you believe about it, you should know about it.
2. You can read about global warming impact here. (Lesson in propaganda: pay attention to “if,” “could,” “possibly” and such words and phrases pointing to the fact that these aren’t facts, but speculations.)
3. I put this video in Oceanography as well, but if you haven’t seen it, I suggest you watch it, or at least part of it. It’s a video of scientists saying that global warming caused by carbon dioxide emissions is not a reality; it is just a political tool.
4. Remember, scientists don’t always agree. There are LOTS of things scientists disagree about. Never let anyone make you feel stupid for believing differently than they do.
  - Always be prepared to think for yourself. The book, More than a Carpenter (print), was written by a skeptic. He thought he would prove Christianity false but wound up proving it true and becoming a Christian himself. “McDowell always believed that Christians were ‘out of their minds’ but now insists that ‘never has an individual been called upon to commit intellectual suicide in trusting Christ as Savior and Lord.’” (from amazon.com) Being a Christian doesn’t mean denying science or history, it means understanding history and science in a way that unbelievers never can.

#### Day 118

1. Read page 4 about cycles.
2. Use the links on the page to learn about/review the...
  - water cycle
  - carbon cycle
  - nitrogen cycle

#### Day 119

1. Read about succession in communities on page 5.
2. Watch the videos on succession in climax communities on page 6.
3. Take notes.

#### Day 120\*

1. \*Print out this chart to take notes on the world’s major biomes.
2. Read over page 7 on biomes and look at the maps.
3. Use the links on the page to fill in your chart. (The biomes picture at the bottom is interactive. You click on the circles to learn about the biomes.)
4. Record up to 28 points. Take off a point for any empty box.

### Day 121

1. Watch the following videos and use the interactive. Write a sentence after each summarizing the info or telling what you think is the most significant aspect.
  - Read the first paragraph on the [Exxon Valdez oil spill](#). (You don't have to write a sentence on this one.)
  - Watch the video on how [warmer oceans affect food chains](#).
  - [Ocean Food Web Activity](#)
  - Watch the video on how [oil contamination affects the food chain](#).
  - Watch the video on [contaminants in the arctic food chain](#).
2. Record out of 8 points, up to 2 points for each complete, informative sentence.
3. If you like watching videos, today and on Day 122, you could also watch the videos on the world's biomes on [page 9](#).

### Day 122

1. Watch the following videos and use the interactives. Write a sentence after each summarizing the info or telling what you think is the most significant aspect.
  - Watch the video on [intertidal communities](#).
  - Watch the video on [food webs in the coral reef](#).
  - [Antarctic Ecosystems](#) Use all of the links.
  - Record out of 6 points, up to 2 points for each complete, informative sentence.
2. Can you put together a [marine food web](#)?
3. If you like watching videos, you could also watch the videos on the world's biomes on [page 9](#).

### Day 123

1. Read the top of page 11 on [human impact](#). Watch the video. Read through "water pollution" and then stop for today.
2. Use the [acid rain interactive](#).
3. There are links on the page to other reading, which I have not looked at. They are about what the world would be like without humans. We already have a record of that in Genesis. "It was good." :)
4. Explain how acid rain can change an ecosystem.
5. Because it's interesting, take this [quiz on energy resources](#).
6. [Save the world](#). Learn about renewable energy.
7. [Feed the mice](#). Learn what is considered non-renewable energy.

### Day 124

1. Continue reading page 11 on [human impact](#). Watch the teacher domain video. You can stop at all the pictures. You won't continue past them to read about wildlife and endangerment until Day 125.
2. Choose one of the videos below, all from the page.
  - [electric car dreams](#)
  - [water world](#)
  - [power struggle](#)
  - [ocean tipping point](#)
  - [on thin ice](#)
  - [can coal be earth friendly](#)

### Day 125

1. Finish reading page 11 on [human impact on wildlife](#).
2. Use the [site](#) on the page to learn more. (Click on the arrow to move through the tour.)
3. Write a paragraph about why humans should care about endangered animals. Include at least three reasons.

4. Score up to 5 points for a complete paragraph: intro, 3 reasons, conclusion.

#### Day 126

1. Learn about a North American biome, the prairie. Start with the [shortgrass prairie](#).
2. Read about it, learn how to play, and then play the game. Use the links to complete the activity.
3. Write a paragraph telling about the biome.
4. Then complete the [tallgrass prairie](#) in the same way.
5. Score up to 5 points for a complete paragraph: intro, 3 reasons, conclusion.
6. Record your score out of 10.

#### Day 127

1. Read about [alien organisms](#) and tell the what, where, why, how of alien invasions. (up to 4 points)
2. Choose four as directed to read about and to write about. Be sure to tell why they are dangerous.
3. Score up to 2 points for each “alien” description if you included why it is dangerous. (up to 8 points)
4. Record your score out of 12.

#### Day 128\*

1. \*Print out and read over the [vocabulary](#) from this unit.
2. Click on “launch interactive” to take the [Global Trends Quiz](#).
3. There are three sections. The first two focus on population, which I have discussed with you before. They focus on the demand many people put on the planet, but then take note at the correct answer to the first question on the last section, the environmental challenge section. It reminds us that it’s really not a problem of numbers of people.
4. Solve the world’s problems. You can write this or just tell someone. What would you do to help solve one of the world’s problems such as declining resources and increased pollution.
5. Record 5 points for a thoughtful solution.

#### Day 129

1. Complete the [study guide](#) on page 16.
2. Use the links on the page to help you. (Here’s the link they give you to help with the [graph](#)—worth 5 points.)
3. Record your score out of 15 (1 point each except for the graph).
4. Review your ecology vocabulary and notes from the chapter.

#### Day 130

1. Do the [crossword puzzle](#) on page 17 (printable version). You can use your notes.
2. There are 37 blanks. Record your score out of 35. (potential for extra credit)
3. Take the [ecology quiz](#).
4. Record your score out of 10.

#### Evolution

##### Day 131

1. You need to understand the evolutionary hypothesis of how people believe all of the organisms on earth came to be. We will also be reading and looking at some contrary information. If you ever want to explain your position and defend your beliefs, it would be helpful to be able to speak intelligently about evolution.
2. Read page 3 about [speciation](#). You do not have to use the links on the page.
3. Do you remember the video on natural selection? There is such a thing as survival of the fittest. The weakest get killed the easiest, fastest, and so don’t breed and so there aren’t more like them. The example in the video was the moths. The darker moths survived and the whiter moths were eaten, so the population changed from white to dark moths. Page talks about genetic drift happening by chance, but we can see the hand of God changing a population [to help it survive](#).

4. Read the introduction and questions about Charles Darwin at the bottom of page 4. We are NOT going to watch the video.
5. Read this article about "Darwin's Finches."
6. Explain to someone about what you read today.

#### Day 132

1. Read this article touting evolution creating a new species. You'll read that a finch learned a new song. Is a finch still a finch? Yes. Can you ever see these little changes in population turning that finch into a fish? a monkey? a truly different species, not just a different type of the same animal?
2. Read about natural selection.
3. Read about genetics and evolution.
4. Talk with someone about what you have read.

#### Day 133

1. Read page 7 about the history of life.
2. Here's an article on carbon dating from a Christian scientist.
3. If you are interested in all this, here are some videos you might like to watch.
4. What can you explain from what you read today?

#### Day 134

1. I'm going to go ahead and let you take this tour. Pay attention to the number of the different types of animals. You don't have to click on the millions of years ago circles if you don't want to. That page is the end of the tour.
2. Which type of animal is the most abundant today? Which is the least? (If you don't know the answer, go back to the tour!)
3. Christians believe the dinosaurs and humans did live at the same time. Leviathan seems to be an example in Job. (I personally also think those stories of knights slaying fire-breathing dragons are examples. I know they are just stories and were exaggerated as they get repeated and passed on, but they did come from somewhere.)
4. Read about adaptations on page 13.
5. Read about your appendix.
6. What did you learn today?

#### Day 135

1. Read these pages about bacteria resistance and watch the animation.
2. Read and answer the questions at the bottom of page 18. What do you think can and should be done about bacteria resistance? Write your answers/position.
3. Record up to 5 points for a well thought out answer.

#### STOP

This is the end of the third quarter. If you are using a paper grading sheet, divide your total score by the total possible. It should be less than 1 (unless you have a perfect or better than perfect score). Multiply your result by 100. (Just ignore decimals.) That's your grade percentage (eg. 87%). Your goal is 90% or better. Place your graded work and labs in a safe place to be included in your portfolio.

#### Day 136(\*)

1. (\*)Print out your next grading sheet or use the Excel version.
2. Watch Video on All Life Systems Were Created by God.
3. Read and Watch Videos about:
  1. DNA Was Created
  2. Proteins Were Created

3. [Cells Protect](#)
4. [Engineering Wonder](#)
5. [Only God](#)

#### Day 137

1. Watch Video on [Life Was Created Fully Functional](#)
2. Read and Watch Videos about:
  1. [Natural Selection](#)
  2. [The Natural Direction](#)
  3. [Living Creatures](#)
  4. [Equipped to Adapt](#)

#### Day 138

1. Watch Video on [Man Was Created by God](#)
2. Read and Watch Videos about:
  1. [Image of God](#)
  2. [People Descended](#)
  3. [Purpose and Accountability](#)
  4. [Distinct from Apes](#)

#### Day 139

1. Watch Video on [Biological Clocks Indicate Recent Creation](#)
2. Read and Watch Videos about:
  1. [Living Populations Are Young](#)
  2. [Living Fossils](#)
  3. [Fresh Fossils](#)

#### Day 140

1. Write out and present to an audience a well thought out explanation of your beliefs about creation and evolution. Try to be persuasive.

#### Taxonomy

#### Day 141\*

1. \*Print out your [notes](#) for the next chapter. Do a little research and find what fills in the blanks. There are three places to fill in.
2. Read over the notes.
3. Why not go back over your vocabulary pages from all of the chapters? Each of the units had one of these sheets. There will be a final exam where you will need to know a bit of everything. Refresh your memory.

#### Day 142

1. Go through [page 3](#) until the chart with the man and triceratops. Read through the chart. Understand its parts.
2. Read about [domains](#).
3. Read about [kingdoms](#).
4. You can read through this [through number 10](#).
5. You read about the “top four” kingdoms.
6. There is more than one way to divide them and at different times scientists did it differently. A commonly held view is that there are [six kingdoms](#).
7. Read about them [here](#) as well.

#### Day 143

1. Use the tabs along the top to learn and practice the [3 domains and 6 kingdoms](#). You can use the flashcards, the learn tab, the games, etc. If you are feeling smart, try the speller tab!

2. Take the test. (Each is worth half a point. Divide your total in half.)
3. Record your score out of 10.

#### Day 144

1. Read the introduction and launch the activity. How close did you come to correctly classifying the organisms?
2. Choose your best organism and remember your score for it, up to 7 points.
3. Build a fish. Retry until you survive.
4. Score 5 points for successful completion.
5. What factors were important in your survival?
6. Build a bird. Successfully complete one planet. (Use the hint. You have to build one of those birds or you get it wrong. I don't like that aspect of the game. You have to figure out which characteristics fit your planet best.)
7. Score 5 points for succession completion.
8. What factors were important for your survival?
9. Record today's combined score out of 17.

#### Day 145\*

1. \*Print out this dichotomous key worksheet.
2. Use these images to do the activity. Take one candy and compare it with the first two descriptions. Follow the directions as to which descriptions to go to next. Choose each time which description fits BEST and continue to follow the directions until you have found the "scientific" name for the candy.
  - lifesavers
  - lollipop
  - Starburst
  - Tootsie Roll
  - Hershey's Kiss
  - Jolly Rancher
  - Andes Mint
3. Complete the worksheet.
4. Check your answers.
5. Score up to 10 points for correctly naming 7 candies and a half a point for each correct answer for the 6 questions at the bottom of the page.
6. Record your score out of 10.

#### Day 146(\*)

1. (\*)Print out your new grading sheet or use the Excel version.
2. Use this dichotomous key to identify this tree.
3. Did you end up on this page? That's what I got when I did it.
4. Use this dichotomous key to identify the salamanders.
5. Record 11 points for correctly completing the lab.

#### Day 147(\*)

1. (\*)Create a dichotomous key for these creatures.
2. Name or number the creatures.
3. Create couples of descriptions that people can use to identify their creature.
4. Have someone check several when you are done.

5. Answering the questions for your creature should lead you to the correct, unique name/number for each creature.
6. Record your score out of 20 if you were successful.

#### **Day 148**

1. Review your notes and use them to complete the following on page 11.
  - Answer questions 1-4 on page 11.
  - Complete the crossword puzzle.
2. Record 12 points for completion if you knew/found all of the answers. Take off a point for any missing answer.
3. Read this article about discovering new species. The article is from the Orange County Register, originally published in February of 2006.
4. Answer the questions on page 12.
5. Record 10 points if you found all of the answers.

#### **Day 149**

1. Review with this organization of life chart.
2. Review the vocabulary with flashcards or with games.
3. Take the quiz.
4. Record your score out of 10. Potential for extra credit.

#### **Viruses and Bacteria**

#### **Day 150\***

1. \*Print out your notes for this chapter.
2. Read the information on page 3 and fill in the blanks on the notes page.
3. Take other notes as if helpful to you.

#### **Day 151**

1. Answer the questions about germs on page 4. Use the links as directed.
2. Record 13 points for completion. If you haven't completed it, go back and finish it! Don't turn in incomplete work! Work diligently, to the best of your ability.
3. Check your answers. Fix any errors. (This is listed as Day 153 on the answer key.)

#### **Day 152**

1. Complete the Blackout Syndrome. (tis a bit gross) Solve the mysteries. Don't just click on random answers. Your grade is on how well you can solve the mysteries.
2. Score 5 points for each solved mystery. Take off a point for each time you guessed incorrectly. (potential for 15 points)
3. Record your score out of 12.

#### **Day 153**

1. Read "When Food Turns Deadly" and answer the question on page 6.
2. Score up to 14 points. Take off a point for any answer you didn't find.
3. Check your answers. (This is listed as Day 155.)
4. Record your score out of 14.

#### **Day 154**

1. Complete the study guide on page 7. Answer the questions before you put your mouse on the answers to see them.
2. Record 17 points for completion. Take off a point for any question you looked at the answer for before answering yourself! Cheating is not going to help you learn anything and will catch up to you.

#### **Day 155**

1. Read the Typhoid Mary assignment on page 8 and answer the questions.
2. Record 12 points for completion. Use the links to help find the answers if necessary.

#### Day 156

1. Read through page 9 on viruses.
2. Here's the link to the size slider.
3. If the last image is not showing up about the flu vaccine, here it is.

#### Day 157\*

1. \*Print out these questions on viruses. Read over the questions and answer them as you are able.
2. Draw a diagram showing what happens to a virus in the body as you go through these pages on how your body fight's a virus. Keep clicking on continue when it's there.
3. Watch this short video on protecting yourself from the flu virus.
4. Read Virus Basics. There are many pages to this.
5. There are three things listed for preventing HIV infection. You'll see that they are very easy to do. Number three is the only one that is separate from just obeying God's principles. There is no fear of infection from numbers 1 and 2 if we are living by God's standards. Instead of instructing people in what is right (keeping your body only for your spouse and not using drugs), they are telling people they can be safe by using condoms and clean needles. But the truth is, there is no such thing as %100 safe sex outside of a marriage between two people who keep themselves for each other. What they really mean is *safer sex*, which still carries some potential risk. Following God's way, you never need to fear risk of such types of diseases being passed onto you.
6. Score up to two points for completed answers. Take off a point for any answer not found or completed.
7. Record your score out of 12.

#### Day 158

1. Read through the vocabulary. Take notes on what you don't know.
  1. A through D
  2. E through L
  3. M through S
  4. T through V
2. These are the words you need to know.

#### Day 159

1. Use the vocabulary tabs on page 2 to help you complete this crossword puzzle. (printable version)
2. Score one point for each correct answer. (Do the words all fit together and in the amount of spaces provided?) Take off a point for any incorrect or incomplete answer. There should not be incomplete answers. I told you where to find the answers. Go back and try again! The definitions aren't copied word for word. Use your brain, be diligent and finish the assignment.
3. Record your score out of 24.

#### Day 160\*

1. Review the words you need to know.
2. In this quiz you will be given the definitions and you will need to fill in the word.
3. \*Take the quiz.
4. Check your answers.
5. Take off one point for any wrong answer.
6. Record your score out of 12.
7. Prepare for your yeast experiment (page 3). You need some flat soda.

#### Protists and Fungi

**Day 161 (Materials needed: 2, two liter bottles of both water and soda, active dry yeast, 4 identical balloons)**

1. Begin your yeast experiment on page 3.
2. You will be writing up a formal lab. Write up everything except observations/data and conclusion. Create a chart to record your data in.
3. Here is the lab report template.
4. Later in the day you will collect data.

#### **Day 162\***

1. Collect data for your experiment.
2. \*Print out your notes for this chapter.
3. Read through page 4 on Kingdom Protista with your notes. Fill in blanks as you are able.

#### **Day 163**

1. Go through the study guide on page 5. (Don't do the pond dip.)
2. Record 7 points for completion.
3. Finish your experiment.
4. Complete your lab.
5. Score your lab report according to this rubric.
6. Record your score out of 20.

#### **Day 164\***

1. Go to the Virtual Pond Dip website.
2. \*Fill out this chart for 10 organisms.
3. Score 20 points for completion.

#### **Day 165**

1. Read through page 7 on fungi and fill in blanks on your notes for this chapter.

#### **Day 166**

1. Complete the 10 stations on page 8. Look through the fungi specimens and answer the questions.
2. Record 20 points for completing the ten stations.

#### **Day 167**

1. Complete the study guide on page 14. You may use your notes.

#### **Day 168**

1. Use your notes or the vocabulary on page 2 to complete the crossword puzzle. (printable version)
2. Record your score out of 50. Take a point off for any missing or incorrect answer.

#### **Animals**

#### **Day 169**

1. Read page three on the animal kingdom and fill in this study guide as best you can with information from the page.
2. I think there is too much specific vocabulary in this chapter. Take out some key words, but don't try to memorize everything unless you are really into animals or biology.

#### **Day 170**

1. Use your notes and study guide and complete the activities on page 5. (If anything is incomplete on your study guide, be looking to fill it in as you continue in the chapter.)

#### **Day 171**

1. Read page 6 on invertebrates and complete the fill in the blank activity.

#### **Day 172**

1. Read page 7 on invertebrates and complete the fill in the blank activities.
2. You don't have to have all of this vocab memorized! Just understand what it is talking about.

#### **Day 173**

1. Read page 8 on invertebrates and complete the fill in the blank activities.

#### Day 174

1. Read pages 9, 10 and 11 on invertebrates and complete the fill in the blank activities.

#### Day 175

1. Read pages 13, 14 and 15 on vertebrates and while you read make some sort of chart/list/diagram that shows the different mammal classifications and their unique attributes.

#### Day 176

1. Do the activities on pages 16 and 17 to get a hold of important information from this chapter.

#### Day 177

1. Answer the questions about vertebrates on page 21.
2. Record your score out of 33 when you have finished all of the questions. Finish!
3. You may check your answers when you are finished. (You have already received your score. This is just for your edification.)

#### Day 178

1. Only if you want to...virtual pig dissection, virtual frog dissection
2. Review your study guides and notes from all of your chapters. You will have Day 179 as well. Look at the main headings in this course and be able to define/describe those things. You don't need to know *all* of the specific vocabulary from the course, but you should be able to use vocabulary from the course to define the processes in those headings or talk about the most significant things related to those topics. On page 2 of those topic pages are vocabulary boxes that contain the vocabulary from your notes divided into important headings. (I'm telling you what's going to be on your final. Pay attention! Use these clues! Practice what I'm saying. Use those boxes—the important words on the headings—and make sure you can talk about those things using the vocabulary.) You won't need to know anything we didn't really cover in the course.

#### Day 179

1. Review your study guides and notes from all of your chapters.

#### Day 180

1. Take your final exam.
2. If you skipped a question, go back and try it. You should always at least try.
3. Score your exam. There should be 97 total points. Add three points to your total if you answered every question.
4. Record your score out of 100.
5. Congratulations on finishing biology!
6. Record your final score. Add biology to your transcript. Create a course record for this course. Save your final, labs, other written work and even some screen shots for your portfolio and records.
7. If you are planning on taking a biology test for college credit, please see the notes below.

**Make A Donation**

#### Notes for those wanting to take an exam for college credit:

- Here is one study guide.
- You will probably need to learn some more about evolution than I covered in this course.
- Here is a study guide if you are going for 6 CLEP credits. That is the same as two college courses, so it does cover more than was in this course. We covered a lot of it though, so you are on your way.

#### I found Biology to be...

easy  just about right  hard

Vote [ViewResultsPollDaddy.com](http://ViewResultsPollDaddy.com)

## About how much time I spent each day on Biology

20 minutes or less  30 minutes  40 minutes  60 minutes or more

Vote [View ResultsPollDaddy.com](http://ViewResultsPollDaddy.com)