Date: January 14. 2019 | **School Day:** 91

Learning Objectives – "Students CAN…"

1. Analyze new concept vocabulary – Vocabulary Enhancement (BW)

2. Electrolysis Labs: Peer Review / Sample Rubric

Assessment

In-class completion of the notebook/bell work

Electrolysis Labs: Peer Review / Sample Rubric

Homework

1. Complete week 22 vocabulary – In Class

2. Complete the electrolysis lab scoring – In Class

3. Notebook Assessment 3-1 (Self Review) – 1/16

Reminders / DO NOT COPY

Need make-up work, concept review, or just a quiet place to study **Room 216 / Wednesday 4:00 – 5:00. (Weger - Science students ONLY)**

The teacher's notebook is no longer available during the second semester. Students must use the information provided in the daily lesson plans for make-up.

Bell work

Using the vocabulary list provided at your seat: *Complete the five starred* terms*

For each term on the list you may do <u>one</u> of the following: • Copy • Summarize • Provide an example	**Incomplete or incorrect vocabulary will be scored accordingly.** **No pictures – Text only**

***Vocabulary assignments must be complete prior to notebook assessments – please plan/prepare accordingly.*

Linked Documents and Class Resource — *Labs Scoring Rubric* ↓ | *Vocabulary 12-1* ↓ | *Electrolysis Lab Key*

District Content Descriptor:

Construct, use, and present oral and written arguments supported by empirical evidence and scientific reasoning to support or refute an explanation or a model for a phenomenon. (07-PS3-5)

- Macroscopic patterns are related to the nature of microscopic and atomic-level structure. (07-PS1-2)
- Matter is conserved because atoms are conserved in physical and chemical processes. (07-PS1-5)

Fayette County 2018-19 District Content Map

Date: January 15. 2019 | **School Day:** 92

Learning Objectives – "Students CAN…"

1. Current events in science – refine reading practices, comprehension and increase vocabulary (BW)

2. Ecology Unit: Ecosystems Challenge / Simulator Lab (Day 1)

Assessment

In-class completion of the notebook/bell work

Ecology Unit: Ecosystems Challenge / Lab simulator (Day 1)

Homework

1. Complete the article Q-Review (BW) – In Class

2. Complete Lesson 1/2 (Simulator Lab) – 1/17

3. Notebook Assessment 3-1 (Self Review) – 1/16

Reminders / DO NOT COPY

Need make-up work, concept review, or just a quiet place to study **Room 216 / Wednesday 4:00 – 5:00. (Weger - Science students ONLY)**

The teacher's notebook is no longer available during the second semester. Students must use the information provided in the daily lesson plans for make-up.

Bell work

Using good-practice reading techniques, read this week's science article. When you finish reading, complete the article questions below.

1. **What makes the Pacific beetle cockroach so special?**
2. **Why is cockroach milk being considered as a dairy milk substitute?**
3. **What other benefits would occur if we had lesser demands on dairy cows for milk?**

Linked Documents and Class Resource

Ecosystems Simulator Lab Handout

Weekly Article: Got Cockroach Milk?

Ecosystem Lab Simulator

Ecosystem Simulator Lab Response Handout

District Content Descriptor:

Construct a scientific explanation based on valid and reliable evidence obtained from sources (including the students' own experiments) and the assumption that theories and laws that describe the natural world operate today as they did in the past and will continue to do so in the future. (07-LS1-6)

- Within a natural system, the transfer of energy drives the motion and/or cycling of matter. (07-LS1-6)
- Matter is conserved because atoms are conserved in physical and chemical processes. (07-PS1-5)

Fayette County 2018-19 District Content Map

Date: January 16. 2019 | **School Day:** 93

Learning Objectives – "Students CAN…"

1. Use critical thinking to solve a problem. (BW)

2. Notebook Assessment 3-1 (Personal Review)

Assessment

In-class completion of the notebook/bell work

Notebook Assessment 3-1 (Personal Review)

Homework

1. Complete the week 22 challenge question (BW) – In Class

2. Complete Lesson 1/2 (Simulator Lab) – 1/17

Reminders / DO NOT COPY

Need make-up work, concept review, or just a quiet place to study **Room 216 / Wednesday 4:00 – 5:00. (Weger - Science students ONLY)**

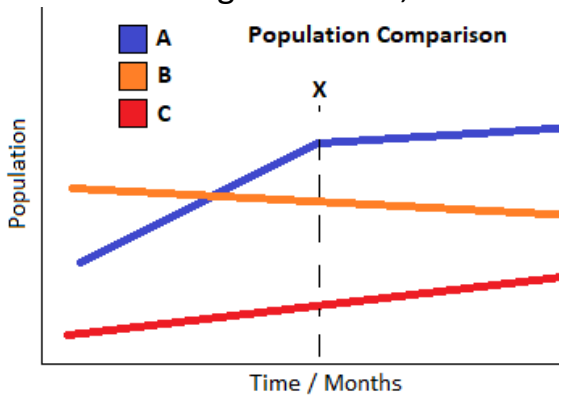
The teacher's notebook is no longer available during the second semester. Students must use the information provided in the daily lesson plans for make-up.

Bell work

Complete today's challenge question in the notebook. When you finish, record your answer on a small piece of paper and place it in the solutions chest at the front of the room.

Observe the graph

Which of the following is the wolf, deer and plants?



Linked Documents and Class Resource *NB Assessment Rubric*

District Content Descriptor:

Construct a scientific explanation based on valid and reliable evidence obtained from sources (including the students' own experiments) and the assumption that theories and laws that describe the natural world operate today as they did in the past and will continue to do so in the future. (07-LS1-6)

- Within a natural system, the transfer of energy drives the motion and/or cycling of matter. (07-LS1-6)
- Matter is conserved because atoms are conserved in physical and chemical processes. (07-PS1-5)

Fayette County 2018-19 District Content Map

Date: January 17. 2019 | **School Day:** 94

Learning Objectives – "Students CAN…"

1. Analyze and respond to this week's YouTube (Q-Review) BW

2. Ecology Unit: Ecosystems Challenge / Simulator Lab (Day 2)

Assessment

In-class completion of the notebook/bell work

Ecology Unit: Ecosystems Challenge / Simulator Lab (Day 2)

Homework

1. Complete the video Q-Review (BW) – In Class

2. Quiz 3-3: Notebook and Lab Concepts – 1/18

3. Complete the ecosystem simulator lab graphing and conclusion – 1/22

Reminders / DO NOT COPY

Need make-up work, concept review, or just a quiet place to study **Room 216 / Wednesday 4:00 – 5:00. (Weger - Science students ONLY)**

The teacher's notebook is no longer available during the second semester. Students must use the information provided in the daily lesson plans for make-up.

Bell work

YouTube Science – Watch the video and respond to the questions below.

1. **What happened to the wolves in Yellowstone – Why weren't there any?**
2. **Explain what occurred as a result of this trophic cascade.**
3. **Identify the population factors that changed in a simple line graph.**

Video LINK

Linked Documents and Class Resource

Ecosystems Simulator Lab Handout

Weekly Video: Wolves Return to Yellowstone

Ecosystem Lab Simulator

Ecosystem Simulator Lab Response Handout

District Content Descriptor:

Construct a scientific explanation based on valid and reliable evidence obtained from sources (including the students' own experiments) and the assumption that theories and laws that describe the natural world operate today as they did in the past and will continue to do so in the future. (07-LS1-6)

- Within a natural system, the transfer of energy drives the motion and/or cycling of matter. (07-LS1-6)
- Matter is conserved because atoms are conserved in physical and chemical processes. (07-PS1-5)

Fayette County 2018-19 District Content Map

Date: January 18. 2019 | **School Day:** 95

Learning Objectives – "Students CAN…"

1. Sharing Ideas – Write a paragraph in your science journal using the BW writing prompt.

2. Quiz 3-3: Lab and notebook concept mastery check (Summative)

Assessment

In-class completion of the notebook/bell work

Quiz 3-3: Lab and notebook concept mastery check (Summative)

Homework

1. Complete the science journal entry (BW) – In Class

2. Complete the ecosystem simulator lab graphing and conclusion – 1/22

3. Grade sheet signed and returned – 1/22

Reminders / DO NOT COPY

Need make-up work, concept review, or just a quiet place to study **Room 216 / Wednesday 4:00 – 5:00. (Weger - Science students ONLY)**

The teacher's notebook is no longer available during the second semester. Students must use the information provided in the daily lesson plans for make-up.

Bell work

Science Journal: Week 22

Complete a paragraph containing no less than five additional sentences that continue the lead below.

Humans demand a lot from their ecosystems and give very little back…

Linked Documents and Class Resource *Electrolysis Lab Handout ↓* *Quiz 3-3** *Ecosystem Lab Simulator*

District Content Descriptor:

Construct a scientific explanation based on valid and reliable evidence obtained from sources (including the students' own experiments) and the assumption that theories and laws that describe the natural world operate today as they did in the past and will continue to do so in the future. (07-LS1-6)

- Within a natural system, the transfer of energy drives the motion and/or cycling of matter. (07-LS1-6)
- Matter is conserved because atoms are conserved in physical and chemical processes. (07-PS1-5)

Fayette County 2018-19 District Content Map

Vocabulary 12-1: Ecosystems Unit

Complete the vocabulary by copying, summarizing or providing an example for each of the starred terms (*).

Term	Definition
Autotroph	*Organisms that can produce their own food*
Commensalism	An association between two organisms in which one benefits and the other derives neither benefit nor harm
Consumers	An organism that must eat something else to survive: Ecology
Ecosystem*	A biological community of interacting organisms and their physical environment
Food Chain	A *hierarchical* series of organisms each dependent on the next as a source of food
Habitat*	The natural home or environment of an animal, plant, or other organism
Herbivores	An animal that feeds on plants
Hierarchy	*A system in which members of an organization or society are ranked according to relative status or authority*
Invasive Species	Organisms that tend to spread quickly and undesirably or harmfully
Limiting Factors	An environmental factor that limits the growth or activities of an organism
Mutualism	Symbiosis that is beneficial to both organisms involved
Niche	A position or role taken by a kind of organism within its community
Omnivores*	An animal that eats food of both plant and animal origin
Parasitism	A relationship between two organisms in which one organism (the parasite) benefits and the other (the host) is harmed
Predators*	An animal that lives by killing and eating other animals
Producers*	An autotrophic organism that serves as a source of food for other organisms in a food chain
Scavenger	An animal that feeds on dead organisms, especially a carnivorous animal that eats dead animals rather than or in addition to hunting live prey
Symbiosis	Interaction between two different organisms living in close physical association, typically to the advantage of both
Trophic Cascade*	Powerful indirect interactions that can change an entire ecosystem.

Lab Scoring Rubric / Conclusion[2] - Using the outline below – Review each section for the key components and score accordingly.

A. Experimental Question: *An inquiry based on cause and effect, where the solution is tested by changing a variable.*			
10 (3 of 3) Complete	**7** (2 of 3) Incomplete	**3** (1 of 3) Not Supported	**0** (No Response)
1. The student has introduced an idea in the **form** of **a question**. 2. The **idea has been defined** into an independent and dependent variable. 3. The **dependent variable is measurable** (qualitative or quantitative data).		**The student has reported OTHER information** that has no clear connection to a measurable investigation.	
B. Hypothesis: *A reasonable prediction based on prior experiences and common-sense logic.*			
10 (2 of 2) Complete	**7** (1 of 2) Incomplete	**3** (0 of 3) Not Supported	**0** (No Response)
1. The student **has a predicted outcome** for this experiment. 2. The student has **explained why the prediction could be true** using an applicable experience or reasonable logic.		**The student has reported OTHER information that** has no clear connection to a possible result for this experiment.	
C. Data: *Facts and statistics collected during an **intentionally designed experiment** for reference or analysis.*			
10 (3 of 3) Complete	**7** (2 of 3) Incomplete	**3** (1 of 3) Not Supported	**0** (No Response)
1. The student **has provided applicable data** – *meaning* the data attempts to answer the question. *(numbers or descriptive observation*) 2A. The student has **provided more than one data set as a means to compare/define** the change in the dependent variable. 2B. **The change has been defined** using a method of calculation.		**The student has reported OTHER information** that may be related to the results, but does not contain measurements or appropriate data that support a tested solution for this lab.	
D. Summary: *A judgment or decision reached by critical reasoning*			
10 (3 of 3) Complete	**7** (2 of 3) Incomplete	**3** (1 of 3) Not Supported	**0** (No Response)
1. The student has **confirmed or corrected the hypothesis**. 2. The student has **shared a true, measured relationship** about the dependent variable that is consistent with the data presented. 3. The student has provided a **demonstration of how the relationship works** using measured data – to confirm the hypothesis is true, or has been corrected.		**The student has reported OTHER information** that may be related to the results, but does not contain measurements or appropriate data that support a tested solution for this lab.	

Lab Scoring Rubric / Graphing[1] - Using the outline below – Review each section for the key components and score accordingly.

E. Title & Variable Labels: *The identities of the subject, and axis values that are to be graphed.*

10 (3 of 3) Complete	**7** (2 of 3) Incomplete	**3** (1 of 3) Not Supported	**0** (No Response)
1. The student has **identified the X-Axis variable** by name and unit of measurement. *If a pie chart – Has a key been provided to identify the sub-groups?* 2. The student has **identified the Y-Axis variable** by name and unit of measurement. *If a pie chart – Have the sub-groups been appropriately identified by percentile?* 3. The student **has provided an applicable title** at the top of the graph – *The title has a clear connection to the content of the graph.*		**The student has selected a design and elements that are inconsistent with the lab data.** The graph has no clear connection to experimentation, or is to incomplete to be understood.	

F. Scale: *The scale is what you mark on the axes. It's the relation between the units you're using, and their representation on the graph.*

10 (3 of 3) Complete	**7** (2 of 3) Incomplete	**3** (1 of 3) Not Supported	**0** (No Response)
1. The student **has designed an equal unit of measure along the X-Axis**. *If a pie chart – Are all parts measured both sides extending from the center?* 2. The student **has designed an equal unit of measure along the Y-Axis**. *If a pie chart – Are all parts consistent to their respective percentile?* 3. The scale(s) selected by the student have been thoughtfully **designed to fill the graph space**, so the graph can be easily observed.		**The student has selected a design and elements that are inconsistent with the lab data.** The graph has no clear connection to experimentation, or is to incomplete to be understood.	

G. Data Mapping: *The placement of data on a graphing field based on the graph type or axis values.*

10 (3 of 3) Complete	**7** (2 of 3) Incomplete	**3** (1 of 3) Not Supported	**0** (No Response)
1. The student has **selected an appropriate graph for the data set** to allowing proper comparisons. *(line graph, bar graph, pie chart, etc.)* 2. The student has **accurately selected data points in the graphing field** – consistent with the data provided. *If data sets are not available for comparison, this step CANNOT be completed.* 3. The student **has selected an appropriate method for organizing data** sets in the graphing field. *(Key, Colors or Patterns, etc.)*		**The student has selected a design and elements that are inconsistent with the lab data.** The graph has no clear connection to experimentation, or is to incomplete to be understood.	

Scoring Matrix – Complete each box with the scores from the rubric *Graphing[1] & Conclusion[2]*.

A.	**B.**	**C.**	**D.**	**E.**	**F.**	**G.**	**TOTAL**
							/70