Life Science 7
Mrs. Duddles

Q3 –Cells and Heredity

Monday 04/04 – Friday 04/08

WCS – No School

Spring Break

Friday 04/01 – ½ Day PM Only

Objectives:

- Students will describe how organisms maintain homeostasis
- Students will understand the levels of organization in living things
- Students will understand that all matter is made of atoms
- Students will understand the theory of cells

White Space Question:

Give an example of an organ that belongs to more than one organ system.

Agenda:

- Finish work for Activity 13 "Homeostasis and Cell Processes"
  - Complete book reading & questions (read pgs 50 – 59; answer questions #1 – 3 & 5 – 18)
  - Complete Vocabulary & Lesson Review, Answer Analysis Questions & Write Conclusion

Thursday 03/31

Objectives:

- Students will describe how organisms maintain homeostasis
- Students will understand the levels of organization in living things
- Students will understand that all matter is made of atoms
- Students will understand the theory of cells

White Space Question:

How do the digestive system and the circulatory system work together in a multicellular organism?

Agenda:

- Discuss and Review "Introduction to Body Systems" packet
- Continue working on Activity 13 "Homeostasis and Cell Processes"
  - Complete book reading & questions (read pgs 50 – 59; answer questions #1 – 3 & 5 – 18)
  - Complete Vocabulary & Lesson Review, Answer Analysis Questions & Write Conclusion

Wednesday 03/30

Objectives:

- Students will understand the levels of organization in living things
- Students will understand that all matter is made of atoms
- Students will understand the theory of cells

White Space Question:

Name 3 human body systems.

Agenda:

- Finish "Introduction to Body Systems" packet
- Copy Activity 13 "Homeostasis and Cell Processes" set up in to Science notebook
- Start Activity 13 book reading & questions
  - Read pages 50 – 59 in *Cells and Heredity* book
  - Answer questions #1 – 3 and 5 - 18

Tuesday 03/29

Objectives:

- Students will understand the levels of organization in living things
- Students will understand that all matter is made of atoms
- Students will understand the theory of cells

White Space Question:

What structures do all eukaryotic cells have in common?

Agenda:

- Continue Human Body Systems Project Presentations
- You have 3 minutes to set up your presentation when it's your turn to present
- Work on "Introduction to Body Systems" packet if time

Monday 03/28

Objectives:

- Students will understand the levels of organization in living things
- Students will understand that all matter is made of atoms
- Students will understand the theory of cells

White Space Question:

What are some ways body systems work together?

Agenda:

- Human Body Systems Project Presentations start today
- Determine order of group presentations voluntarily and randomly by luck of the draw
- You have 3 minutes to set up your presentation when it's your turn to present

Friday 03/25

WCS – No School

Good Friday

Thursday 03/24 – ½ Day AM Only

Objectives:

- Students will understand the levels of organization in living things
- Students will understand that all matter is made of atoms
- Students will understand the theory of cells

White Space Question:

What are some examples pf organs in animals? What are some examples of organs in plants?

Agenda:

- Continue work on Human Body Systems project:
  - Investigate the function(s) of body system, it's major organs, tissues & cells
  - Plan presentation format, write script, practice & rehearse, etc.
- Reminder: Presentations start Monday 03/28

Wednesday 03/23

Objectives:

- Students will understand the levels of organization in living things
- Students will understand that all matter is made of atoms
- Students will understand the theory of cells

White Space Question:

What structures make up organs?

Agenda:

- Continue work on Human Body Systems project:
  - Investigate the function(s) of body system, it's major organs, tissues & cells
  - Work on poster lay-out; assemble poster components
  - Turn in poster for grading; Poster is due today
  - Plan presentation format, write script, practice & rehearse, etc.
- Reminder: Presentations start Monday 03/28

Tuesday 03/22

Objectives:

- Students will understand the levels of organization in living things
- Students will understand that all matter is made of atoms
- Students will understand the theory of cells

White Space Question:

What structures make up tissues?

Agenda:

- Continue work on Human Body Systems project:
  - Investigate the function(s) of body system, it's major organs, tissues & cells
  - Create components for poster including original drawings, text, etc.
  - Work on poster lay-out; assemble poster components
  - Plan presentation format, write script, practice & rehearse, etc.
- Reminder: Poster is due Wednesday 03/23 & Presentations start Monday 03/28

Monday 03/21

Objectives:

- Students will understand the levels of organization in living things
- Students will understand that all matter is made of atoms
- Students will understand the theory of cells

White Space Question:

How does the structure of your pencil relate to its function?

Agenda:

- Continue work on Human Body Systems project:
  - Investigate the function(s) of body system, it's major organs, tissues & cells
  - Create components for poster including original drawings, text, etc.
  - Work on poster lay-out; assemble poster components
  - Plan presentation format, write script, practice & rehearse, etc.
- Reminder: Poster is due Wednesday 03/23

Friday 03/18

Objectives:

- Students will understand that all matter is made of atoms
- Students will discuss the chemical makeup of living things
- Students will understand the theory of cells
- Students will explain how cells capture and release energy

White Space Question:

Think about the functions of a red blood cell and a nerve cell. How do the structures of these specialized cells relate to their functions?

Agenda:

- Continue work on Human Body Systems project:
  - Investigate the function(s) of body system, it's major organs, tissues & cells
  - Create components for poster including original drawings, text, etc.
  - Work on poster lay-out; assemble poster components
  - Plan presentation format, write script, practice, etc.

Thursday 03/17

Objectives:

- Students will understand that all matter is made of atoms
- Students will discuss the chemical makeup of living things
- Students will understand the theory of cells
- Students will explain how cells capture and release energy

White Space Question:

What are the different levels of cellular organization in a living thing?

Agenda:

- Continue work on Human Body Systems project:
  - Investigate the function(s) of body system, it's major organs, tissues & cells
  - Create components for poster including original drawings, text, etc.
  - Work on poster lay-out; assemble poster components
  - Plan presentation format, write script, practice, etc.

Wednesday 03/16

Objectives:

- Students will understand that all matter is made of atoms
- Students will discuss the chemical makeup of living things
- Students will understand the theory of cells
- Students will explain how cells capture and release energy

White Space Question (from Tuesday):

What is one major difference between a specialized cell and a unicellular organism?

Agenda:

- Discuss and Review Activity 12 “Levels of Cellular Organization” book reading & questions, Lesson Review, & Analysis Questions
- Continue work on Human Body Systems project if time

Tuesday 03/15

Objectives:

- Students will understand that all matter is made of atoms
- Students will discuss the chemical makeup of living things
- Students will understand the theory of cells
- Students will explain how cells capture and release energy

White Space Question (do this for HW):

What is one major difference between a specialized cell and a unicellular organism?

Agenda:

- Start work on Human Body Systems Project
  - Choose Body System that your group will investigate
  - Review grading rubric & ask questions or clarify project goals
  - Start researching your group's body system using classroom resources, including laptops, *The Human Body* book, & handouts

HW: Finish Activity 12 "Levels of Cellular Organization" work; be ready for discussion & review Wednesday 03/16

Monday 03/14

Objectives:

- Students will understand that all matter is made of atoms
- Students will discuss the chemical makeup of living things
- Students will understand the theory of cells
- Students will explain how cells capture and release energy

White Space Question:

Why is it important for particles to be able to pass through the cell membrane?

Agenda:

- Finish Activity 11A "A Cell Model" lab (PM classes)
  - Answer Analysis Questions & Write Conclusion
  - Discuss and Review
- Work on Activity 12 "Levels of Cellular Organization" book reading & questions (AM & PM classes)
- Discuss & Review Human Body Systems Project handout with lab group
- Students who missed Science Notebook check (Activities 10B, 10C, 11, and 11A) from last Wednesday, see me today

Friday 03/11 – ½ Day AM Only

Objectives:

- Students will understand that all matter is made of atoms
- Students will discuss the chemical makeup of living things
- Students will understand the theory of cells
- Students will explain how cells capture and release energy

White Space Question:

What is the function of a cell membrane?

Agenda:

- Finish Activity 11A "A Cell Model" lab
  - Answer Analysis Questions & Write Conclusion
  - Discuss and Review
- Work on Activity 12 "Levels of Cellular Organization" book reading & questions
- AM Students who missed Science Notebook check (Activities 10B, 10C, 11, and 11A) from Wednesday, see me today

Thursday 03/10

Objectives:

- Students will understand that all matter is made of atoms
- Students will discuss the chemical makeup of living things
- Students will understand the theory of cells
- Students will explain how cells capture and release energy

White Space Question:

What cell structure is analogous to City Hall?

Agenda:

- Start Activity 11A "A Cell Model" lab
  - Read and follow lab packet carefully to understand what you will be doing today in lab
  - Follow directions in lab packet & listen for teacher directions
- Students who missed Science Notebook check (Activities 10B, 10C, 11, and 11A) from Wednesday, see me by Monday 03/14

HW: Copy Activity 12 "Levels of Cellular Organization" set up in to Science Notebook

Wednesday 03/09

Objectives:

- Students will understand that all matter is made of atoms
- Students will discuss the chemical makeup of living things
- Students will understand the theory of cells
- Students will explain how cells capture and release energy

White Space Question:

How are plant and animal cells alike and different?

Agenda:

- Finish discussion and review of Activity 11 “Cell Structure and Function” (AM)
- Complete Cell City Analogy WS; you may work with your elbow partner to complete assignment
- Science Notebook check: Activities 10B, 10C, 11, and 11A

Tuesday 03/08

WCS – No School

Election Day

Monday 03/07

Objectives:

- Students will understand that all matter is made of atoms
- Students will discuss the chemical makeup of living things
- Students will understand the theory of cells
- Students will explain how cells capture and release energy

White Space Question:

What organelles (cell structures) do all eukaryotes have in common?

Agenda:

- Finish discussion and review of Activity 11 "Cell Structure and Function"
- "Time for Slime!" lab activity

HW: Copy Activity 11A "A Cell Model" lab set up in to Science notebook.

Friday 03/04

Objectives:

- Students will understand that all matter is made of atoms
- Students will discuss the chemical makeup of living things
- Students will understand the theory of cells
- Students will explain how cells capture and release energy

White Space Question:

Make a drawing to show the difference between an atom and a molecule.

Agenda:

- Discuss and Review Activity 10C “Modeling Molecules” lab activity (AM classes)
- Discuss and Review Activity 11 “Cell Structure and Function” (ALL)

Thursday 03/03 – ½ Day PM Only

Objectives:

- Students will understand that all matter is made of atoms
- Students will discuss the chemical makeup of living things
- Students will understand the theory of cells
- Students will explain how cells capture and release energy

White Space Question:

Name an element that is a metalloid.

Agenda:

- Finish Activity 10C "Modeling Molecules" lab activity
  - Discuss and review

HW: Don't forget to finish work for Activity 11 "Cell Structure and Function" if you have not done so. Be ready for class discussion on Friday 03/04

Wednesday 03/02

Objectives:

- Students will understand that all matter is made of atoms
- Students will discuss the chemical makeup of living things
- Students will understand the theory of cells
- Students will explain how cells capture and release energy

White Space Question:

Name the two most reactive families of elements.

Agenda:

- Continue work on Activity 10C "Modeling Molecules" lab activity
  - Read and follow directions in lab packet to make simple and complex molecules using atoms of H, C, O, and N
  - Answer Analysis Questions in lab handout

HW: Don't forget to finish work for Activity 11 "Cell Structure and Function" if you have not done so. Be ready for class discussion on Friday 03/04

Tuesday 03/01

Objectives:

- Students will understand that all matter is made of atoms
- Students will discuss the chemical makeup of living things
- Students will understand the theory of cells
- Students will explain how cells capture and release energy

White Space Question:

How many valence electrons do the elements in Group 14 have?

Agenda:

- Finish work on Activity 11 "Cell Structure and Function" (25 mins):
  - Complete assigned book reading & questions & Vocabulary handout. Turn in Vocabulary handout for completion grade
  - Do Lesson Review on page 35, questions 1 – 11
  - Answer Analysis Questions & Write Conclusion
- Start Activity 10C "Modeling Molecules" lab activity

Monday 02/29

Objectives:

- Students will understand that all matter is made of atoms
- Students will discuss the chemical makeup of living things
- Students will understand the theory of cells
- Students will explain how cells capture and release energy

Agenda:

- Continue work on Activity 11 “Cell Structure and Function”:
  - Read pages 24 – 33 in Cells and Heredity book; answer questions 1 – 3 and 5 – 19
  - Complete Activity 11 Vocabulary handout
  - Do Lesson Review on page 35, questions 1 – 11.
  - Answer Analysis Questions

Friday 02/26

Objectives:

- Students will understand that all matter is made of atoms
- Students will discuss the chemical makeup of living things
- Students will understand the theory of cells
- Students will explain how cells capture and release energy

White Space Question:

The chemical formula for sulfuric acid is H_2SO_4. What are the elements that make up sulfuric acid?

Agenda:

- Set up Activity 11 “Cell Structure and Function” in Science notebook
- Start Activity 11 work:
  - Read pages 24 – 33 in Cells and Heredity book; answer questions 1 – 3 and 5 – 19
  - Complete Activity 11 Vocabulary handout

Thursday 02/25

WCS – No School due to inclement weather

Wednesday 02/24

Objectives:

- Students will understand that all matter is made of atoms
- Students will discuss the chemical makeup of living things
- Students will understand the theory of cells
- Students will explain how cells capture and release energy

White Space Question:

How are compounds different from the elements that form them?

Agenda:

- Work on Periodic Table coloring activity
  - Follow teacher directions to color code Periodic Table
  - Read and complete information sheet
  - Turn in completed Periodic Table for grading

Tuesday 02/23

Objectives:

- Students will understand that all matter is made of atoms
- Students will discuss the chemical makeup of living things
- Students will understand the theory of cells
- Students will explain how cells capture and release energy

White Space Question:

What is the smallest particle that is characteristic of an element?

Agenda:

- Finish Activity 10B "Elements and the Periodic Table" guided reading lab activity
- Discuss and Review Activity 10B

Monday 02/22

Objectives:

- Students will understand that all matter is made of atoms
- Students will discuss the chemical makeup of living things
- Students will understand the theory of cells
- Students will explain how cells capture and release energy

White Space Question:

Which family of elements is the least reactive?

Agenda:

- HOUSE meeting schedule (shortened class periods)
- Start Activity 10B "Elements and the Periodic Table" guided reading lab activity
  - Read and follow directions in Activity 10B "Elements and the Periodic Table" lab packet
  - As you read the information in the lab packet, answer the questions in Activity 10B lab handout

Monday 02/15 – Friday 02/19

WCS District – No School

Winter Break

Friday 02/12 – ½ Day AM Only

Objectives:

- Students will discuss the chemical makeup of living things
- Students will understand the theory of cells
- Students will explain how cells capture and release energy

White Space Question:

Which molecule in a cell carries the information for cell processes such as making molecules?

Agenda:

- View BBC *Planet Earth* documentary on Fresh Water biomes

Thursday 02/11

Objectives:

- Students will discuss the chemical makeup of living things
- Students will understand the theory of cells
- Students will explain how cells capture and release energy

White Space Question:

Name the four main types of molecules in the cell.

Agenda:

- Discuss & review Activity 10A “Families of Elements” lab activity
- Looking for signs of micro-life:
  - Prepare slides of pond water
  - Use microscopes to find microscopic organisms
  - Draw what you see under magnification

Wednesday 02/10

Objectives:

- Students will discuss the chemical makeup of living things
- Students will understand the theory of cells
- Students will explain how cells capture and release energy

White Space Question:

Give an example of a physical property. Give an example of a chemical property.

Agenda:

- On a separate sheet of paper, answer and submit the following Analysis Questions for an assessment grade:
  1. Give an example of an atom and an example of a molecule.
  2. Rank the following terms by level of organization: *cell, atom, molecule*. Explain your ranking.
- Finish Activity 10A "Families of Elements" lab activity; Answer Analysis Questions #1 – 5; Discuss and Review

Tuesday 02/09

Objectives:

- Students will discuss the chemical makeup of living things
- Students will understand the theory of cells
- Students will explain how cells capture and release energy

White Space Question:

Why is water important in cells?

Agenda:

- Start Activity 10A "Families of Elements" lab activity
  - What are physical and chemical properties? How can you use physical and chemical properties to group elements?
  - Read and follow directions in lab packet

Monday 02/08

Objectives:

- Students will discuss the chemical makeup of living things
- Students will understand the theory of cells
- Students will explain how cells capture and release energy

White Space Question:

What is water? What atoms make up water?

Agenda:

- Discuss and Review Activity 10 “The Chemistry of Life”
- Copy Activity 10A “Families of Elements” lab set up in to Science notebook

Friday 02/05

Objectives:

- Students will discuss the chemical makeup of living things
- Students will understand the theory of cells
- Students will explain how cells capture and release energy

White Space Question:

What are the products of cellular respiration?

Agenda:

- Finish Activity 10 “The Chemistry of Life” assigned book reading & questions:
  - Do Lesson Review on page 23, questions 1 – 9
  - Complete Vocabulary, Answer Analysis Questions, Write Conclusion
- Science Notebook check today

Thursday 02/04

Objectives:

- Students will discuss the chemical makeup of living things
- Students will understand the theory of cells
- Students will explain how cells capture and release energy

White Space Question:

Explain the process of cellular respiration. Where does cellular respiration take place within the cell?

Agenda:

- Work on Activity 10 "The Chemistry of Life" assigned book reading & questions:
  - Read pages 14 – 21 in *Cells and Heredity* book
  - Answer questions 1 – 3 & 5 – 13
  - Do Lesson Review on page 23, questions 1 - 9

Wednesday 02/03

Objectives:

- Students will understand the theory of cells
- Students will know how to use a microscope
- Students will explain how cells capture and release energy

White Space Question:

Why do living organisms like humans and elephants take in oxygen?

Agenda:

- Finish Activity 9A Lab: "Cells Alive!" Analysis Questions
- Discuss and Review Activity 9A
- Copy Activity 10 "The Chemistry of Life" in to Science notebook; finish for HW if not done in class

Tuesday 02/02

Objectives:

- Students will understand the theory of cells
- Students will know how to use a microscope
- Students will explain how cells capture and release energy

White Space Question:

What type of cell makes up all bacteria? What type of cells are plants and animals made of?

Agenda:

- Start Activity 9A Lab: "Cells Alive!"
  - Listen & follow teacher directions to complete the lab
  - Clean up & return lab materials to lab tray

Monday 02/01

Objectives:

- Students will understand the theory of cells
- Students will know how to use a microscope
- Students will explain how cells capture and release energy

White Space Question:

Describe the main difference between prokaryotic and eukaryotic cells.

Agenda:

- Discuss and Review Activity 9 “The Characteristics of Cells”
- Copy Activity 9A Lab “Cells Alive!” in to Science notebook

Friday 01/29

Objectives:

- Students will understand the theory of cells
- Students will know how to use a microscope
- Students will explain how cells capture and release energy

White Space Question:

Which cell structure in a plant cell is most important in food production?

Agenda:

- Finish Activity 9 “The Characteristics of Cells”:
  - Complete Vocabulary
  - Answer Analysis Questions
  - Write Conclusion
  - Be ready for discussion & review on Monday

Thursday 01/28

Objectives:

- Students will understand the theory of cells
- Students will know how to use a microscope
- Students will explain how cells capture and release energy

White Space Question:

What type of cell makes up all bacteria?

Agenda:

- Discuss Activity 8C “The Cells of Producers” assessment
- Discuss and review Activity 9 “The Characteristics of Cells” book reading & questions

Wednesday 01/27

Objectives:

- Students will understand the theory of cells
- Students will know how to use a microscope
- Students will explain how cells capture and release energy

White Space Question:

Give an example of an organism carrying out life processes.

Agenda:

- Start Activity 9 "The Characteristics of Cells":
  - Read pages 4 – 11 in *Cells and Heredity* book
  - Answer questions 1, 2, 3, and 5 – 13
  - Do Lesson Review on page 13, questions 1 – 9

Tuesday 01/26

Objectives:

- Students will understand the theory of cells
- Students will know how to use a microscope
- Students will explain how cells capture and release energy

White Space Question:

What are some basic life processes of all organisms?

Agenda:

- Discuss and Review Activity 8C "The Cells of Producers"
- Turn in Activity 8C Data Sheet for lab grade
- Write Conclusion for Activity 8C; turn in for assessment grade

HW: Copy Activity 9 "The Characteristics of Cells" set up in to Science notebook

Monday 01/25

Objectives:

- Students will know how to use a microscope
- Students will explain how cells capture and release energy

White Space Question:

List three things you have learned about handling and using a microscope.

Agenda:

- Finish Activity 8C “The Cells of Producers” lab
  - Observe prepared slides under low, medium, & high power objectives
  - Re-draw images seen under microscope in data sheet; add details
  - Answer Analysis Questions 1- 6 from lab packet in notebook
  - Complete Vocabulary and Write Conclusion
  - Discuss and review

Friday 01/22

Objectives:

- Students will know how to use a microscope
- Students will explain how cells capture and release energy

White Space Question:

The microscope is one important tool used by scientists to study living things. What other tools are used by life scientists? Think about tools used by doctors and in laboratories.

Agenda:

- Finish Activity 8C "The Cells of Producers" lab
  - Observe prepared slides under low, medium, & high power objectives
  - Re-draw images seen under microscope in data sheet; add details
  - Answer Analysis Questions 1- 6 from lab packet in notebook
  - Complete Vocabulary and Write Conclusion

Thursday 01/21

Objectives:

- Students will know how to use a microscope
- Students will explain how cells capture and release energy

White Space Question:

How does the microscope change the image you see? (Hint: Compare the material you placed on the stage with what you see through the eyepiece.)

Agenda:

- Work on Activity 8C "The Cells of Producers" lab
  - Read & follow directions in lab packet
  - Prepare wet mount slides of celery stalk, Elodea, & onion slice
  - Observe slides under low, medium, & high power objectives
  - Draw images seen under microscope in data sheet
  - Answer Analysis Questions 1- 6 from lab packet in notebook
  - Clean up microscope lab stations

Wednesday 01/20

Objectives:

- Students will know how to use a microscope
- Students will explain how cells capture and release energy

White Space Question:

What is the magnification of the ocular?

Agenda:

- Work on Activity 8B "Introduction to Microscope" lab
  - Listen and watch teacher demonstrate lab
  - Read and follow directions in lab packet
  - Draw images seen under microscope in data sheet
  - Answer Analysis Questions
  - Clean up microscope lab stations

HW: Copy Activity 8C "The Cells of Producers" set up in to Science notebook

Tuesday 01/19

Objectives:

- Students will know how to use a microscope
- Students will explain how cells capture and release energy

White Space Question:

How do you find the total magnification?

Agenda:

- Watch teacher demonstrate proper handling of microscope
- Take quiz on parts of microscope & proper use of microscope and the meaning of magnification
- Turn in quiz and “Introduction to Microscope” note sheet for grading

Monday 01/18

WCS District – No School

MLK Holiday