



**Life Science 7**  
**Mrs. Duddles**

**Q3 – Cells, Genetics &  
Heredity**

**Monday 04/01 - Friday 04/05**

**WCS District – Closed**

**Spring Break**

**Have a safe break!**

# Friday 03/29 Half Day PM Session Only

## Objectives:

- o Students will explain the important processes that organisms undergo to maintain stable internal conditions
- o Students will explain how cells capture and release energy
- o Students will compare the structure and function of cell parts in plant and animal cells

## White Space Question:

The energy for all ecosystems is provided by \_\_\_\_\_.

## Agenda:

- o Continue our study of the global biomes
  - o Watch BBC Planet Earth documentary series, Great Plains episode

# Important Notice

School Site Project Schedule for Q4:

**04/26 Friday** Work Day 1

**05/02 Thursday** Work Day 2

**05/10 Friday** Work Day 3

**05/15 Wednesday** Mrs. Toy will be available after school until 5 pm

**05/16 Thursday** Mrs. Duddles will be available after school until 5 pm

**05/29 Wednesday** School Site Project presentations

# Thursday 03/28

## Objectives:

- Students will explain the important processes that organisms undergo to maintain stable internal conditions
- Students will explain how cells capture and release energy
- Students will compare the structure and function of cell parts in plant and animal cells

## White Space Question:

What are the products of the cellular respiration reaction?

## Agenda:

- Activity 7, 8, & 9 Quiz make-ups for absent students
- Work on Activity 10 Homeostasis and Cell Processes directed reading
  - Complete Procedures steps 1 & 2

## Reminder:

Cell Structure & Function Analogy Project poster; due **Monday 04/15**

# Wednesday 03/27

## Objectives:

- Students will explain how cells capture and release energy
- Students will compare the structure and function of cell parts in plant and animal cells
- Students will explain the components of the scientific theory of cells

## White Space Question:

**What are the reactants of the cellular respiration reaction?**

## Agenda:

- Turn in Lab Activity 9A: A Producer's Source of Energy (Penguin section & any students who did not turn it in on Tuesday)
- Take Activity 7, 8, & 9 Quiz; Turn in quiz with study guide when done
- Read silently for remainder of class period

## Reminder:

Cell Structure & Function Analogy Project poster; due **Monday 04/15**

# Tuesday 03/26

## Objectives:

- o Students will explain how cells capture and release energy
- o Students will compare the structure and function of cell parts in plant and animal cells
- o Students will explain the components of the scientific theory of cells

## White Space Question:

What are the products of the photosynthesis reaction?

## Agenda:

- o Finish Lab Activity 9A A Producer's Source of Energy
  - o Make observations of overnight changes; Answer Analysis Questions
  - o Discuss and review

## Reminder:

Study for Activity 7, 8, & 9 Quiz; **Wednesday 03/27**

Work on Cell Structure and Function Analogy Project poster; due **Mon 04/15**

# Monday 03/25

## Objectives:

- o Students will explain how cells capture and release energy
- o Students will compare the structure and function of cell parts in plant and animal cells
- o Students will explain the components of the scientific theory of cells

## White Space Question:

What are the reactants of the photosynthesis reaction?

## Agenda:

- o Turn in Activity 9 Photosynthesis and Cellular Respiration directed reading student handout for grading
- o Work on Lab Activity 9A A Producer's Source of Energy

## Reminder:

Study for Activity 7, 8, & 9 Quiz; **Wednesday 03/27**

Work on Cell Structure and Function Analogy Project poster; due **Mon 04/15**



# Friday 03/22

## Objectives:

- Students will explain how cells capture and release energy
- Students will compare the structure and function of cell parts in plant and animal cells
- Students will explain the components of the scientific theory of cells

## White Space Question:

What is the source of energy for plants?

## Agenda:

- Discuss and review Activity 9 Photosynthesis and Cellular Respiration directed reading
- Write Conclusion; turn in Activity 9 student handout for grading
- Distribute Study Guide for Activity 7, 8, & 9 Quiz; **Wednesday 03/27**

**Reminder:** Work on Cell Structure and Function Analogy Project poster; due **Monday April 15**

# Thursday 03/21

## Objectives:

- Students will explain how cells capture and release energy
- Students will compare the structure and function of cell parts in plant and animal cells
- Students will explain the components of the scientific theory of cells

## White Space Question:

How does the folding of the inner membrane of mitochondria affect its function?

## Agenda:

- Finish Activity 9 Photosynthesis and Cellular Respiration directed reading
- Review Cell Structure and Function Analogy Project student handout; **due Monday April 15**

# Wednesday 03/20

## Objectives:

- o Students will explain how cells capture and release energy
- o Students will compare the structure and function of cell parts in plant and animal cells
- o Students will explain the components of the scientific theory of cells

## White Space Question:

What do you have in common with celery?

## Agenda:

- o Start Activity 9 Photosynthesis and Cellular Respiration directed reading
  - o Complete Procedures step 1: Read pages 66 – 75 in *Cells and Heredity* book
  - o Complete Procedures step 2: Answer questions 1, 2, and 5 – 15 from reading

# Tuesday 03/19

## Objectives:

- Students will compare the structure and function of cell parts in plant and animal cells
- 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 does a plant benefit from having a cell wall around the cell membrane?**

## Agenda:

- NWEA 7<sup>th</sup> Language Usage testing today – shorten Science/Math classes
- If done with NWEA testing early, finish Cell City Analogy Worksheet
- Turn in Activity 8 Cell Structure and Function directed reading student handout if you did not do so yesterday
- Turn in Lab Activity 8A The Cells of Producers lab handout if you did not do so yesterday

# Monday 03/18

## Objectives:

- Students will compare the structure and function of cell parts in plant and animal cells
- 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 can't animal cells make food?

## Agenda:

- Discuss and Review Activity 8 Cell Structure and Function directed reading
- Review Lab Activity 8A The Cells of Producers
- Review Cell City Analogy Worksheet (if time)

# Friday 03/15

## Objectives:

- Students will compare the structure and function of cell parts in plant and animal cells
- 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:

Which cell structure(s) are unique to animal cells (found only in animal cells)?

## Agenda:

- Continue work on Lab Activity 8A The Cells of Producers
- Work on Lab Activity 8A Analysis Questions 1 – 6 and Cell City Analogy Worksheet as you await your turn on the microscope

# Thursday 03/14 Half Day AM Session Only

## Objectives:

- Students will compare the structure and function of cell parts in plant and animal cells
- 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 is an organism's niche different from its habitat?

## Agenda:

- Continue our study of the global biomes
  - Watch BBC Planet Earth documentary series, Great Plains episode

# Wednesday 03/13

## Objectives:

- Students will compare the structure and function of cell parts in plant and animal cells
- 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:

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

## Agenda:

- Start work on Lab Activity 8A The Cells of Producers
  - Listen, read, & follow directions from teacher and lab packet



# Tuesday 03/12

## Objectives:

- Students will compare the structure and function of cell parts in plant and animal cells
- 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

## Agenda:

- NWEA 7<sup>th</sup> Math testing today – no Science class
- If done with NWEA testing early, finish Activity 8 Cell Structure and Function directed reading

# Monday 03/11

## Objectives:

- Students will compare the structure and function of cell parts in plant and animal cells
- 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:

List 3 cell structures (organelles) that you have learned about.

## Agenda:

- Listen and participate in the “Hunters of the Sky” program presented by the Leslie Science and Nature Center (LSNC)

# Friday 03/08 - Half Day PM Session Only

## Objectives:

- Students will compare the structure and function of cell parts in plant and animal cells
- 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 is the main difference between prokaryotes and eukaryotes?

## Agenda:

- Continue our study of the global biomes
  - Watch BBC Planet Earth documentary series, Ice Worlds episode

Don't miss the  
"Hunters of the Sky"  
program presented by  
the Leslie Science and  
Nature Center during  
Life Science class on  
Monday, March 11.



# Thursday 03/07

## Objectives:

- Students will compare the structure and function of cell parts in plant and animal cells
- 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 are the two types of cells?

## Agenda:

- Continue work on Activity 8 Cell Structure and Function directed reading
  - Complete Procedures Step 1, 2, 3, & 4
  - Due Monday 03/11

# Wednesday 03/06

## Objectives:

- Students will compare the structure and function of cell parts in plant and animal cells
- 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:

List three basic characteristics of all cells and organisms.

## Agenda:

- Start work on Activity 8 Cell Structure and Function directed reading
  - Complete Procedures Step 1 & 2

**Tuesday 03/05**

**Objectives:**

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

**Agenda:**

- o NWEA 7<sup>th</sup> Grade Reading Test today – No Science class**

Don't miss the  
“Hunters of the Sky”  
program presented by  
the Leslie Science and  
Nature Center during  
Life Science class on  
Monday, March 11.





# Monday 03/04

## 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?

## Agenda:

- Finish discussion and review for Activity 7 The Characteristics of Cells directed reading
- Write Conclusion; turn in Activity 7 student handout for grading
- Discuss informational text guided reading (if time)
- Pass back & review Parts of a Microscope quiz

# Friday 03/01

## 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 are some basic life processes of all organisms?**

## Agenda:

- Microscope Quiz make-ups (for absent students)
- Finish Activity 7 The Characteristics of Cells directed reading work (15 mins)
- Discuss and review Activity 7 The Characteristics of Cells directed reading

# Thursday 02/28

## 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 is the total magnification if you use the eyepiece and the medium objective lens?

## Agenda:

- Take quiz on Parts of a Microscope; turn in when completed
- Continue work on Activity 7 The Characteristics of Cells directed reading
  - Complete Procedure steps 1, 2, 3, and 4

# Wednesday 02/27

## 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 do you adjust the amount of light that comes through the aperture?

## Agenda:

- Turn in guided reading for “Mmmm ... Flavorful Food!” article; due today
- Work on Activity 7 The Characteristics of Cells directed reading
  - Complete Procedure steps 1 & 2
- Study for Parts of a Microscope quiz; review notes & magnification WS

**Reminder: Quiz on Parts of a Microscope & Magnification Thursday 02/28**

# Tuesday 02/26

## Objectives:

- o Students will explain the flow of energy and the cycles of matter in ecosystems
- o Students will relate the roles of organisms to the transfer of energy in food chains and food webs

## White Space Question:

How does increasing magnification change what you can see?

## Agenda:

- o Search for micro-organisms from hay infusion using lab microscope; Draw what you see in your Science notebook
- o Practice informational text reading:
  - o Finish guided reading for “Mmmm ... Flavorful Food!” article; due Wednesday 02/27

**Reminder: Quiz on Parts of a Microscope & Magnification Thursday 02/28**

# Monday 02/25

## Objectives:

- Students will explain the flow of energy and the cycles of matter in ecosystems
- Students will relate the roles of organisms to the transfer of energy in food chains and food webs

## White Space Question:

What is the proper way to store a microscope when you have finished using it?

## Agenda:

- Discuss and review Lab Activity 7A: Introduction to the Microscope student handout
- Search for micro-organisms from hay infusion using lab microscope
- Practice informational text reading; complete guided reading for “Mmmm ... Flavorful Food!” article

**Monday 02/18 - Friday 02/22**

**WCS District – Closed**

**Winter Break**

**Have a safe break!**

# Friday 02/15 – Half Day AM Session Only

## Objectives:

- o Students will explain the flow of energy and the cycles of matter in ecosystems
- o Students will relate the roles of organisms to the transfer of energy in food chains and food webs

## White Space Question:

What is the proper way to store a microscope when you have finished using it?

## Agenda:

- o Practice using lab microscope; Complete Lab Activity 7A: Introduction to the Microscope questions (15 mins)
- o Continue our study of the global biomes
  - o Watch BBC Planet Earth documentary series, Ice Worlds episode



# Thursday 02/14

## Objectives:

- Students will explain the flow of energy and the cycles of matter in ecosystems
- Students will relate the roles of organisms to the transfer of energy in food chains and food webs

## White Space Question:

When you first focus a microscope, should you start at the highest objective or the lowest objective?

## Agenda:

- Practice using lab microscope; Complete Lab Activity 7A: Introduction to the Microscope
- Practice informational text reading; complete guided reading for “Mmmm ... Flavorful Food!” article

# Wednesday 02/13

## Objectives:

- o Students will explain the flow of energy and the cycles of matter in ecosystems
- o Students will relate the roles of organisms to the transfer of energy in food chains and food webs

## White Space Question:

Explain how to find the total magnification of an object when using microscope in lab.

## Agenda:

- o Discuss and review the meaning of magnification (What does magnification mean? WS); turn in WS for grading
- o Practice using lab microscope; Complete Lab Activity 7A: Introduction to the Microscope
- o Practice informational text reading; complete guided reading for “Mmmm ... Flavorful Food!” article

**Tuesday 02/12**

**WCS District – Closed  
Due to inclement weather**

# Monday 02/11

## Objectives:

- Students will explain the flow of energy and the cycles of matter in ecosystems
- Students will relate the roles of organisms to the transfer of energy in food chains and food webs

## White Space Question:

What is energy?

## Agenda:

- Start Introduction to the Microscope notes
- Learn about magnification (complete What does magnification mean? WS)
- Examine the light microscopes available in the lab; learn how to focus objectives

# Friday 02/08

## Objectives:

- Students will explain the flow of energy and the cycles of matter in ecosystems
- Students will relate the roles of organisms to the transfer of energy in food chains and food webs

## White Space Question:

Based on what you know about the water cycle, how do fertilizers, which are used on land, cause pollution in bodies of water?

## Agenda:

- Finish School Site Investigation implementation plan time-line; meet with Mrs. Duddles to discuss time-line
- Turn in Activity 6 Energy & Matter in Ecosystems directed reading Part 2 quiz
- Start Introduction to the Microscope notes (if time)

# Thursday 02/07

## Objectives:

- o Students will explain the flow of energy and the cycles of matter in ecosystems
- o Students will relate the roles of organisms to the transfer of energy in food chains and food webs

## White Space Question:

Are producers making new matter and energy?

## Agenda:

- o Open book/notes quiz on Activity 6 Energy & Matter in Ecosystems directed reading Part 1 and 2
- o Turn in Activity 6 student handout for grading with Conclusion

**Wednesday 02/06**

**WCS District – Closed  
Due to inclement weather**

# Tuesday 02/05

## Objectives:

- Students will explain the flow of energy and the cycles of matter in ecosystems
- Students will relate the roles of organisms to the transfer of energy in food chains and food webs

## White Space Question:

What are two things food provides to an organism?

## Agenda:

- Finish School Site Investigation implementation plan time-line; turn in completed student handout for grading (10 mins)
- Discuss and review Activity 6 Energy and Matter in Ecosystems directed reading
  - Write Conclusion; turn in Act. 6 student handout for grading



# Monday 02/04

## Objectives:

- Students will explain the flow of energy and the cycles of matter in ecosystems
- Students will relate the roles of organisms to the transfer of energy in food chains and food webs

## White Space Question:

Where do plants get their food? What ecological role do plants perform?

## Agenda:

- Work with School Site Investigation group to plan implementation of your Action Plan
- Review SF Project Display Board with Mrs. Duddles

Reminder: Finish Activity 6 Energy and Matter in Ecosystems directed reading

# Monday 02/04

A **stakeholder** is a person or group who has an interest -- vested or otherwise -- in an organization and **whose support is required** in order for a plan or project to be successful.

Examples of stakeholders at Butcher (or typical school building):

- o Students
- o Teachers
- o Custodians/ Maintenance & facilities people/ Support staff
- o Administration (principal and assistant principals)

# Friday 02/01

## Objectives:

- Students will explain the flow of energy and the cycles of matter in ecosystems
- Students will relate the roles of organisms to the transfer of energy in food chains and food webs

## White Space Question:

Where do plants get their food? What ecological role do plants perform?

## Agenda:

- Turn in SF Project Display Board due Tuesday 01/29
- Finish Activity 6 Energy and Matter in Ecosystems directed reading:
  - Complete Procedure steps 1 – 4
  - Be ready for discussion and review Monday 02/04

**Monday 01/28 - Thursday 01/31**

**WCS District – Closed**

**Due to inclement weather**

# Friday 01/25

## Objectives:

- o Students will explain the flow of energy and the cycles of matter in ecosystems
- o Students will relate the roles of organisms to the transfer of energy in food chains and food webs

## White Space Question:

List three things that you need to accomplish for your SF Project today.

## Agenda:

- o Work on SF Project with partners to complete remaining components of project: abstract, conclusion, project display board, log notebook check #2
- o SF Project Log Notebook check #2 is **due today**
- o SF Project Display Board is **due Tuesday 01/29**

# Thursday 01/24

## Objectives:

- o Students will explain the flow of energy and the cycles of matter in ecosystems
- o Students will relate the roles of organisms to the transfer of energy in food chains and food webs

## White Space Question:

List three things that you need to accomplish for your SF Project today.

## Agenda:

- o Work on SF Project with partners to complete remaining components of project: abstract, conclusion, project display board, log notebook check #2
- o Turn in SF Project Log Notebook check #2 **today or Friday 01/25**
- o SF Project Display Board is **due Tuesday 01/29**

**Wednesday 01/23**

**WCS District – Closed**

**Due to inclement weather**

# Tuesday 01/22

## Objectives:

- o Students will explain the flow of energy and the cycles of matter in ecosystems
- o Students will relate the roles of organisms to the transfer of energy in food chains and food webs

## White Space Question:

What are some causes for a population crash?

## Agenda:

- o SF Project check with partners to plan for completion of project; turn in Abstract if you have not done so (10 mins)
- o Start Activity 6 Energy and Matter in Ecosystems
  - o Complete Procedures steps 1 & 2 today



**Monday 01/21**

**WCS District – No School  
MLK Holiday**

# Friday 01/18 Half Day PM Session Only

## Objectives:

- o Students will explain the flow of energy and the cycles of matter in ecosystems
- o Students will relate the roles of organisms to the transfer of energy in food chains and food webs

## White Space Question:

What are three things that we need to do to reduce pollution of our watershed from storm-water run-off?

## Agenda:

- o SF Project check with partners to plan for completion of project; turn in Abstract if you have not done so (15 mins)
- o Continue our study of the global biomes
  - o Watch BBC Planet Earth documentary series, Jungles episode

# Thursday 01/17

## Objectives:

- o Students will explain the flow of energy and the cycles of matter in ecosystems
- o Students will relate the roles of organisms to the transfer of energy in food chains and food webs

## White Space Question:

How does energy flow from the sun through a food web?

## Agenda:

- o SF Project check with partners
- o Review SF Project Display Board guidelines and rubric; display board **due Tuesday 01/29**
- o Abstract Writing Lesson for SF Project
  - o Listen and follow along to learn how to write an abstract for your SF research experiment

# Wednesday 01/16

## 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 relate the roles of organisms to the transfer of energy in food chains and food webs

## White Space Question:

How do consumers get energy to function?

## Agenda:

- Turn in Ecology Unit 1 Review WS for grading
- Complete Ecology Unit 1 Test
- Turn in test with your sheet of handwritten notes when complete
- Read silently for remainder of class

# Tuesday 01/15

## Objectives:

- o Students will predict the effects of different interactions in communities
- o Students will explain how population size changes in response to environmental factors and interactions between organisms
- o Students will relate the roles of organisms to the transfer of energy in food chains and food webs

## White Space Question:

What is the type of symbiosis where both organisms benefit? Give an example.

## Agenda:

- o Discuss & review Ecology Unit 1 Review WS to prepare for Unit Test
- o Continue work on Ecology Unit 1 Study Guide
  - o You may have 1 lined sheet of handwritten notes to use during the test
- o Study for Unit Test; **Unit Test is Wednesday 01/16**

# Monday 01/14

## Objectives:

- o Students will predict the effects of different interactions in communities
- o Students will explain how population size changes in response to environmental factors and interactions between organisms
- o Students will relate the roles of organisms to the transfer of energy in food chains and food webs

## White Space Question:

What is the main difference between a community and an ecosystem?

## Agenda:

- o Finish Ecology Unit 1 Review WS to prepare for Unit Test
- o Work on Ecology Unit 1 Study Guide
  - o You may have **1 lined sheet of handwritten notes** to use during the test

**Reminder: Ecology Unit Test is Wednesday 01/16; this will be your Mid-Term exam**