Date: November 12. 2018 | **School Day:** 059

Learning Objectives – "Students CAN…"

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

2. Complete Lab 2-2: Final Graphing Activity / Selecting Appropriate Graphs

Assessment

In-class completion of the notebook/bell work
Final Graphing Activity / Selecting Appropriate Graphs

Homework

1. Complete Lab 2-2 / Graphing – 11/13

2. Complete BW vocabulary (1-5) – 11/12

3. Science Fair: Sample graph – 11/16

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 11/12* — *Population Study 101: Lab Series* — *Vocabulary 7-1 ↓* — *The Best Test – Lab Results*

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: November 13. 2018 | **School Day:** 060

Learning Objectives – "Students CAN…"

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

2. Complete Lab 2-2 / Conclusion & Error Reporting – Who came out on top?

Assessment

In-class completion of the notebook/bell work
Conclusion & Error Reporting – Who came out on top?

Homework

1. Complete Lab 2-2 / Conclusion & Error Reporting – 11/14

2. Science Fair: Sample graph – 11/16

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

1. **There are two sides to controversial topics like – climate change. What side of the argument is this article?**
2. **Why does this article feel we need to spend more on science education – what does it say will happen if we don't?**
3. **Why are humans most vulnerable (at risk) when it comes to climate change, if what this article claims is true?**
4. **What is the "domino effect" – provide an example from the article.**

Linked Documents and Class Resource

Teacher's NB 11/13 | *Science Article: Science Education* | *Population Study 101: Lab Series*

Vocabulary 7-1 ↓ | *The Best Test – Lab Results*

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: November 14. 2018 | **School Day:** 061

Learning Objectives – "Students CAN…"

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

2. Mini Lab 2-2[2] / Scatter Plots – Comparing variables (Regression Line & Correlation)

Assessment

In-class completion of the notebook/bell work
Comparing variables (Regression Line & Correlation)

Homework

1. Complete mini lab 2-2[2] (Review Q-Series) – 11/14

2. Quiz #12: Labs & Notebook Concepts – 11/16

3. Science Fair: Sample graph – 11/16

Reminders / DO NOT COPY

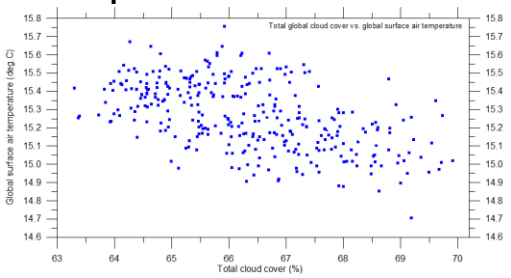
SCIENCE FAIR CALENDAR

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

Bell work

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.

Observe the graph below and decide – What is the correlation between surface temperature and cloud cover?



Linked Documents and Class Resource *Teacher's NB 11/14* *Review Q Series ↓* *BW – Scatter Plot*

The Best Test – Lab Results

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: November 15. 2018 | **School Day:** 062

Learning Objectives – "Students CAN…"

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

2. Introduction to chemistry – The periodic table (Elements 1 – 10)

Assessment

In-class completion of the notebook/bell work
Complete the "Best Tests" lab data organizer: Class results / Analyzing data (Activity 2)

Homework

1. Complete Atomic Basics Handout – 11/19

2. Quiz #12: Labs & Notebook Concepts – 11/16

3. Science Fair: Sample graph – 11/16

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

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

1. **Complete a short list of the sample projects suggested by the video.**

2. **Using one project from the list above – Identify a dependent variable and how you would measure it.**

YouTube Video Link – Science Fair²

Linked Documents and Class Resource

Teacher's NB 11/15

Population Study 101: Lab Series

YouTube Science: Science Fair² (5:20 – END)

Periodic Table (Printable)

Atomic Structures Handouts & KEY

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: November 16. 2018 | **School Day:** 063

Learning Objectives – "Students CAN…"

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

2. Quiz 12: Labs & Notebook Concepts / Science Fair Graphing Activity

Assessment

In-class completion of the notebook/bell work
Quiz 12: Labs & Notebook Concepts / Science Fair Graphing Activity

Homework

1. Complete Atomic Basics Handout – 11/19

2. Science Fair: Conclusion Rough Draft – 11/20

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

Science Journal: Day 11

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

"If I could change one thing about myself – I wish…"

Linked Documents and Class Resource *Teacher's NB 11/16* *Quiz #12**

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 7-1

You are expected to familiarize yourself with these concept terms – complete the terms that are (*) as part of the weekly bell work.

Vocabulary Term	***Definition***
Line of best fit*	a line of best fit (or "trend" line) is a straight line that best represents the data on a scatter plot.
Atom*	the basic unit of a chemical element
Chemical Change	usually irreversible chemical reaction involving the rearrangement of the atoms of one or more substances and a change in their chemical properties or composition, resulting in the formation of at least one new substance
Correlation*	A mutual relationship or connection between two or more things
Electron	a stable subatomic particle with a charge of negative electricity
Element*	each of more than one hundred substances that cannot be broken down into simpler substances
Macroscopic	visible to the naked eye; not microscopic
Neutron	a subatomic particle of about the same mass as a proton but without an electric charge
Periodic Table*	a table of the chemical elements arranged in order of atomic number, usually in rows, so that elements with similar atomic structure appear in vertical columns.
Physical Change	changes affecting the form of a chemical substance, but not its chemical composition
Proton	a stable subatomic particle occurring in all atomic nuclei, with a positive electric charge equal in magnitude to that of an electron, but of opposite sign
Reactivity	the degree to which a thing is reactive - having a tendency to respond chemically
Regression Line	SEE – Line of best fit

1. Complete a short list of the sample projects suggested by the video. **2. Using one project from the list above – Identify a dependent variable and how you would measure it.**	**1. Complete a short list of the sample projects suggested by the video.** **2. Using one project from the list above – Identify a dependent variable and how you would measure it.**	**1. Complete a short list of the sample projects suggested by the video.** **2. Using one project from the list above – Identify a dependent variable and how you would measure it.**
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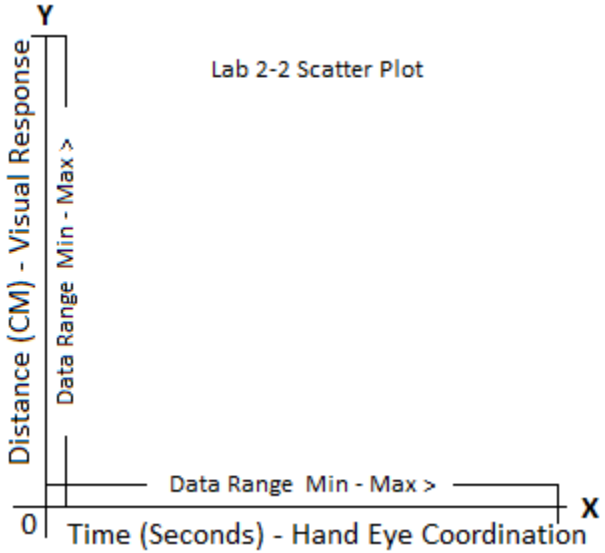
Review Q Series

As a final data analysis, we will create a scatter-plot to find any correlations between the test variables **visual response** and **hand-eye-coordination**.



Part 1 – Enter the lab data on to the graphing page. Place the time for hand-eye coordination on the X-Axis and the visual response distance on the Y-Axis. *Shown Above*

Part 2 – Using the graphed data answer the following questions.

1. What is the slope of the line regression? *You do not have to calculate the actual slope. Indicate if its positive, negative or neutral.*
2. Based on your response to Q1 – Is there a correlation between visual response and hand-eye-coordination? *Explain the relationship*
3. Are there any areas of the scatter plot with a high density of plots? If YES identify central data plots in these areas.
4. If NO to Q3 – What can we conclude if the data plots are equally distributed?
5. Identify two other variables that could be compared to test correlation from our lab results using a scatter plot. Explain why you selected these?