Life Science 7 Mrs. Duddles Q3 – Cells and Biochemistry

Friday 03/30 – Friday 04/06 WCS District – No School Spring Break Have a safe and happy break!

Thursday 03/29 – Half Day PM Only

Objectives:

- Students will discuss the chemical makeup of living things
- Students will explain how cells capture and release energy
- Students will compare the structure and function of cell parts in plant & animal cells

White Space Question:

What cell structure would you find in an eukaryotic cell but not a prokaryotic cell?

Agenda:

Slime Lab for fun!

Wednesday 03/28 – Half Day AM Only

Objectives:

- Students will discuss the chemical makeup of living things
- Students will explain how cells capture and release energy
- Students will compare the structure and function of cell parts in plant & animal cells

White Space Question:

What cell structure would you find in an eukaryotic cell but not a prokaryotic cell?

Agenda:

Slime Lab for fun!

Tuesday 03/27

Objectives:

- Students will discuss the chemical makeup of living things
- Students will explain how cells capture and release energy
- Students will compare the structure and function of cell parts in plant & animal cells

White Space Question:

Define the term molecule.

- Turn in Cells Unit Book Review for grading
- Take Cells Unit Test; you may use the Cells Unit Study Guide half sheet
- When done, turn in Test and read silently for remainder of class period

Monday 03/26

Objectives:

- Students will discuss the chemical makeup of living things
- Students will explain how cells capture and release energy
- Students will compare the structure and function of cell parts in plant & animal cells

White Space Question:

What is cell specialization?

Agenda:

- O Discuss and Review Cells Unit Book Review
- Study for Cells Unit Test (15 mins)

HW: Study for Cells Unit Test tomorrow, Tuesday 03/27

Friday 03/23

Objectives:

- Students will discuss the chemical makeup of living things
- Students will explain how cells capture and release energy
- Students will compare the structure and function of cell parts in plant & animal cells

White Space Question:

Which molecules make up proteins?

Agenda:

- Discuss and Review Activity 12 "Molecules for Life" & Activity 12A "A Closer Look" Guided Reading & Cells Unit Review
- Work on Cells Unit Book Review

HW: Finish Cells Unit Book Review & Study for Cells Unit Test Tuesday 03/27

Thursday 03/22

Objectives:

- Students will discuss the chemical makeup of living things
- Students will explain how cells capture and release energy
- Students will compare the structure and function of cell parts in plant & animal cells

White Space Question:

Plants make their own food during photosynthesis. In what group do plants belong?

Agenda:

- Complete Lab Activity 12 Quick Lab "Molecules for Life Processes" (15 mins)
- Complete Activity 12A "A Closer Look" Guided Reading & Cells Unit Review (40 mins)

Notice: Cells Unit Test Tuesday 03/27

Wednesday 03/21

Objectives:

- Students will discuss the chemical makeup of living things
- Students will explain how cells capture and release energy
- Students will compare the structure and function of cell parts in plant & animal cells
 Agenda:

NWEA Testing for ELA – No Science class today

Tuesday 03/20

Objectives:

- Students will discuss the chemical makeup of living things
- Students will explain how cells capture and release energy
- Students will compare the structure and function of cell parts in plant & animal cells

White Space Question:

What is the function of carbohydrate molecules in cells?

Agenda:

- Finish Coloring the Periodic Table activity
- PM Classes Review Timeline for School Site Project Action Plan

Notice: Cells Unit Test Monday 03/26; we will have a guided reading and review for the Cells Unit Thursday 03/22

Monday 03/19

Objectives:

- Students will discuss the chemical makeup of living things
- Students will explain how cells capture and release energy
- Students will compare the structure and function of cell parts in plant & animal cells
- White Space Question:

What is the function of lipid molecules in cells? Agenda:

- Introduction to the Periodic Table of Elements
- Listen and watch teacher demo to decode the Periodic Table

Friday 03/16

Objectives:

- Students will discuss the chemical makeup of living things
- Students will explain how cells capture and release energy
- Students will compare the structure and function of cell parts in plant & animal cells

White Space Question:

What is the function of protein molecules in cells? Agenda:

 Discuss & Review Activity 12 The Chemistry of Life guided reading

Thursday 03/15 – Half Day AM Only

Objectives:

- Students will discuss the chemical makeup of living things
- Students will explain how cells capture and release energy
- Students will compare the structure and function of cell parts in plant & animal cells

White Space Question:

Name four molecules found in cells.

- Ø Work on School Site Action Plan
 - Turn in Timeline if you have not done so
 - With your group plan how you will complete the tasks on your timeline

Wednesday 03/14

Objectives:

- Students will discuss the chemical makeup of living things
- Students will explain how cells capture and release energy
- Students will compare the structure and function of cell parts in plant & animal cells

Agenda:

 NWEA Testing for Math – No Science class today

Tuesday 03/13

Objectives:

- Students will discuss the chemical makeup of living things
- Students will explain how cells capture and release energy
- Students will compare the structure and function of cell parts in plant & animal cells

White Space Question:

Draw examples of a cell, a molecule, and an atom.

- Turn in Activity 12 The Chemistry of Life student handout for grading if you did not do so Monday
- Attend WSU STEM Day event

Monday 03/12

Objectives:

- Students will discuss the chemical makeup of living things
- Students will explain how cells capture and release energy
- Students will compare the structure and function of cell parts in plant & animal cells

White Space Question:

What is water? What atoms make up water? Describe how water is related to cells.

Agenda:

- Turn in Activity 12 The Chemistry of Life student handout for grading; due today
- Listen and participate in "Hunters of the Sky" program presented by LSNC (Leslie Science and Nature Center) guest speaker

Reminder: WSU STEM Day field trip tomorrow!

Friday 03/09 –Half Day PM

Objectives:

- Students will explain how cells capture and release energy
- Students will compare the structure and function of cell parts in plant & animal cells
- Students will use appropriate tools (microscopes) to gather, analyze, & interpret data

White Space Question:

What is the smallest unit of an element that has the properties of that element?

- Finish Activity 12 The Chemistry of Life
 - Read assigned book pages; answer book questions; do Lesson Review; complete Vocabulary; answer Analysis Questions
 - Finish for homework if not done by end of class; due Monday

Thursday 03/08

Objectives:

- Students will explain how cells capture and release energy
- Students will compare the structure and function of cell parts in plant & animal cells
- Students will use appropriate tools (microscopes) to gather, analyze, & interpret data

White Space Question:

What happens when large, multicellular organisms like humans breathe? Agenda:

- O Discuss & review Lab Activity 11B Cells Alive!
 - Turn in Activity 11B Cells Alive! student sheet for grading
- Ø Work on Activity 12 The Chemistry of Life

HW: (AM classes only)

- Finish Activity 12 The Chemistry of Life work; due Monday
- O LSNC "Hunters of the Sky" program on Monday!

Wednesday 03/07

Objectives:

- Students will explain how cells capture and release energy
- Students will compare the structure and function of cell parts in plant & animal cells
- Students will use appropriate tools (microscopes) to gather, analyze, & interpret data

Agenda:

NWEA Testing for ELA – No Science class today

Tuesday 03/06

Objectives:

- Students will explain how cells capture and release energy
- Students will compare the structure and function of cell parts in plant & animal cells
- Students will use appropriate tools (microscopes) to gather, analyze, & interpret data

White Space Question:

Where do you think plants get their energy from at night when the sun is not shining?

- Complete Lab Activity 11B Cells Alive!
 - Read and follow directions in pink lab packet
 - Record data in student sheet

Monday 03/05

Objectives:

- Students will explain how cells capture and release energy
- Students will compare the structure and function of cell parts in plant & animal cells
- Students will use appropriate tools (microscopes) to gather, analyze, & interpret data

White Space Question:

What life processes do cells undergo to maintain homeostasis? Agenda:

- Discuss & Review Activity 10 Homeostasis and Cell Processes guided reading; turn in after discussion for grading
- Preview Lab Activity 11B Cells Alive! for tomorrow's class

Friday 03/02

Objectives:

- Students will explain how cells capture and release energy
- Students will compare the structure and function of cell parts in plant & animal cells
- Students will use appropriate tools (microscopes) to gather, analyze, & interpret data

White Space Question:

What do animals do with the carbon dioxide produced in their cells during cellular respiration?

- Finish Lab Activity 11A "A Producer's Source of Energy" (20 mins)
- Ø Discuss & Review Lab Activity 11A "A Producer's Source of Energy"
- Activity 10 Homeostasis and Cell Processes guided reading due Monday 03/05

Thursday 03/01

Objectives:

- Students will explain how cells capture and release energy
- Students will compare the structure and function of cell parts in plant & animal cells
- Students will use appropriate tools (microscopes) to gather, analyze, & interpret data

White Space Question:

What is the food that plants produce during photosynthesis?

Agenda: Power Hour Schedule

- Finish Lab Activity 11A "A Producer's Source of Energy"
 - Make final observations; Answer Analysis Questions; Complete group write up for experiment design to test role of light in photosynthesis
- Finish Activity 10 Homeostasis and Cell Processes guided reading:
 - Answer Analysis Questions; Write Conclusion

Wednesday 02/28

Objectives:

- Students will explain how cells capture and release energy
- Students will compare the structure and function of cell parts in plant & animal cells
- Students will use appropriate tools (microscopes) to gather, analyze, & interpret data

White Space Question:

What is the main function of chloroplasts in a plant cell? Agenda:

- Start Lab Activity 11A "A Producer's Source of Energy"
 - Read and follow directions in pink lab packet
 - Watch teacher demonstration of BTB color change

Tuesday 02/27

Objectives:

- Students will explain how cells capture and release energy
- Students will compare the structure and function of cell parts in plant & animal cells
- Students will use appropriate tools (microscopes) to gather, analyze, & interpret data

White Space Question:

What products of photosynthesis are starting materials for cellular respiration?

- Complete Activity 10 Homeostasis and Cell Processes guided reading:
 - Read pages 50 59 in Cells and Heredity book
 - ${\it o}$ Answer questions 1 3 and 5 18
 - Do Lesson Review on page 61; #1 9

Monday 02/26

Objectives:

- Students will explain how cells capture and release energy
- Students will compare the structure and function of cell parts in plant & animal cells
- Students will use appropriate tools (microscopes) to gather, analyze, & interpret data

White Space Question:

What term describes the smallest unit that can perform all of the functions necessary for life?

- Turn in WSU STEM Day Permission; this is overdue!
- Turn in Cell Structure & Function Analogy Project poster due today
- Activities 7, 8, and 9 Quiz make up for absent students
- O Discuss & review Lab Activity 10A "A Cell Model"

Monday 02/19 – Friday 02/23 WCS District – No School Winter Break Have a safe and happy break!

Friday 02/16 – Half Day AM Only

Objectives:

- Students will explain how cells capture and release energy
- Students will compare the structure and function of cell parts in plant & animal cells
- Students will use appropriate tools (microscopes) to gather, analyze, & interpret data

White Space Question:

What are the two main functions of the cell membrane?

Agenda:

- Turn in WSU STEM Day Permission; last day today
- Activities 7, 8, and 9 Quiz make up for absent students
- Finish Lab Activity 10A "A Cell Model"; do Analysis Questions

Reminders:

Thursday 02/15

Objectives:

- Students will explain how cells capture and release energy
- Students will compare the structure and function of cell parts in plant & animal cells
- Students will use appropriate tools (microscopes) to gather, analyze, & interpret data

White Space Question:

Describe the cytoskeleton.

Agenda:

- Turn in WSU STEM Day Permission; due today 02/15
- Take quiz on Activities 7, 8, and 9
- Finish Lab Activity 10A "A Cell Model"; do Analysis Questions

Reminders:

Wednesday 02/14

Objectives:

- Students will explain how cells capture and release energy
- Students will compare the structure and function of cell parts in plant & animal cells
- Students will use appropriate tools (microscopes) to gather, analyze, & interpret data

White Space Question:

Which process, anaerobic respiration or cellular respiration, probably developed first on Earth?

Agenda:

- Turn in WSU STEM Day Permission; due tomorrow 02/15
- Complete Lab Activity 10A "A Cell Model"; read and follow directions in lab packet
- Study for quiz on Activities 7, 8, and 9; read assigned book pages & review activity handouts; Quiz tomorrow 02/15

Reminders:

Tuesday 02/13

Objectives:

- Students will explain how cells capture and release energy
- Students will compare the structure and function of cell parts in plant & animal cells
- Students will use appropriate tools (microscopes) to gather, analyze, & interpret data

White Space Question:

How is chloroplast like a solar panel on a house?

Agenda:

- ✓ Turn in WSU STEM Day Permission; due 02/15
- Discuss and review Lab Activity 8A The Cells of Producers; turn in student WS for grading
- Study for quiz on Activities 7, 8, and 9; read assigned book pages and review activity handouts; Quiz Thursday 02/15

Reminders:

Monday 02/12

Objectives:

- Students will explain how cells capture and release energy
- Students will compare the structure and function of cell parts in plant & animal cells
- Students will use appropriate tools (microscopes) to gather, analyze, & interpret data

White Space Question:

In the plant cells that you observed, which cell structures appear to be common to all of them?

Agenda:

- Turn in WSU STEM Day Permission; due 02/15
- Discuss and review Lab Activity 8A The Cells of Producers
- Finish discussion of Activity 9 Photosynthesis and Cellular Respiration
 Reminders:

Take poster paper for Cell Structure & Function Analogy Project; due 02/26. Quiz on Activities 7, 8, and 9 Wednesday 02/14 Friday 02/09

WCS – NO school due to inclement weather

Thursday 02/08

Objectives:

- Students will explain how cells capture and release energy
- Students will compare the structure and function of cell parts in plant & animal cells
- Students will use appropriate tools (microscopes) to gather, analyze, & interpret data

White Space Question:

Which plant cell structures were you able to observe under the microscope yesterday? Agenda:

- Turn in WSU STEM Day Permission; due 02/15
- Finish Lab Activity 8A The Cells of Producers; read and follow directions in lab packet (25 mins)
- Discuss and review Activity 9 Photosynthesis and Cellular respiration guided reading (30 mins)

Reminder:

Take poster paper for Cell Structure & Function Analogy Project; due 02/26. Quiz on Activities 7, 8, and 9 next Wednesday 02/14

Wednesday 02/07

Objectives:

- Students will explain how cells capture and release energy
- Students will compare the structure and function of cell parts in plant & animal cells
- Students will use appropriate tools (microscopes) to gather, analyze, & interpret data

White Space Question:

Why is the mitochondria known as the "powerhouse of the cell"?

Agenda:

- Work on Lab Activity 8A The Cells of Producers; read and follow directions in lab packet
- Continue work on Activity 9 Photosynthesis and Cellular respiration guided reading while you await your turn at the microscope
- Distribute WSU STEM Day permission forms; due 02/15

Reminder: Pick up poster paper for Cell Structure and Function Analogy Project. Project is due Monday, 02/26.

Tuesday 02/06

Objectives:

- Students will explain how cells capture and release energy
- Students will compare the structure and function of cell parts in plant & animal cells
- Students will use appropriate tools (microscopes) to gather, analyze, & interpret data

White Space Question:

How do plants get food? How do animals get food?

Agenda:

 Continue work on Activity 9 Photosynthesis and Cellular respiration guided reading

Reminder: Pick up poster paper for Cell Structure and Function Analogy Project. Project is due Monday, 02/26.

Monday 02/05

Objectives:

- Students will explain how cells capture and release energy
- Students will compare the structure and function of cell parts in plant & animal cells
- Students will use appropriate tools (microscopes) to gather, analyze, & interpret data

White Space Question:

What do you think a plant uses energy for?

Agenda:

- Finish Activity 77 Ups and Downs; discuss and review.
- Start work on Activity 9 Photosynthesis and Cellular respiration guided reading

Reminder: Pick up poster paper for Cell Structure and Function Analogy Project. **Project is due Monday**, 02/26.

Friday 02/02

Objectives:

- Students will use appropriate tools (microscopes) to gather, analyze, & interpret data
- Students will explain the components of the scientific theory of cells
- Students will compare the structure and function of cell parts in plant & animal cells

White Space Question:

This cell structure is a network of protein filaments that give shape and support to cells. What is it?

- Turn in SF Project Display Boards; due today
 - Attach grading rubric with your name(s) to the back of display board
- O Discuss and review Cell City Analogy WS
- Review Cell Structure and Function Analogy Project; distribute poster paper; project due Monday, 02/26

Thursday 02/01

Objectives:

- Students will use appropriate tools (microscopes) to gather, analyze, & interpret data
- Students will explain the components of the scientific theory of cells
- Students will compare the structure and function of cell parts in plant & animal cells

Agenda: Power Hour schedule

- Continue work on SF Project Display Boards:
 - Read and follow guidelines & grading rubric from student handout
 - O Due Friday 02/02 at beginning of class
- Finish Cell City Analogy WS; due Friday 02/02

Wednesday 01/31

Objectives:

- Students will use appropriate tools (microscopes) to gather, analyze, & interpret data
- Students will explain the components of the scientific theory of cells
- Students will compare the structure and function of cell parts in plant & animal cells

White Space Question:

What factors can limit population size?

- Work on SF Project Display Boards:
 - Read and follow guidelines & grading rubric from student handout
 - Logbook Check #2 today
- Microscope Quiz make-ups for students absent last Thursday 01/25

Tuesday 01/30

Objectives:

- Students will use appropriate tools (microscopes) to gather, analyze, & interpret data
- Students will explain the components of the scientific theory of cells
- Students will compare the structure and function of cell parts in plant & animal cells

White Space Question:

What factors can limit population size?

Agenda:

- Complete Lab Activity 77 "Ups and Downs"
 - Read & follow directions in the lab packet
 - Answer Analysis Questions on a separate sheet of line paper

HW: Complete "Cell City Analogy Worksheet" due Thursday 02/01

Monday 01/29

Objectives:

- Students will use appropriate tools (microscopes) to gather, analyze, & interpret data
- Students will explain the components of the scientific theory of cells
- Students will compare the structure and function of cell parts in plant & animal cells

White Space Question:

Which cell structures are unique (found only in) to plant cells? Agenda:

- Work on SF Project Display Boards:
 - Read and follow guidelines & grading rubric from student handout
 - Turn in final draft of Abstract if you did not do so last Friday
- Microscope Quiz make-ups for students absent last Thursday 01/25

Friday 01/26

Objectives:

- Students will use appropriate tools (microscopes) to gather, analyze, & interpret data
- Students will explain the components of the scientific theory of cells
- Students will compare the structure and function of cell parts in plant & animal cells

White Space Question:

Why can't animal cells make food?

- Work on SF Project: (10 mins)
 - Turn in final draft of Abstract today
 - Check on experiment set up, water plants, record data, update Science Fair Project Log Notebook, etc. Last day for data collection! Bring display board materials to school Monday.
- Practice using microscopes to view pond microorganisms up close:
 - View aquatic microbes under the microscope; Draw what you see

Thursday 01/25

Objectives:

- Students will use appropriate tools (microscopes) to gather, analyze, & interpret data
- Students will explain the components of the scientific theory of cells
- Students will compare the structure and function of cell parts in plant & animal cells

White Space Question:

What are some ways that plants & animals are different that might explain some of their cellular characteristics?

- Work on SF Project: (5 mins)
 - Check on experiment set up, water plants, record data, update Science Fair Project Log Notebook, etc.
- Share your SF Project abstract initial draft with your partner; write final draft. Submit initial & final drafts for grading
- Finish SF Project Logbook Check #2 today
- Take quiz on Parts of a Microscope and Total Magnification; turn in for grading

Wednesday 01/24

Objectives:

- Students will use appropriate tools (microscopes) to gather, analyze, & interpret data
- Students will explain the components of the scientific theory of cells
- Students will compare the structure and function of cell parts in plant & animal cells

White Space Question:

How does a plant benefit from having a cell wall around the cell membrane? Agenda:

- Work on SF Project: (10 mins)
 - Check on experiment set up, water plants, record data, update Science Fair Project Log Notebook, etc.
- Discuss how to write a science research project abstract
- Write SF Project abstract; submit for grading Thursday 01/25
- SF Project Logbook Check #2 today

Reminder: Quiz on Parts of a Microscope and Total Magnification tomorrow

Tuesday 01/23

Objectives:

- Students will use appropriate tools (microscopes) to gather, analyze, & interpret data
- Students will explain the components of the scientific theory of cells
- Students will compare the structure and function of cell parts in plant & animal cells

White Space Question:

How do you calculate total magnification?

Agenda:

- 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 microscope lab and "What Does Magnification Mean?" activity
- Ø Discuss and review Activity 8 "Cell Structure and Function"

Reminder: SF Project Logbook Check #2 is tomorrow

Monday 01/22

Objectives:

- Students will use appropriate tools (microscopes) to gather, analyze, & interpret data
- Students will explain the components of the scientific theory of cells
- Students will compare the structure and function of cell parts in plant & animal cells

White Space Question:

What organelles do all eukaryotes have in common?

- Work on SF Project: (10 mins)
 - Check on experiment set up, water plants, record data, update Science Fair Project Log Notebook, etc.
- O Discuss and review SF Project Display Board rubric & guidelines
- Learn more about microscopes and magnification

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.
- Ø 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