Life Science 7 Mrs. Duddles Q2 – Soil & Ecosystems

Friday 01/19 – Half Day PM Only

Objectives:

- Students will explain the components of the scientific theory of cells
- Students will explain the flow of energy and the cycles of matter in ecosystems

White Space Question:

Describe the main difference between prokaryotic and eukaryotic cells.

- Work on SF Project: (15 mins)
 - Check on experiment set up, water plants, record data, update Science Fair Project Log Notebook, etc.
- Work on Using Venn Diagrams to Compare Cells activity to help you review Activities 7 & 8 information
- End Q2 Records Day

Thursday 01/18

Objectives:

- Students will explain the components of the scientific theory of cells
- Students will explain the flow of energy and the cycles of matter in ecosystems

White Space Question:

Why are most cells small? What is the advantage of their small size? Agenda:

- Work on SF Project: (10 mins)
 - Check on experiment set up, water plants, record data, update Science Fair Project Log Notebook, etc.
- Start or continue "Introduction to the Microscope" lab activity
- Work on Activity 8 Cell Structure and Function while you wait for your turn at the microscope

Wednesday 01/17

Objectives:

- Students will explain the components of the scientific theory of cells
- Students will explain the flow of energy and the cycles of matter in ecosystems

White Space Question:

What type of cell has a nucleus?

- Work on SF Project: (10 mins)
 - Check on experiment set up, water plants, record data, update Science Fair Project Log Notebook, etc.
- "Introduction to the Microscope" notes with note sheet: Learn how to properly use a microscope
- Start "Introduction to the Microscope" lab activity

Tuesday 01/16

Objectives:

- Students will explain the components of the scientific theory of cells
- Students will explain the flow of energy and the cycles of matter in ecosystems

White Space Question:

What type of cells are plants and animals made of?

- Work on SF Project: (10 mins)
 - Check on experiment set up, water plants, record data, update Science Fair Project Log Notebook, etc.
- Discuss and review Activity 7 The Characteristics of Cells
- Turn in Activity 7 student handout & Analysis Questions for grading

Monday 01/15 WCS District – No School MLK Holiday

Friday 01/12

Objectives:

- Students will explain the components of the scientific theory of cells
- Students will explain the flow of energy and the cycles of matter in ecosystems

White Space Question:

How are unicellular organisms different from multicellular organisms? Agenda:

- Work on SF Project: (10 mins)
 - Check on experiment set up, water plants, record data, update Science Fair Project Log Notebook, etc.
- Finish Activity 7 The Characteristics of Cells (Vocabulary, Analysis Questions, Write Conclusion)
- Start Activity 8 Cell Structure and Function work (Read pages 24 33, Answer assigned questions from reading)

Thursday 01/11

Objectives:

- Students will explain the components of the scientific theory of cells
- Students will explain the flow of energy and the cycles of matter in ecosystems
- Students will predict the effects of different interactions in communities
 White Space Question:

What are some basic life processes of all organisms?

- SF Project log notebook check #1 today
- Work on SF Project: (15 mins)
 - Check on experiment set up, water plants, record data, update Science Fair Project Log Notebook, etc.
- Continue work on Activity 7 The Characteristics of Cells (Lesson Review, Vocabulary, Analysis Questions)

Wednesday 01/10

Objectives:

- Students will explain the components of the scientific theory of cells
- Students will explain the flow of energy and the cycles of matter in ecosystems
- Students will predict the effects of different interactions in communities

White Space Question:

What are two things that food provides to an organism?

- Discuss and review Activity 6 Energy and Matter in Ecosystems
- Work on SF Project: (15 mins)
 - Check on experiment set up, water plants, record data, update Science Fair Project Log Notebook, etc.
 - SF Project log notebook check #1 is tomorrow Thursday 01/11

Tuesday 01/09

Objectives:

- Students will explain the components of the scientific theory of cells
- Students will explain the flow of energy and the cycles of matter in ecosystems
- Students will predict the effects of different interactions in communities
 White Space Question:

Write the word equation for the process of cellular respiration.

- Start work on Activity 7 The Characteristics of Cells:
 - Read pages 4 11 in the Cells and Heredity book
 - Answer Questions 1 3 and 5 13
- Update Science Fair Project Log Notebook; log notebook check #1 Thursday 01/11
- Set up Science Fair Project (if you have not done so yesterday or at home)

Monday 01/08

Objectives:

- Students will explain the flow of energy and the cycles of matter in ecosystems
- Students will predict the effects of different interactions in communities
- Students will explain how population size changes in response to environmental factors and interactions between organisms

White Space Question:

Write the word equation for the process of photosynthesis.

- Take Life Science 7 Mid Term (you may use your Science Notebook)
- Finish work on Activity 6 Energy and Matter in Ecosystems
- Update Science Fair Project Log Notebook; follow log notebook guidelines and rubric handout
- Set up Science Fair Project (you should have your materials today or have your experiment set up by this weekend at home)

Friday 01/05 WCS District – No School due to inclement weather

Thursday 01/04

Objectives:

- Students will explain the flow of energy and the cycles of matter in ecosystems
- Students will predict the effects of different interactions in communities
- Students will explain how population size changes in response to environmental factors and interactions between organisms

White Space Question:

By what day should your Science Fair project experiment be set up? Agenda:

- Continue work on Activity 6 Energy and Matter in Ecosystems:
 - Do Lesson Review on page 99; questions 1 11
 - Create definitions for Vocabulary. Write Conclusion
- Update Science Fair Project Log Notebook; follow log notebook guidelines and rubric handout
- Set up Science Fair Project if you have your materials

Wednesday 01/03

Objectives:

- Students will explain the flow of energy and the cycles of matter in ecosystems
- Students will predict the effects of different interactions in communities
- Students will explain how population size changes in response to environmental factors and interactions between organisms

White Space Question:

How can the carrying capacity of an ecosystem increase?

- Start Activity 6 Energy and Matter in Ecosystems:
 - Read pages 88 97 in Ecology book
 - Answer questions 1 3 and 5 17
- Set up Science Fair Project Log Notebook; follow log notebook guidelines and rubric handout
- Set up Science Fair Project if you have your materials

Wednesday 12/20 – Tuesday 01/02 WCS District – No School Winter Break Have a safe and happy break!

Tuesday 12/19 – Half Day AM Only

Objectives:

- Students will predict the effects of different interactions in communities
- Students will explain how population size changes in response to environmental factors and interactions between organisms
- Students will investigate and determine the composition of soil found on the school site

Agenda: Short class period for Jog-a-Thon Pizza Party and 7th Grade Holiday Celebration

- Discuss and Review Science Fair Project Log Notebook Guidelines and Rubric handout
- Work with Science Fair Project group to research background information for your project experiment using Mrs. Duddles' comments/ feedback on your Final Draft
- Have Science Fair Project experiment materials ready when we return from Break or you should start experiment during break

Monday 12/18

No Science class today – ELA/Math Block for School Site Project Action Plan Presentations

Friday 12/15

Objectives:

- Students will predict the effects of different interactions in communities
- Students will explain how population size changes in response to environmental factors and interactions between organisms
- Students will investigate and determine the composition of soil found on the school site

White Space Question:

How is an organism's niche different from its habitat?

Agenda: Short class period for School Site Project Presentations

- Work on School Site Project Action Plan summary poster due today
- Work with Science Fair Project group to research background information for your project experiment
- Work on Science Fair Project Proposal Final Draft using Mrs. Duddles' comments/ feedback on your Initial Draft; turn in Final Draft today

Thursday 12/14 WCS District – No school today due to inclement weather

Wednesday 12/13

Objectives:

- Students will predict the effects of different interactions in communities
- Students will explain how population size changes in response to environmental factors and interactions between organisms
- Students will investigate and determine the composition of soil found on the school site

White Space Question:

From where do macronutrients (N, P, K) in soil come?

- Work on School Site Project Action Plan summary poster due Friday 12/15
- Work with Science Fair Project group to research background information for your project experiment
- Work on Science Fair Project Proposal Final Draft using Mrs. Duddles' comments/ feedback on your Initial Draft; Final Draft is due Thursday 12/14

Tuesday 12/12

Objectives:

- Students will predict the effects of different interactions in communities
- Students will explain how population size changes in response to environmental factors and interactions between organisms
- Students will investigate and determine the composition of soil found on the school site

White Space Question:

What are some ways that different animals interact with each other?

- Work on School Site Project Action Plan summary poster due Friday 12/15
- Work with Science Fair Project group to brainstorm possible experiment ideas
- Choose an experiment idea and submit Science Fair Project Proposal Initial Draft due today

Monday 12/11

Objectives:

- Students will predict the effects of different interactions in communities
- Students will explain how population size changes in response to environmental factors and interactions between organisms
- Students will investigate and determine the composition of soil found on the school site

White Space Question:

How is soil formation related to the Rock Cycle?

- Soil Unit Quiz make-up (absent students); turn in with Activities 5C & 5D
- Work with Science Fair Project group to brainstorm possible experiment ideas
- Work on School Site Project Action Plan write up and poster
- Choose an experiment idea and submit Project Proposal Initial Draft by Tuesday 12/12

Friday 12/08

Objectives:

- Students will predict the effects of different interactions in communities
- Students will explain how population size changes in response to environmental factors and interactions between organisms
- Students will investigate and determine the composition of soil found on the school site

White Space Question:

In which layer of soil would you find living things like earthworms?

- Take Soil Unit Quiz; staple Activities 5C & 5D to your quiz and turn in for grading
- Work with Science Fair Project group to brainstorm possible experiment ideas
- Choose an experiment idea and submit Project Proposal Initial Draft by Tuesday 12/12

Thursday 12/07

Objectives:

- Students will predict the effects of different interactions in communities
- Students will explain how population size changes in response to environmental factors and interactions between organisms
- Students will investigate and determine the composition of soil found on the school site

White Space Question:

Name the layers of soil.

Agenda: Power Hour for School Site Project Action Plan

- Review 7th grade Science Fair project packet
- Brainstorm possible experiment ideas with your lab group

Reminder: Study for quiz on Soil Unit; Friday 12/08

Wednesday 12/06

Objectives:

- Students will predict the effects of different interactions in communities
- Students will explain how population size changes in response to environmental factors and interactions between organisms
- Students will investigate and determine the composition of soil found on the school site

White Space Question:

What do plants need to grow?

Agenda: Power Hour for Butcher Academy

- Discuss and review Activity 5C Lab: Macronutrients in Soil and Activity 5D Lab: Nutrients in Soil work
- Keep Activity 5C & 5D to study for quiz; turn in Friday for grading Reminder: Quiz on Soil Unit this Friday 12/08

Tuesday 12/05

Objectives:

- Students will predict the effects of different interactions in communities
- Students will explain how population size changes in response to environmental factors and interactions between organisms
- Students will investigate and determine the composition of soil found on the school site

White Space Question:

What is the Dust Bowl?

Agenda: Power Hour

- Complete Activity 5C Lab: Macronutrients in Soil and Activity 5D Lab: Nutrients in Soil work (40 mins)
 - HW if not completed in class

Reminder: Quiz on Soil Unit this Friday 12/08

Monday 12/04

Objectives:

- Students will predict the effects of different interactions in communities
- Students will explain how population size changes in response to environmental factors and interactions between organisms
- Students will investigate and determine the composition of soil found on the school site

White Space Question:

What three tests did you conduct on the soil samples from the school site?

- Finish Activity 5C Lab: Macronutrients in Soil
 - Complete Vocabulary, Answer Analysis Questions, Write Conclusion
- Start Activity 5D Lab: Nutrients in Soil

Friday 12/01

Objectives:

- Students will predict the effects of different interactions in communities
- Students will explain how population size changes in response to environmental factors and interactions between organisms
- Students will investigate and determine the composition of soil found on the school site

White Space Question:

What words can you use to describe the consistence of soil? Agenda:

- Start Activity 5C Lab: Macronutrients in Soil
 - Conduct pH, N, P, and K tests on soil samples collected from school site
 - Read & follow directions from soil test kit

Thursday 11/30

Objectives:

- Students will predict the effects of different interactions in communities
- Students will explain how population size changes in response to environmental factors and interactions between organisms
- Students will investigate and determine the composition of soil found on the school site

White Space Question:

What are three words used to describe the texture of soil?

Agenda: Power Hour

- Finish Activity 5B Lab: Describing Soil Scientifically (20 mins)
- Discuss and review Activity 5B lab
- Turn in Activity 5B lab student handout for grading

Wednesday 11/29

Objectives:

- Students will predict the effects of different interactions in communities
- Students will explain how population size changes in response to environmental factors and interactions between organisms
- Students will investigate and determine the composition of soil found on the school site

White Space Question:

What characteristics would you use to describe soil?

Agenda: Power 45

- Start Activity 5B Lab: Describing Soil Scientifically
 - Read and follow directions in lab packet to complete activity

Tuesday 11/28

Objectives:

- Students will predict the effects of different interactions in communities
- Students will explain how population size changes in response to environmental factors and interactions between organisms
- Students will investigate and determine the composition of soil found on the school site

White Space Question:

What do the arrows in a food web represent? Agenda:

- Take Unit 1 Interactions of Living Things Test
- Staple one-page, handwritten, note sheet to test
- Turn in test
- Read for remainder of class period

Monday 11/27

Objectives:

- Students will predict the effects of different interactions in communities
- Students will explain how population size changes in response to environmental factors and interactions between organisms
- Students will investigate and determine the composition of soil found on the school site

White Space Question:

What type of organism makes up the base of a food chain or food web? Agenda:

- O Discuss and review Unit 1 Interactions of Living Things study guide:
 - Check Unit 1 Review on pages 55 58, questions 1 16
 - Ask Mrs. Duddles questions about study guide topics
 - Make one-page, handwritten, note sheet

HW: Study for Unit 1 Test

Wednesday 11/22 – Friday 11/24

WCS District – No classes Thanksgiving Break Have a Happy Thanksgiving!

Tuesday 11/21 – Half Day PM Only

Objectives:

- Students will predict the effects of different interactions in communities
- Students will explain how population size changes in response to environmental factors and interactions between organisms
- Students will investigate and determine the composition of soil found on the school site

White Space Question:

What are some adaptations of predators? What are some adaptations of prey?

Agenda:

- Finish Unit 1 Review on pages 55 58, questions 1 16
- Ø Work on Unit 1 Study Guide

Reminder:

Prepare for Unit 1 Interactions of Living Things unit test; Tuesday 11/28

Monday 11/20

Objectives:

- Students will predict the effects of different interactions in communities
- Students will explain how population size changes in response to environmental factors and interactions between organisms
- Students will investigate and determine the composition of soil found on the school site

White Space Question:

Give one example for each of the following symbiotic relationships: mutualism, commensalism, and parasitism.

- Power Hour schedule Work on School Site Investigation Action Plan
- Discuss and review Activity 5A Lab: Identifying Predators and Prey activity
- Review Unit 1 Interactions of Living Things study guide for Unit 1 Test Tuesday 11/28
- Work on Unit 1 Review on pages 55 58, questions 1 16

Friday 11/17

Objectives:

- Students will predict the effects of different interactions in communities
- Students will explain how population size changes in response to environmental factors and interactions between organisms
- Students will investigate and determine the composition of soil found on the school site

White Space Question:

What predators can you think of that are also prey? Agenda:

- Discuss and review Activity 5 "Interactions in Communities" work
- Finish Activity 5A Lab: Identifying Predators and Prey activity
 Finish for HW if not done in class

Thursday 11/16

Objectives:

- Students will explain how population size changes in response to environmental factors and interactions between organisms
- Students will investigate and determine the composition of soil found on the school site
- Students will analyze the parts of an environment

White Space Question:

Put the following terms in order of increasing particle size: clay, sand, silt, rock Agenda:

- Work on Activity 5A Lab: Identifying Predators and Prey lab activity
- Finish Activity 5 "Interactions in Communities" book work:
 - Read pgs 42 49; Answer questions 1-3, 5, 6, 8 11, 13, 14
 - Do Lesson Review on page 51; #1 10
 - Create Vocabulary definitions. Answer Analysis Questions
 - Finish for HW if not completed in class

Wednesday 11/15

Objectives:

- Students will explain how population size changes in response to environmental factors and interactions between organisms
- Students will investigate and determine the composition of soil found on the school site
- Students will analyze the parts of an environment

White Space Question:

Give three examples of limiting factors.

Agenda:

 Discuss and review Soil Unit Lab Activity A "Soil Composition" guided reading

 Turn in Lab Activity A "Soil Composition" student handout for grading HW: Copy Activity 5 "Interactions in Communities" set up in to Science Notebook. Read pages 42 – 49 and do book questions. Set up is on Mrs. Duddles web page.

Tuesday 11/14

Objectives:

- Students will explain how population size changes in response to environmental factors and interactions between organisms
- Students will investigate and determine the composition of soil found on the school site
- Students will analyze the parts of an environment
 White Space Question:

Explain the difference between immigration and emigration. Agenda:

- Complete Soil Unit Lab Activity A "Soil Composition" guided reading
 - Read lab packet and fill in guided reading student hand-out

Monday 11/13

Objectives:

- Students will explain how population size changes in response to environmental factors and interactions between organisms
- Students will investigate and determine the composition of soil found on the school site
- Students will analyze the parts of an environment

White Space Question:

Do plants compete for resources and if so, for what resources do plants compete?

- Discuss Soil Unit Intro Lab Activity (10 mins)
 - Turn in Soil Unit Intro Lab Activity handout for grading
- O Discuss and Review Activity 4 "Population Dynamics"
 - Answer Analysis Questions 3 & 5 on a separate sheet of paper & turn in for an assessment grade

Friday 11/10 – Half Day AM Only

Objectives:

- Students will explain how population size changes in response to environmental factors and interactions between organisms
- Students will investigate and determine the composition of soil found on the school site
- Students will analyze the parts of an environment

White Space Question:

Compare Soil A and Soil B from the Soil Unit Intro Lab Activity. How are they different? How are they alike?

Agenda:

- Ø Work on Activity 4 "Population Dynamics"
 - Read pages 30 39 in Ecology book
 - Answer questions 5 9, 11, 12, and 16 18
 - Do Lesson Review on page 41; #1 11; Complete Vocabulary
 - Complete for HW if not done in class

Reminder: PM students should complete Activity 4 for HW

Thursday 11/09

Objectives:

- Students will investigate and determine the composition of soil found on the school site
- Students will analyze the parts of an environment
- Students will assess the biodiversity of surrounding area

Agenda:

 Bring a reading book and read until dismissed for Cranbrook trip at 8:00 am

Did you remember to:

pack a lunch, bring money for gift shop, arrange for transportation to and from Butcher?

Wednesday 11/08

Objectives:

- Students will investigate and determine the composition of soil found on the school site
- Students will analyze the parts of an environment
- Students will assess the biodiversity of surrounding area
 White Space Question:

Why do you think soil is important?

Agenda:

Work on Soil Unit Intro Lab Activity: "Observing Soil"
 Reminder:

Cranbrook visit tomorrow: pack a lunch, bring money for gift shop, arrange for transportation to and from Butcher

Tuesday 11/07 WCS District – No classes Election Day

Monday 11/06

Objectives:

- Students will analyze the parts of an environment
- Students will investigate the presence, health, and benefits of trees
- Students will assess the biodiversity of surrounding area
- White Space Question:

What is soil?

Agenda:

Special presentation with GFL speaker on the process of recycling waste "Toss or Turn?"

Friday 11/03

Objectives:

- Students will analyze the parts of an environment
- Students will investigate the presence, health, and benefits of trees
- Students will assess the biodiversity of surrounding area
 White Space Question:

An organism eats berries and insects, what kind of consumer is it? Agenda:

- Turn in Activity 3 "Roles in Energy Transfer" Conclusion if you did not do so yesterday
- Review proper method for collecting soil
- Collect soil from school site for experiment at later time (weather permitting)

Thursday 11/02

Objectives:

- Students will analyze the parts of an environment
- Students will investigate the presence, health, and benefits of trees
- Students will assess the biodiversity of surrounding area
 White Space Question:

Draw a food chain that could exist in your backyard.

Agenda: (Power Hour)

- Finish discussion and review of Activity 3 "Roles in Energy Transfer"
- Write Conclusion for Activity 3 on a separate sheet of paper; turn in for grading (HW if not completed in class)
- Collect soil from school site for experiment at later time (weather permitting)

Wednesday 11/01

Objectives:

- Students will analyze the parts of an environment
- Students will investigate the presence, health, and benefits of trees
- Students will assess the biodiversity of surrounding area
 White Space Question:

How do food webs show energy connections?

- O Discuss and review Activity 2B "Which Abiotic and Biotic Factors Are Found in an Ecosystem?" lab
- Turn in Activity 2B lab handout with ecosystem drawing for grading
- O Discuss and review Activity 3 "Roles in Energy Transfer"

Tuesday 10/31

Objectives:

- Students will analyze the parts of an environment
- Students will investigate the presence, health, and benefits of trees
- Students will assess the biodiversity of surrounding area
 White Space Question:

How do introduced species affect a food web?

- O Do Activity 2B "Which Abiotic and Biotic Factors Are Found in an Ecosystem?" lab; homework if not completed in class
- Did you remember to Copy Activity 4 "Population Dynamics" set up in to Science notebook?

Monday 10/30

Objectives:

- Students will analyze the parts of an environment
- Students will investigate the presence, health, and benefits of trees
- Students will assess the biodiversity of surrounding area

White Space Question:

What do the arrows in a food chain show?

Agenda:

- Continue work on initial analysis of Stream Leaders data; compile data from all 6 groups and determine mean, median, and mode values
- Copy Activity 4 "Population Dynamics" set up in to Science notebook (HW if not done in class)

HW: Copy Activity 4 "Population Dynamics" set up in to Science notebook (AM classes)

Friday 10/27 – Half Day PM Only

Objectives:

- Students will analyze the parts of an environment
- Students will investigate the presence, health, and benefits of trees
- Students will assess the biodiversity of surrounding area
 White Space Question:

How might carnivores be affected if the main plant species in a community were to disappear?

Agenda:

 Continue work on initial analysis of Stream Leaders data; compile data from all 6 groups and determine mean, median, and mode values

Thursday 10/26

Objectives:

- Students will analyze the parts of an environment
- Students will investigate the presence, health, and benefits of trees
- Students will assess the biodiversity of surrounding area
 White Space Question:
- Define the following terms: mean, median, and mode.
- Agenda: No Power Hour today
- Conduct initial analysis of Stream Leaders data; compile data for all 6 groups and determine mean, median, and mode values
- Finish Activity 3 "Roles in Energy Transfer" (if you didn't do it for homework; due Friday)

Wednesday 10/25

Objectives:

- Students will analyze the parts of an environment
- Students will investigate the presence, health, and benefits of trees
- Students will assess the biodiversity of surrounding area

White Space Question:

What does turbidity measure?

- Take an up-close look at macroinvertebrate samples from Stream Leaders collection at Delia Park
- Finish Activity 3 "Roles in Energy Transfer":
 - Do Lesson Review on page 29 (#1 11)
 - Complete Vocabulary
 - Answer Analysis Questions
 - Ø Finish Activity 3 for homework if not completed in class

Tuesday 10/24

Objectives:

- Students will analyze the parts of an environment
- Students will investigate the presence, health, and benefits of trees
- Students will assess the biodiversity of surrounding area
 White Space Question:

If the water in a stream ecosystem has a pH 2, lots of suspended sediments, > 20°C temperature, and low level of dissolved oxygen, can most organisms live in that stream?

Agenda:

Continue School Site Investigation Project work:

- Take attendance
- Get into project groups; review group letter assignment (ABCDEF)
- Go to Delia Park for Stream Leaders program

Monday 10/23

Objectives:

- Students will analyze the parts of an environment
- Students will investigate the presence, health, and benefits of trees
- Students will assess the biodiversity of surrounding area

White Space Question:

What are benthic macroinvertebrates? Why are they bio-indicators? Agenda:

Continue School Site Investigation Project work:

- Assign Stream Leaders group letters (ABCDEF) so that you know which side of the stream you will be working on Tuesday 10/24 when we go to Delia Park (don't forget to dress for working outside)
- Assign data recorders for Stream Leaders
- Learn how to use sweep nets to help determine the insect biodiversity at our school site