Lesson 4.18: Life Science – End of Unit Review & Quiz

Weekly Focus: Test-Taking Strategies
Weekly Skill: Review of Life Science Units 4.10 – 4.17

Lesson Summary: This week students will have the opportunity to review life science from Units 4.10 to 4.17. They will then use test-taking strategies on a life science test.

Materials Needed:

- Review Units 4.10 – 4.17: **Unit 4.18 Handout 1**
- Review Quiz: **Unit 4.18 Handout 2**
- Post Self-Evaluation **Unit 4.18 Handout 3** (use the bottom part of Unit 4.1 Handout 1 or use Unit 4.18 Handout 3)
- Extra Work/Homework **Unit 4.18 Handout 4** (Spectrum Science, Grade 8, pages 108 – 109)

Objectives: Students will be able to…

- Activate prior knowledge in previous life science units
- Demonstrate knowledge with GED 2014-like questions
- Self-evaluate knowledge in life science

College and Career Readiness Standards: RI, RST, WHST

ACES Skills Addressed: EC, LS, ALS, CT, SM, N

Notes: Please review and be familiar with classroom routine notes for: summarizing techniques (**Routine 4**), and self-management skills (**Routine 1**). The notes will help with making a smooth transition to each activity.

GED 2014 Science Test Overview – For Teachers and Students

The GED Science Test will be 90 minutes long and include approximately 34 questions with a total score value of 40. The questions will have focus on three content areas: life science (~40%), physical science (~40%), and Earth and space science (~20%). Students may be asked to read, analyze, understand, and extract information from a scientific reading, a news brief, a diagram, graph, table, or other material with scientific data and concepts or ideas.

The online test may consist of multiple choice, drop down menu, and fill-in-the-blank questions. There will also be two short answer questions (suggested 10 each) where students may have to design an experiment or identify errors in a conducted experiment, summarize, find evidence (supporting details), and reason or make a conclusion from the information (data) presented.

The work students are doing in class will help them with the GED Science Test. They are also learning skills that will help in many other areas of their lives.

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Activities:

Warm-Up: Review Notes	Time: 5 - 10 minutes
As students enter the class, have the following written on the board or overhead: **"We will review Units 4.10 – 4.17 before taking a test on life science."** While students enter the room, ask them to take out the notes from the units listed on the board. This is the time they should review their notes. If there are new students, you may want to give them handouts from the units covered on the test, or they can work on a previous reading from any of the units.	

Activity 1: Unit Review 4.18 Handout 1	Time: 30 - 40 minutes
1) Distribute **Unit 4.18 Handout 1** to students. **2)** Have students work independently or together to fill in the blanks with what they remember of the units. **3)** Ask students to try to fill in the blanks with information they recall without looking at their notes. **4)** After they have filled in the information from what they remember, encourage them to look at their notes to fill in more information. **5)** While students are reviewing the units, circulate the class to answer questions or prompt them as needed. **6)** If there is time, review some of the key concepts from each unit (listed in parenthesis) as a whole class. **7)** This may be a good opportunity for students to get information from units they may have missed.	

Break: 10 minutes

Activity 2: Unit Test: Unit 4.18 Handout 2	Time: 45 - 50 minutes
1) Hand out **Unit 4.18 Handout 2** to students. **2)** Explain that over the past 8 - 9 weeks, they have studied various aspects of Life Science as it relates to parts of the 2014 GED Science module. **3)** Discuss with students that although this is not a "timed" test as the GED test will be, it is important to review some test taking strategies. Explain to them they can use the same strategies for many different tests they may have to take, such as the TABE, GED, or Accuplacer (college entrance exam) tests. Strategies include: 1. Read instructions first 2. Read question and possible answers 3. Make sure you understand what the question is asking 4. Skim and scan for information 5. Mark an answer for every question 6. Keep an eye on the clock (for a timed test) **4)** Have students begin the review quiz. Circulate as needed to help struggling or newer students	

with the material. Remind students the questions may be worded differently from the study materials, similar to what they can expect on a test.
5) Review answers as a whole class.
6) Ask for students to share their answers and what evidence or information helped them find the answer. Remind students that there can be different possible answers for some questions. There will also be a written response on the 2014 GED Science module.
7) Have students circle the questions they didn't have correct. They should note this is an area they may need to study further. They should refer back to their handouts for the units that covered that content area.

Wrap-Up: Fill out Self-Evaluation (post) Unit 4.18 Handout 3	**Time: 5 - 10 minutes**

1) Hand out a self-evaluation sheet (Unit 4.1 Handout 1 or Unit 4.18 Handout 3) to students.
2) Have students rate their post-unit knowledge of life science by using the Likert rating scale. Remind students this is a way for them to assess their own knowledge and determine which areas they may need to continue to study.
3) Check to see if students are comfortable with sharing their self-evaluations. You can ask them how they answered each question, or they can share in pairs or table groups.
4) It may be useful for you to see how students evaluated themselves to determine what areas may need to be reviewed. If possible circulate to see how students evaluated their knowledge and take notes.
5) Ask students to discuss methods they can review and study some of the material on their own.

Extra Work/Homework: Unit 4.18 Handout 4	**Time: 30 minutes outside of class**

Students can continue with work on life science with a reading passage on managing stress. This handout is an opportunity for students to get ideas of how to manage stress in their lives as well as read for content and comprehension.

Differentiated Instruction/ELL Accommodation Suggestions	**Activity**
If some students finish early, they can assist new students with getting the information from the units. Other students may wish to work with others to help them with the review.	**Activity 1**
There may be some new concepts and/or vocabulary for new students. Please make sure they are comfortable with the vocabulary. If needed, have students work in groups of students who have been in class longer.	**Activity 2**

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Online Resources:

If students have Internet connection, they should try to take the free practice test for 2014 GED Science Module. This test is not scored, but students can get an idea of what some of the questions are on the real test. If you have time, you may want to use the test as a teaching tool for the entire class. It could be a great opportunity to review the digital literacy skills needed for the test.

http://www.gedtestingservice.com/freepractice/download/GED_Science/GEDSciencePracticeTest.html

Students can also try an online test (click in the appropriate boxes (Science 8) (20 or 40 questions) and type in name). It is another good practice for online test taking.

http://education.jlab.org/solquiz/

Suggested Teacher Readings:

- GED Testing Service – GED Science Item Sample (to get an idea of what the test *may* be like)

  http://www.gedtestingservice.com/itemsamplerscience/

- Assessment Guide for Educators: A guide to the 2014 assessment content from GED Testing Service:

  http://www.riaepdc.org/Documents/ALALBAASSESSMENT%20GUIDE%20CHAPTER%203.pdf

- Minnesota is getting ready for the 2014 GED test! – website with updated information on the professional development in Minnesota regarding the 2014 GED.

  http://abe.mpls.k12.mn.us/ged_2014_2

- ATLAS: ABE Teaching & Learning Advancement System: 2014 GED ® Classroom: Science: Minnesota's state-wide website for resources for the science module

  http://atlasabe.org/resources/ged/science

Unit 4.18 Handout 1 (2 pages total)

Units 4.10 – 4.17 Review

Write information you recall from each topic in life science in the space provided below. If you were absent for one of the topics, check with the teacher to see about getting copies of the material(s).

Unit 4.10 **Plant and Animal Cell Structure & Functions**

Unit 4.11 **Photosynthesis & Respiration**

4.12 **The Nitrogen & Water Cycle**

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Units 4.13 & 4.14 **Ecosystems**

Units 4.15 **Health – Human Body Systems**

Units 4.16 **Health – Disease Prevention**

Units 4.17 **Health – Effects of Disease**

Unit 4.18 Handout 2 (3 pages)

End of Unit Review: Life Science

Name: _____ **Date:** _____

Directions: Read each question carefully and choose the best answer. Circle the answer.

1. In the food relationship where the lion eats the wildebeest, and the wildebeest eats plants…

A. The lion is the prey and the wildebeest is the predator

B. The lion is the predator and the wildebeest is the prey.

C. The lion is the primary consumer and the wildebeest is the secondary consumer

D. The lion is the secondary consumer and the wildebeest is the primary consumer.

1. A and C only **2.** A and D only

3. B and C only **4.** B and D only

2. If there is a shortage of wildebeest in the area, what are some things the lions might do?

A. move to another area to hunt for food

B. eat the bark and roots of trees

C. hunt for other animals

1. C only **2.** C and B only

3. A and C only **4.** A and B only

3. Over a period of time, the number of wildebeest drops. Which of the following statements could explain the drop in the wildebeest population?

A. A drought occurred

B. There was an increase in the lion population.

C. The death rate of the wildebeest was lower than the birth rate.

D. There was an increase in the number of predators.

1. A and B only **2.** B and C only

2. A, B, and C only **4.** A, B and D only

4. Which of these is an example of a tissue in the human body?

A. lung **B.** liver **C.** tendon **D.** stomach

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5. Write a sentence or two to describe what happens during photosynthesis.

_____

_____

6. In which biome would you expect to see the greatest species diversity?

A. desert **B.** temperate grassland **C.** tropical rainforest **D.** tundra

7. About what percentage of the human body is made up of water?

A. 50% **B.** 70% **C.** 10% **D.** 30%

8. In which organ are blood cells made?

A. bone **B.** heart **C.** liver **D.** skin

9. Describe what is the different between a food chain and a food web.

_____

_____

10. Which of these diseases is least likely to be a result of tobacco use?

A. lung cancer **B.** emphysema **C.** heart disease **D.** diabetes

11. Disease can be caused by:

A. saliva **B.** mucus **C.** viruses **D.** antibodies

12. What is the function of the stomach?

A. It filters out waste. **B.** It removes bacteria.

C. It breaks down food. **D.** It separates liquids from solids.

13. Animals that feed on both plans and animals are called:

A. carnivores **B.** herbivores **C.** detritivores **D.** omnivores

14. How does a decomposer get energy?

A. by making its own food **B.** by eating live plants

C. by eating live animals **D.** by breaking down the remains of dead organisms

15. The body's general defense mechanism, which involved the release of a number of chemicals and cells that fight the invading pathogen, is referred to as the _____?

A. immune response **B.** disease response **C.** pathogen destroyer **D.** phagocyte invad

16. There are more herbivores than carnivores in a food chain because:

A. Much energy is lost in the transfer of energy from herbivores to carnivores.

B. A larger number of herbivores is needed to support a smaller number of carnivores.

C. This is the way for the food chain to stay in equilibrium.

1. A only **2.** B and C only

3. A and B only **4.** All of the above

17. Write two causes for increased amounts of carbon dioxide in the atmosphere.

_____

18. Bodies have four basic levels of organization. Which is the correct order, from smallest to largest?

A. cell, tissue, organ, system **B.** tissue, system, organ, cell

C. cell, organ, system, organism **D.** tissue, organism, organ, system

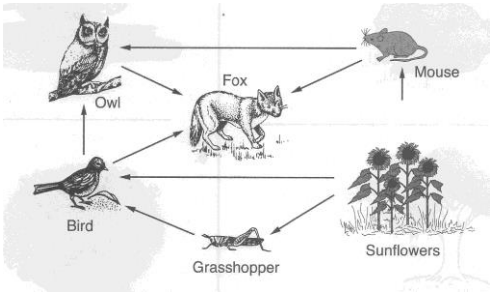
19. What do animal cells and plant cells have in common?

A. cell wall **B.** chloroplast **C.** organelles **D.** vesicles

20. Write a few sentences to explain why too many nitrates in a body of water can be a problem.

_____

_____



21. What do the arrows in the food web represent?

_____

22. In the above food web, which organism is the producer and which organisms eat this producer?

_____

23. Nitrogen gas in the air can be used by

A. most plants **B.** certain animals **C.** certain bacteria **D.** all organisms

Unit 4.18 Handout 2 (3 pages)

End of Unit Review: Life Science TEACHER ANSWER KEY

Name: _____ **Date:** _____

Directions: Read each question carefully and choose the best answer. Circle the answer.

1. In the food relationship where the lion eats the wildebeest, and the wildebeest eats plants…

A. The lion is the prey and the wildebeest is the predator

B. The lion is the predator and the wildebeest is the prey.

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D. The lion is the secondary consumer and the wildebeest is the primary consumer.

1. A and C only **2.** A and D only

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2. If there is a shortage of wildebeest in the area, what are some things the lions might do?

A. move to another area to hunt for food

B. eat the bark and roots of trees

C. hunt for other animals

1. C only **2.** C and B only

3. **A and C only** **4.** A and B only

3. Over a period of time, the number of wildebeest drops. Which of the following statements could explain the drop in the wildebeest population?

A. A drought occurred

B. There was an increase in the lion population.

C. The death rate of the wildebeest was lower than the birth rate.

D. There was an increase in the number of predators.

1. A and B only **2.** B and C only

2. A, B, and C only **4.** **A, B and D only**

4. Which of these is an example of a tissue in the human body?

A. lung **B.** liver **C.** **tendon** **D.** stomach

5. Write a sentence or two to describe what happens during photosynthesis.

Photosynthesis is the process that plants use in order to make food. Energy from sunlight is used to change carbon dioxide and water into glucose and oxygen.

6. In which biome would you expect to see the greatest species diversity?

A. desert **B.** temperate grassland **C.** **tropical rainforest** **D.** tundra

7. About what percentage of the human body is made up of water?

A. 50% **B.** **70%** **C.** 10% **D.** 30%

8. In which organ are blood cells made?

A. **bone** **B.** heart **C.** liver **D.** skin

9. Describe what is the different between a food chain and a food web.

Food chains show how a living thing such as a plant or an animal gets its energy. A food web is made up of multiple food chains and includes many more pants and animals than a food chain includes.

10. Which of these diseases is least likely to be a result of tobacco use?

A. lung cancer **B.** emphysema **C.** heart disease **D.** **diabetes**

11. Disease can be caused by:

A. saliva **B.** mucus **C.** **viruses** **D.** antibodies

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15. The body's general defense mechanism, which involved the release of a number of chemicals and cells that fight the invading pathogen, is referred to as the _____?

A. **immune response** **B.** disease response **C.** pathogen destroyer **D.** phagocyte invad

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A. Much energy is lost in the transfer of energy from herbivores to carnivores.

B. A larger number of herbivores is needed to support a smaller number of carnivores.

C. This is the way for the food chain to stay in equilibrium.

1. A only **2.** B and C only

3. A and B only **4.** **All of the above**

17. Write two causes for increased amounts of carbon dioxide in the atmosphere.

Two causes for the increase are burning fossil fuels and cutting down trees.

18. Bodies have four basic levels of organization. Which is the correct order, from smallest to largest?

A. cell, tissue, organ, system **B.** tissue, system, organ, cell

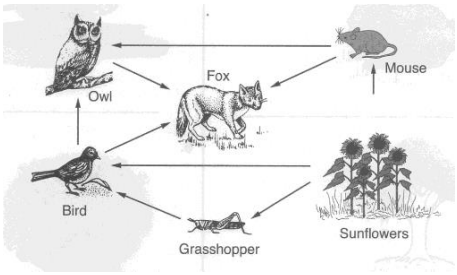
C. cell, organ, system, organism **D.** tissue, organism, organ, system

19. What do animal cells and plant cells have in common?

A. cell wall **B.** chloroplast **C. organelles** **D.** vesicles

20. Write a few sentences to explain why too many nitrates in a body of water can be a problem.

Too many nitrates in a body of water can be a problem because bacteria don't have a chance to convert the nitrates back into nitrogen gas, which can make the water dangerous for people and animals.



21. What do the arrows in the food web represent?

The arrows represent the flow of energy in the ecosystem.

22. In the above food web, which organism is the producer and which organisms eat this producer?

The sunflower is the producer. It is eaten by the grasshopper, the bird, and the mouse.

23. Nitrogen gas in the air can be used by

A. most plants **B.** certain animals **C. certain bacteria** **D.** all organisms

Unit 4.1 Handout 1 & Unit 4.18 Handout 3

Pre- and Post- Self Evaluation

Pre-Evaluation – Life Science

Statement	Self-Rating				
1. I can define basic vocabulary in the building blocks life: cells, DNA, mitosis, organelles, chromosomes, etc.	1 strongly agree	2 agree	3 somewhat agree	4 disagree	5 strongly disagree
2. I can describe the theory of evolution.	1 strongly agree	2 agree	3 somewhat agree	4 disagree	5 strongly disagree
3. I can describe the basics of heredity in humans.	1 strongly agree	2 agree	3 somewhat agree	4 disagree	5 strongly disagree
4. I can state some effects of disease and disease prevention.	1 strongly agree	2 agree	3 somewhat agree	4 disagree	5 strongly disagree
5. I can interpret food chains and food webs with relations to ecosystems.	1 strongly agree	2 agree	3 somewhat agree	4 disagree	5 strongly disagree

Post-Evaluation – Life Science

Statement	Self-Rating				
1. I can define basic vocabulary in the building blocks life: cells, DNA, mitosis, organelles, chromosomes, etc.	1 strongly agree	2 agree	3 somewhat agree	4 disagree	5 strongly disagree
2. I can describe the theory of evolution.	1 strongly agree	2 agree	3 somewhat agree	4 disagree	5 strongly disagree
3. I can describe the basics of heredity in humans.	1 strongly agree	2 agree	3 somewhat agree	4 disagree	5 strongly disagree
4. I can state some effects of disease and disease prevention.	1 strongly agree	2 agree	3 somewhat agree	4 disagree	5 strongly disagree
5. I can interpret food chains and food webs with relations to ecosystems.	1 strongly agree	2 agree	3 somewhat agree	4 disagree	5 strongly disagree

Unit 4.18 Handout 4

TEACHER ANSWER KEY

1. C
2. Answers will vary depending on student.
3. Answers will vary. Suggested answer: Fight or flight is the body's physical reaction to a situation of stress or danger. It's an instinctual response that prepares you to deal with the situation by fighting or fleeing.
4. Answers will vary depending on student.
5. Answers will vary depending on student.
6. Answers will vary. Suggested answer: Exercise makes you feel good and it releases endorphins.
7. Answers will vary. Possible answer: It can motivate you to work harder.
8. Answers will vary depending on student.