Date: December 3. 2018 | **School Day:** 071

Learning Objectives – "Students CAN…"

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

2. Science Fair Presentations / Communicating Experimental Results (PPT)

Assessment

In-class completion of the notebook/bell work
Science Fair Presentations / Communicating Experimental Results (PP)

Homework

1. Complete NEW vocabulary – (In-Cass)

2. Study PT Elements: Names, Symbols and Order (1-20) – 12/6

3. Science fair PPT presentations – (In-Class)

4. Notebook Collections (Teacher's Review) **3rd – 12/3**

Reminders / DO NOT COPY
SCIENCE FAIR CALENDAR

Model notebook entries can be found below at the Teacher's NB. Use this resource to keep your notebook accurate.

Bell work

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

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

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

Linked Documents and Class Resource *Teacher's NB 12/3* *Science Fair Presentation Scoring Rubric ↓* *Vocabulary 8-1² ↓*

Periodic Table (Printable)

District Content Descriptor:

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

Modeling in 6–8 builds on K–5 and progresses to developing, using and revising models to describe, test, and predict more abstract phenomena and design systems - **Develop a model to describe unobservable mechanisms**. (07-PS3-2)

Science Fair – Best Practices Modeling Sequence / Population & Behavior Studies

Fayette County 2018-19 District Content Map

Date: December 4. 2018 | **School Day:** 072

Learning Objectives – "Students CAN…"

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

2. Science Fair Presentations / Communicating Experimental Results (PPT)

Assessment

In-class completion of the notebook/bell work
Science Fair Presentations / Communicating Experimental Results (PPT)

Homework

1. Study PT Elements: Names, Symbols and Order (1-20) – 12/6

2. Science fair PPT presentations – (In-Class)

Reminders / DO NOT COPY

Students who have not completed a science fair project have until **December 18** to complete a project for late credit.

Model notebook entries can be found below at the Teacher's NB. Use this resource to keep your notebook accurate.

Bell work

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

1. What types of gene editing have been approved?

2. What are we currently able to do with "gene editing"?

3. What are the "growing concerns" scientists have about gene editing as it becomes easier and more affordable?

4. Opinion: Do you think gene editing should be allowed? Explain your response.

Linked Documents and Class Resource

Teacher's NB 12/4

Article: Gene Editing Approved

Science Fair Presentation Scoring Rubric ↓

Periodic Table (Printable)

District Content Descriptor:

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

Modeling in 6–8 builds on K–5 and progresses to developing, using and revising models to describe, test, and predict more abstract phenomena and design systems - **Develop a model to describe unobservable mechanisms**. (07-PS3-2)

Science Fair – Best Practices Modeling Sequence / Population & Behavior Studies

Fayette County 2018-19 District Content Map

Date: December 5. 2018 | **School Day:** 73

Learning Objectives – "Students CAN…"

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

2. Through Course Writing Task (TCT #1) – SAVE THE EGG / Observe & Write

Assessment

In-class completion of the notebook/bell work
Through Course Writing Task (TCT #1) – SAVE THE EGG / Observe & Write

Homework

1. Study PT Elements: Names, Symbols and Order (1-20) – 12/6

2. TCT: SAVE THE EGG / Written Response – (In-Class)

Reminders / DO NOT COPY

Model notebook entries can be found below at the Teacher's NB. Use this resource to keep your notebook accurate.

Bell work

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

Using your periodic table handout draw a BOHR model of nitrogen in your notebook.

Identify the Element: I have four electrons in my valence shell (outer-most ring) and six neutrons in my nucleus

Linked Documents and Class Resource *Teacher's NB 12/5*

Periodic Table (Printable)

District Content Descriptor:

Patterns - Macroscopic patterns are related to the nature of microscopic and atomic-level structure. (07-PS1-2) Energy and Matter - Matter is conserved because atoms are conserved in physical and chemical processes. (07-PS1-5) - The transfer of energy can be tracked as energy flows through a designed or natural system. (07-PS1-6)

Modeling in 6–8 builds on K–5 and progresses to developing, using and revising models to describe, test, and predict more abstract phenomena and design systems - **Develop a model to describe unobservable mechanisms**. (07-PS3-2)

Fayette County
2018-19
District Content Map

Date: December 6 2018 | **School Day:** 74

Learning Objectives – "Students CAN…"

1. Analyze and respond to the YouTube - Q Review. (BW)

2. Through Course Writing Task (TCT #1) – SAVE THE EGG / Reflective Scoring

Assessment

In-class completion of the notebook/bell work
Through Course Writing Task (TCT #1) – SAVE THE EGG / Reflective Scoring

Homework

1. Study PT Elements: Names, Symbols and Order (1-20) – 12/6

2. TCT: SAVE THE EGG / Scoring – (In-Class)

Reminders / DO NOT COPY

Students selected for the local fair will be provided materials and in-class time to complete their work for the local competition on December 7th

Model notebook entries can be found below at the Teacher's NB. Use this resource to keep your notebook accurate.

Bell work

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

1. Describe Mendeleev's childhood? Provide a detail that supports your explanation.

2. Mendeleev was obsessed with the incomplete patterns of the elements – why?

3. What was Mendeleev able to do when another scientist claimed to have discovered a new element?

4. Have you ever felt a need to finish something? What was it?

CRASH COURSE: PERIODIC TABLE

Linked Documents and Class Resource | *Teacher's NB 12/6* | *Video: Crash Course – Periodic Table* | *Science Fair Presentation Scoring Rubric ↓*

Periodic Table (Printable)

District Content Descriptor:

Patterns - Macroscopic patterns are related to the nature of microscopic and atomic-level structure. (07-PS1-2) Energy and Matter - Matter is conserved because atoms are conserved in physical and chemical processes. (07-PS1-5) - The transfer of energy can be tracked as energy flows through a designed or natural system. (07-PS1-6)

Modeling in 6–8 builds on K–5 and progresses to developing, using and revising models to describe, test, and predict more abstract phenomena and design systems - **Develop a model to describe unobservable mechanisms**. (07-PS3-2)

Science Fair – Best Practices Modeling Sequence / Population & Behavior Studies

Fayette County 2018-19 District Content Map

Date: December 7. 2018 | **School Day:** 75

Learning Objectives – "Students CAN…"

1. Share ideas by writing a paragraph in their science journal. (BW)

2. **Quiz #13:** Chemistry Basics, BOHR Models & The Periodic Table

Assessment

In-class completion of the notebook/bell work
Quiz #13: Chemistry Basics, BOHR Models & The Periodic Table

Homework

1. Return signed grade sheet – 12/11

2. Return chemistry basics handout – 12/11

Reminders / DO NOT COPY
Those who have been selected to compete in this year's local science fair competition will present their projects today – **Good luck to the 7th grade class!**

Model notebook entries can be found below at the Teacher's NB. Use this resource to keep your notebook accurate.

Bell work

Science Journal: Day 13

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

I could make tomorrow better if I…

Linked Documents and Class Resource

Teacher's NB 12/7

Science Fair Presentation Scoring Rubric ↓

Periodic Table (Printable)

District Content Descriptor:

Patterns - Macroscopic patterns are related to the nature of microscopic and atomic-level structure. (07-PS1-2) Energy and Matter - Matter is conserved because atoms are conserved in physical and chemical processes. (07-PS1-5) - The transfer of energy can be tracked as energy flows through a designed or natural system. (07-PS1-6)

Modeling in 6–8 builds on K–5 and progresses to developing, using and revising models to describe, test, and predict more abstract phenomena and design systems - **Develop a model to describe unobservable mechanisms**. (07-PS3-2)

Science Fair – Best Practices Modeling Sequence / Population & Behavior Studies

Fayette County 2018-19 District Content Map

Vocabulary 8-1[2]

Complete today's vocabulary assignment by copying, summarizing or providing an example of the starred* terms below.

Bond	The attraction and repulsion between atoms and molecules that is a cornerstone of chemistry
Catalyst *	A substance that increases the rate of a chemical reaction.
Chemical Formula *	The many ways of displaying information about the chemical composition of a compound or molecule using letters, numbers, and/or symbols.
Chemistry	The scientific discipline that studies chemical substances, compounds, and molecules composed of atoms of various chemical elements, as well as their composition, structure, properties, behavior, and the changes they undergo during reactions with other substances
Combustion *	A reaction that produces large amounts of heat and often light.
Compound	A thing that is composed of two or more separate elements; a mixture
Dmitri Mendeleev	A Russian chemist and inventor. He formulated the Periodic Law, created a farsighted version of the periodic table of elements
Endothermic *	(of a reaction or process) accompanied by or requiring the absorption of heat
Exothermic *	(of a reaction or process) accompanied by the release of heat.
Matter	Physical substance in general, as distinct from mind and spirit; (in physics) that which occupies space and possesses rest mass, especially as distinct from energy

1. Describe Mendeleev's childhood? Provide a detail that supports your explanation.

2. Mendeleev was obsessed with the incomplete patterns of the elements – why?

3. What was Mendeleev able to do when another scientist claimed to have discovered a new element?

4. Have you ever felt a need to finish something? What was it?

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Science Fair Presentation Rubric

Read the objective/descriptor then select the appropriate rating from the scale provided.

Question / Observation	Hypothesis	Data Collected	Summary / Conclusion	Appropriate Content
• Solution is not obvious or simple common sense • Solution must require experimentation • Clear Identified dependent variable (Test variable) • Appropriate test trials – Result answers project question	• Prediction is related and appropriate based on the project question • Prediction is based on common sense logic – not wild/random guessing • Prediction contains an explanation supported by insightful reasoning, and personal experience • The expected result is clearly defined and can be measured	• The data has been thoughtfully prepared – using tables, graphs or graphic organizers • The data selected relates to the tested variables (dependent/independent) • Proper comparisons can be made based on trials completed • An appropriate graph has been created to summarize the data/results	• Data/results have been provided as evidence to answer the project question • Data/results have been provided as evidence to answer the hypothesis • The summary thoughtfully explains what has been learned • All statements made in the summary have been supported with numerical/data evidences	• Solution is not obvious or simple common sense • Project is creative, and inventive using authentic interest and relatable content • Participant has done research into the appropriate fields of science and understands the dynamics of the variables • The project has applicable value – answers a question of interest and has inherent worth to society
5	**5**	**5**	**5**	**5**
Participant met **ALL** objectives in this category	Participant met **ALL** objectives in this category	Participant met **ALL** objectives in this category	Participant met **ALL** objectives in this category	Participant met **ALL** objectives in this category
4	**4**	**4**	**4**	**4**
Participant met **MOST** objectives in this category	Participant met **MOST** objectives in this category	Participant met **MOST** objectives in this category	Participant met **MOST** objectives in this category	Participant met **MOST** objectives in this category
3	**3**	**3**	**3**	**3**
Participant met **SOME** objectives in this category	Participant met **SOME** objectives in this category	Participant met **SOME** objectives in this category	Participant met **SOME** objectives in this category	Participant met **SOME** objectives in this category
0	**0**	**0**	**0**	**0**
Participant **did not meet ANY** of the objectives in this category	Participant **did not meet ANY** of the objectives in this category	Participant **did not meet ANY** of the objectives in this category	Participant **did not meet ANY** of the objectives in this category	Participant **did not meet ANY** of the objectives in this category
A / 25 – 23 = 250	**B / 22 – 21 = 230**	**C / 20 – 19 = 208**	**D / 18 – 16 = 183**	**F / 15 and below = 160**