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## Middle School Science

**a resource for grades 5 - 8**

![Image](image_url)

Chemistry | Earth Science | Life Science | Physics
---|---|---|---

### My Plan Book

Lesson Plans for the 2010-11 school year will be posted here. We have a 6 day cycle with science classes meeting 5 out of 6 days. Each class period is about 45 - 50 minutes. I have 3 sections of Science: 5R, 5G, 5E.

### 2010-2011

- **Interactive Science Notebook** - all activities
- Old Lessons Plans 2000-2010
- September: Week 1, 2, 3, 4
- October: Week 5, 6, 7, 8
- November: Week 9, 10, 11, 12
- December: Week 13, 14, 15
- January: Week 16, 17, 18, 19
- February: Week 20, 21, 22, 23
- March: Week 24, 25, 26
- April: Week 27, 28, 29, 30
- May: Week 31, 32, 33, 34
- June: Week 35, 36

### Weeks 34-36 top

<table>
<thead>
<tr>
<th>Big Idea: Volcanoes are locations where molten rock reaches Earth's surface, and volcanoes can affect landforms and societies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NJCCC Standards:</strong> 5.1, 5.2, 5.8</td>
</tr>
</tbody>
</table>

### Objectives: Students will be able to...

- explain the relationship between volcanoes and plate tectonics
- identify the features of a volcano
- describe different types of lava
- explain how volcanic eruptions can affect climate
- compare three types of volcanoes
- compare craters vs calderas
- describe how magma is formed and moves
- locate & research major volcanoes from around the world
- learn about the history of Pompeii, its destruction, and its preservation
- explain how Mt. Vesuvius formed using the terms stratovolcano, Eurasian Plate, African Plate, and subduction
- describe the phases of eruption of Mt. Vesuvius
- understand that Romans did not know that Mt. Vesuvius was a volcano and the destruction that it could cause
- view a reenactment of daily life during Roman times and the eruption of Mt. Vesuvius
- understand the importance of Pliny’s Letter to Tacitus and its value as a primary source for the events of that day

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• understand how historians and scientists have pieced together the story of Pompeii

<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Science Starters</th>
<th>Classwork</th>
<th>Homework</th>
</tr>
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<tbody>
<tr>
<td>5/23</td>
<td>E</td>
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<td>Greek Plays Today - no science class</td>
<td>pgs. 184-86</td>
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<tr>
<td>5/24</td>
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<td>none</td>
<td>5R/5E - drop 5G - BrainPOP Volcanoes &amp; Notes</td>
<td>pgs. 187-88</td>
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<tr>
<td>5/25</td>
<td>A</td>
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<td>5G - drop 5R/5E - BrainPOP Volcanoes &amp; Notes</td>
<td>pgs. 187-88</td>
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<tr>
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<td>B</td>
<td>none</td>
<td>All - Volcano Independent Work</td>
<td>pgs. 190-91</td>
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<td>C</td>
<td>none</td>
<td>All - Volcano Independent Work</td>
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<td>No School</td>
<td>None</td>
</tr>
<tr>
<td>5/31</td>
<td>D</td>
<td>none</td>
<td>All - Volcano Independent Work</td>
<td>study</td>
</tr>
<tr>
<td>6/1</td>
<td>E</td>
<td>none</td>
<td>All - Earthquake/Volcanoes Quest</td>
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<tr>
<td>6/2</td>
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<td>5R/5E - drop 5G - special activity</td>
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<tr>
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<td>Special Schedule: Ulysses Movie &amp; Black Boxes</td>
<td>Class Picnics</td>
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<td>All Classes: The Mini Page, begin &quot;Pompeii, The Last Day&quot;</td>
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<td>Wrap up &quot;Pompeii, The Last Day&quot;</td>
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<td>All Classes - Gladiator presentation and BBC Movie</td>
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<td>X</td>
<td>none</td>
<td>Graduation 3 pm</td>
<td>Enjoy the summer!</td>
</tr>
</tbody>
</table>

Notebook:

• pg. 184 - Earthquake Vocab
• pg. 185 - Earthquake Vocab
• pg. 186 - Earthquake Vocab
• pg. 187 - P & S Waves Graph
• pg. 188 - Calculating Time of an Earthquake (pg. 33)
• pg. 189 - Volcano notes & ppt
• pg. 190 - Volcano Vocab
• pg. 191 - Volcano Vocab
• Handouts - Independent Work
  ○ BrainPOP Volcano Activity Page
  ○ Graphic Organizer: Volcano Hazards Vocab (pg. 8) & ppt
  ○ Research 5 volcanoes

Volcano Links:

• List of Volcanoes around the world
• USGS, monitors current Volcanic activity - check it out!!
• Volcanoes in the USA - list - Did you know that we have over 160 volcanoes?!
• Volcanic Glossary, not sure what a word means? look it up here! also has color pictures
• Deadliest Volcanoes
• Volcanoes for Kids
• NatGeo - Volcano Quiz
• NatGeo - Volcanoes
Week 33 top

Big Idea: Earthquakes result from sudden motions along breaks in the Earth's crust and can affect landforms and societies.

NJCCC Standards: 5.1, 5.2, 5.8

Objectives: Students will be able to...

- record real time earthquake data using USGS
- describe how earthquakes are measured using the Richter Scale
- plot earthquake data on a map using latitude and longitude coordinates
- see the correlation between earthquakes and tectonic plates
- explain where earthquakes take place
- explain what causes earthquakes
- describe how energy from earthquakes travels through the Earth
- differentiate between P, S, and surface waves
- explain how earthquakes are detected
- know how to read the Richter scale
- simulate an earthquake drill
- know what to do in case of an earthquake
- explain what a tsunami is and what causes one to form
- identify the warning signs of an approaching tsunami
- identify Iceland as a volcanic island
- know that Iceland is part of the Mid-Atlantic Ridge, and both the N. American & Eurasian tectonic plates

<table>
<thead>
<tr>
<th>Date</th>
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<th>Homework</th>
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<tr>
<td>5/16</td>
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<td>5R/5E - drop 5G - wrap up plotting earthquakes</td>
<td>pgs. 180 - 81</td>
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<td>5G - drop 5R/5E - wrap up plotting earthquakes</td>
<td>pgs. 180 - 81</td>
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<tr>
<td>5/18</td>
<td>B</td>
<td>none</td>
<td>All - Earthquake Notes</td>
<td>pg. 183</td>
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<tr>
<td>5/19</td>
<td>C</td>
<td>none</td>
<td>All - wrap up earthquake notes Earthquake drill?</td>
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<td>D</td>
<td>none</td>
<td>Plate Tectonics Quest</td>
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Notebook:

- pg. 172 - Plate Tectonics Notes & Plate Tectonics ppt
- pg. 173 - Earth's Layers - Color
- pg. 174 - Tectonic Plates - Color
- pg. 175 - Pangea - color, cut, and paste in order
- pg. 176 - Plate Tectonics Vocab
- pg. 177 - Plate Tectonics Vocab
- pg. 178 - Plate Tectonics Vocab
- pg. 179 - BrainPOP - Earthquakes handout
- pg. 180 - Plotting Earthquakes data
- pg. 181 - Plotting Earthquakes - map
- pg. 182 - Earthquake Notes & ppt
- pg. 183 - Types of Waves Puzzle

USGS Earthquake Links:
Week 32

Big Idea: Plate tectonics accounts for important features of Earth’s surface and major geologic events.

Big Idea: Earthquakes result from sudden motions along breaks in the Earth’s crust and can affect landforms and societies.

NJCCC Standards: 5.1, 5.2, 5.8

Objectives: Students will be able to...

- identify the layers of the Earth and their chemical composition
- identify the layers of the Earth and their physical properties
- describe a tectonic plate
- describe Wegener’s hypothesis of continental drift
- explain how sea-floor spreading provides a way for continents to move
- describe how oceanic lithosphere forms at mid-ocean ridges
- describe 3 types of tectonic plate boundaries
- record real time earthquake data using USGS
- describe how earthquakes are measured using the Richter Scale
- plot earthquake data on a map using latitude and longitude coordinates
- see the correlation between earthquakes and tectonic plates
- explain where earthquakes take place

<table>
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<th>Day</th>
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<td>All - continue Plate Tectonic Notes</td>
<td>pgs. 173-75</td>
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<td>C</td>
<td>none</td>
<td>All - BrainPOP - Earthquakes Plotting Earthquakes</td>
<td>pgs. 176-178</td>
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<td>D</td>
<td>none</td>
<td>All - Plotting Earthquakes</td>
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<td>5/13</td>
<td>E</td>
<td>none</td>
<td>Field Trip - Dorney Park</td>
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</tbody>
</table>

Notebook:

- pg. 172 - Plate Tectonics Notes & Plate Tectonics ppt
- pg. 173 - Earth's Layers - Color
- pg. 174 - Tectonic Plates - Color
- pg. 175 - Pangea - color, cut, and paste in order
- pg. 176 - Plate Tectonics Vocab
- pg. 177 - Plate Tectonics Vocab
- pg. 178 - Plate Tectonics Vocab
- pg. 179 - BrainPOP - Earthquakes handout
- pg. 180 - Plotting Earthquakes data
- pg. 181 - Plotting Earthquakes - map
- pg. 182 - Earthquake Notes & ppt

Related Links for more information:

USGS Earthquake Links:
- Past 7 days
- Last 7 days - USA Animation
- Last 8-30 days

Week 31

Big Idea: Studying the rock and fossil record help us understand Earth's history and the history of life on Earth.

Big Idea: Plate tectonics accounts for important features of Earth's surface and major geologic events.

NJCCC Standards: 5.1, 5.2, 5.8

Objectives: Students will be able to...
- explain that a topographic map represents a 3-D surface on a flat piece of paper
- create and read simple topographic maps
- make a 3-D model using data from a topographic map
- identify the layers of the Earth and their chemical composition
- identify the layers of the Earth and their physical properties
- describe a tectonic plate
- describe Wegener's hypothesis of continental drift
- explain how sea-floor spreading provides a way for continents to move
- describe how oceanic lithosphere forms at mid-ocean ridges
- describe 3 types of tectonic plate boundaries

<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
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<th>Homework</th>
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<tr>
<td>5/2</td>
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<td>none</td>
<td>All - Go over Core Sample HW</td>
<td>pg. 171</td>
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<td>PlayDoh Topography Activity</td>
<td>&amp; study</td>
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<td>Review for Rocks Test</td>
<td>study</td>
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<td>Rocks Test - All</td>
<td>Kairos Night No HW</td>
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<td>5/5</td>
<td>F</td>
<td>none</td>
<td>5R/5 E - Drop</td>
<td>none</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>5G- BrainPOP - Earth's Structure, Plate Tectonics Intro to Plate Tectonics</td>
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<tr>
<td>5/6</td>
<td>X</td>
<td>none</td>
<td>Grandfriend's Day, Spring Sing, &amp; Field Day 12:00 Dismissal</td>
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</tbody>
</table>

Notebook:
- pg. 168 - Core Samples - Candy Bar Activity
- pg. 169 - Practice: Core Samples
- pg. 170 - Playdoh Mountains/Topo Maps
Week 30 top

Big Idea: Studying the rock and fossil record help us understand Earth's history and the history of life on Earth.

NJCCC Standards: 5.1, 5.2, 5.8

Objectives: Students will be able to...

- explain how relative dating is used in geology
- explain the law of superposition
- explain how physical features are used to determine relative ages
- explain why fossils are usually found in sedimentary rock
- explain how fossils can be used to date rock layers
- explain how fossils can be used to determine the history of changes in environments and organisms
- name an index fossil
- use a model to demonstrate core sampling
- understand that geologists use core samples to diagram underground rock layers

<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Science Starters</th>
<th>Classwork</th>
<th>Homework</th>
</tr>
</thead>
<tbody>
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<td>4/25</td>
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<td>No School</td>
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<tr>
<td>4/26</td>
<td>E</td>
<td>none</td>
<td>Finish Rock Lab begin recess/academic support - rock practice</td>
<td>Rocks ppt</td>
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<tr>
<td>4/27</td>
<td>F</td>
<td>none</td>
<td>5R/5E - drop&lt;br&gt;5G - BrainPOP: weathering &amp; erosion Law of Superposition</td>
<td>pg. 165, 167</td>
</tr>
<tr>
<td>4/28</td>
<td>A</td>
<td>none</td>
<td>5G - Drop&lt;br&gt;5R/5E - BrainPOP: weathering &amp; erosion Law of Superposition</td>
<td>pg. 165, 167</td>
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<tr>
<td>4/29</td>
<td>B</td>
<td>none</td>
<td>All - Core Sampling</td>
<td>pg. 169</td>
</tr>
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</table>

Notebook:

- pg. 157 - BrainPOP Rocks - Graphic Organizer
- pg. 158 - Color the Rock Cycle Notes & ppt
- pg. 159 - Rocks Vocabulary Cut ‘n Paste
- pg. 160 - Ride the Rock Cycle Activity, Comic to hand in

Related Links for more information:

http://www.learner.org/interactives/rockcycle/index.html

BBC - rocks and weathering
Related Links for more information:

http://www.learner.org/interactives/rockcycle/index.html

Week 29 top

Big Idea: Rock changes through the rock cycle and is classified by how it formed, by its composition, and by its texture.

NJCCC Standards: 5.1, 5.2, 5.8

Objectives: Students will be able to...

- describe how each type changes into another type of rock as it moves through the rock cycle
- identify processes such as weathering, erosion, deposition, heat, pressure, cementation
- create an original comic showing the journey of one rock through the rocky cycle

<table>
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<tr>
<th>Date</th>
<th>Day</th>
<th>Science Starters</th>
<th>Classwork</th>
<th>Homework</th>
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<td>All - Start Rock ID Lab</td>
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<td>4/21</td>
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<tr>
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<td>enjoy!</td>
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</table>

Notebook:

- pg. 157 - BrainPOP Rocks - Graphic Organizer
- pg. 158 - Color the Rock Cycle Notes & ppt
- pg. 159 - Rocks Vocabulary Cut ’n Paste
- pg. 160 - Ride the Rock Cycle Activity, Comic to hand in
- pg. 161 - Igneous Rocks
- pg. 162 - Metamorphic Rocks
- pg. 163 - Sedimentary Rocks

Related Links for more information:

http://www.learner.org/interactives/rockcycle/index.html

Week 28 top

Big Idea: Rock changes through the rock cycle and is classified
by how it formed, by its composition, and by its texture.

NJCCC Standards: 5.1, 5.2, 5.8

Objectives: Students will be able to...

- define the term rock
- list three different types of rocks: igneous, sedimentary, and metamorphic
- identify characteristics for each type of rock
- describe how each type changes into another type of rock as it moves through the rock cycle
- identify processes such as weathering, erosion, deposition, heat, pressure, cementation

<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Science Starters</th>
<th>Classwork</th>
<th>Homework</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Intro to Rocks, BrainPOP BrainPOP: Rocks</td>
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<td>Finish Rocks notes</td>
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<td>Review for Minerals and Mining Test</td>
<td>finish notes, Y chart</td>
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<td>Minerals and Mining Test pgs. 140-155</td>
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<td>Earth Day Schedule</td>
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Notebook:

- pg. 156 - BrainPOP Rocks - Fill in the blank notes
- Packet - Types of Rocks Power Point and notes
- pg. 157 - BrainPOP Rocks - Graphic Organizer
- pg. 158 - Color the Rock Cycle Notes & ppt
- pg. 159 - Rocks Vocabulary Cut 'n Paste
- pg. 160 - Ride the Rock Cycle Activity, Comic to hand in

Related Links for more information:

- Geology.com: Minerals
- Minerals: listed by name
- Minerals: A to Z
- Commons Minerals and their uses
- Minerals: Photos
- Mineral Groups
- USGS: type in the name of your mineral

Miners - child labor

- Beyond their years
**Week 27 top**

**Big Idea:** Minerals have characteristic physical and chemical properties that determine how each mineral is used by humans.

**NJCCC Standards:** 5.1, 5.2, 5.8

**Objectives:** Students will be able to...

- understand why we have mines
- realize the relationship between mining and their everyday life
- list and compare different types of mining
- know what reclamation is
- understand how mining impacts the environment
- participate in a simulated "mining" of chocolate chips from cookies, using money to purchase the necessary property, tools, and labor
- understand the various costs associated with mining coal, including environmental remediation, as demonstrated in the simulation
- calculate costs and profits from cookie mining and relate them to the mining industry.
- define the term rock
- list three different types of rocks: igneous, sedimentary, and metamorphic

<table>
<thead>
<tr>
<th>Date</th>
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<th>Science Starters</th>
<th>Classwork</th>
<th>Homework</th>
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<td>4/5</td>
<td>E</td>
<td>none</td>
<td>Mineral Cube Due Today</td>
<td>pg. 153, ppt &amp; questions</td>
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<td>Little Miners - videos and writing prompt</td>
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<td>5E/5R Drop</td>
<td>pg. 155</td>
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<td>5G - go over hw</td>
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<td>Cookie Mining Activity</td>
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<td>4/7</td>
<td>A</td>
<td>none</td>
<td>5G - drop</td>
<td>pg. 155</td>
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<td>5R/5E - go over hw</td>
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<td>Cookie Mining Activity</td>
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<td>B</td>
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<td>Go over hw &amp; Cookie Mining Activity</td>
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**Notebook:**

- pg. 152 - What is mining? PPT, Notes
- pg. 153 - Little Miners ppt & questions,
  - Beyond their years
  - Breaker Boys
- pg. 154 - Cookie Mining Lab
- pg. 155 - Mining in NJ - color code map (pg 2)
- pg. 156 - BrainPOP Rocks - Fill in the blank notes
- pg. 157 - Types of Rocks Power Point and notes
- pg. 158 - Types of Rocks Power Point and notes
- pg. 159 - Types of Rocks Power Point and notes
- pg. 160 - BrainPOP Rocks - Graphic Organizer
- pg. 161 - Rocks Vocabulary Cut 'n Paste
- pg. 162 - Color the Rock Cycle Notes & ppt
- pg. 163 - Ride the Rock Cycle Activity, Comic to hand in

**Related Links for more information:**

- Geology.com: Minerals

- Minerals: listed by name
- Minerals: A to Z
- Commons Minerals and their uses
- Minerals: Photos
- Mineral Groups
- USGS: type in the name of your mineral

Miners - child labor
- Beyond their years

Week 26 top

Big Idea: Minerals have characteristic physical and chemical properties that determine how each mineral is used by humans.

NJCCC Standards: 5.1, 5.2, 5.8

Objectives: Students will be able to...
- identify the properties of minerals
- describe the structure and composition of minerals
- differentiate between minerals and non-minerals
- identify common uses of minerals
- categorize the minerals into groups
- list characteristics of a mineral
- perform a variety of mineral identification tests
- identify common minerals based on physical characteristics and collected data

<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Science Starters</th>
<th>Classwork</th>
<th>Homework</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/28</td>
<td>E</td>
<td>none</td>
<td>All - Quest pgs. In class - start pgs. 146-147</td>
<td>pg. 146-47</td>
</tr>
<tr>
<td>3/29</td>
<td>F</td>
<td>none</td>
<td>5E/5R - Drop 5G - Mineral Identification Lab</td>
<td>pgs. 148-49</td>
</tr>
<tr>
<td>3/30</td>
<td>A</td>
<td>none</td>
<td>5G - Drop 5R/5E - Mineral Identification Lab</td>
<td>pgs. 148-49</td>
</tr>
<tr>
<td>3/31</td>
<td>B</td>
<td>none</td>
<td>All - Continue Mineral Identification Lab</td>
<td>pgs. 150-51</td>
</tr>
<tr>
<td>4/1</td>
<td>C</td>
<td>none</td>
<td>Mineral Identification Practice</td>
<td>mineral cube</td>
</tr>
</tbody>
</table>

Notebook:
- pg. 146 - Graphic Organizer: Silicate Minerals, ppt
- pg. 147 - Graphic Organizer: Nonsilicate Minerals
- pg. 148 - Mineral Identification Outline
- pg. 149 - Practice: Mineral Groups
- Mineral Cube Project (word doc)
- pg. 150 - Mineral Identification Lab
- pg. 151 - Practice: Mohs Scale of Hardness (pg. 17)
- pg. 152 - What is mining? PPT, Notes
- pg. 153 - Mining in NJ - color code map (pg 2)
- pg. 154 - Cookie Mining Lab
Related Links for more information:

- Geology.com: Minerals
- Minerals: listed by name
- Minerals: A to Z
- Commons Minerals and their uses
- Minerals: Photos
- Mineral Groups
- USGS: type in the name of your mineral

Week 25 top

Big Idea: Minerals have characteristic physical and chemical properties that determine how each mineral is used by humans.

NJCCC Standards: 5.1, 5.2, 5.8

Objectives: Students will be able to...

- identify the properties of minerals
- describe the structure and composition of minerals
- differentiate between minerals and non-minerals
- identify common uses of minerals
- categorize the minerals into groups

<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Science Starters</th>
<th>Classwork</th>
<th>Homework</th>
</tr>
</thead>
<tbody>
<tr>
<td>3/21</td>
<td>F</td>
<td>none</td>
<td>5E/5R - drop</td>
<td>pg. 141</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5G - New Notebook</td>
<td>What is a Mineral? pg. 140</td>
<td></td>
</tr>
<tr>
<td>3/22</td>
<td>A</td>
<td>none</td>
<td>5G-Drop</td>
<td>pg. 141</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5E/5R - new Notebook</td>
<td>What is a Mineral? pg. 140</td>
<td></td>
</tr>
<tr>
<td>3/23</td>
<td>B</td>
<td>none</td>
<td>All - go over hw pg. 141 using SmartBoard, introduce mineral guide and how to use it, look up minerals from HW to see what they look like, chem formula, and where it is found</td>
<td>none</td>
</tr>
<tr>
<td></td>
<td></td>
<td>BrainPOP: Crystals Movie</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>6 Crystal Shapes pg. 142</td>
<td>pg. 143 Graphic Organizer using mineral guide book</td>
<td></td>
</tr>
<tr>
<td>3/25</td>
<td>D</td>
<td>none</td>
<td>All - Continue Research, due April 5th</td>
<td>review for quest pgs. 124-139</td>
</tr>
</tbody>
</table>

Notebook:
- pg. 140 - What is a mineral? Notes & PPT
- pg. 141 - Practice: Minerals in your home, Link
- pg. 142 - Crystal Shapes Handout
- pg. 143 - Graphic Organizer: Crystal Forms
- pg. 144 - Minerals Vocab pg. 1
- pg. 145 - Minerals Vocab pg. 2
- pg. 146 - Graphic Organizer: Silicate Minerals, ppt
- pg. 147 - Graphic Organizer: Nonsilicate Minerals
- pg. 148 - Mineral Identification Outline
- pg. 149 - Practice: Mineral Groups
- Mineral Cube Project (word doc)
- pg. 150 - Mineral Identification Lab
- pg. 151 - Practice: Mohs Scale of Hardness (pg. 17)
- pg. 152 - What is mining? PPT, Notes
- pg. 153 - Mining in NJ - color code map (pg 2)
- pg. 154 - Cookie Mining Lab

Related Links for more information:

- Geology.com: Minerals
- Minerals: listed by name
- Minerals: A to Z
- Commons Minerals and their uses
- Minerals: Photos
- Mineral Groups
- USGS: type in the name of your mineral

Week 24 top

Big Idea: Substances undergo chemical reactions which form new substances whose properties differ from the properties of the original substance.

NJCCC Standards: 5.1, 5.2, 5.6

Objectives: Students will be able to

- collect data from 6 different white powders based upon physical and chemical properties
- follow correct lab safety procedures
- analyze data and use a flow chart
- identify unknown substances

<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Science Starters</th>
<th>Classwork</th>
<th>Homework</th>
</tr>
</thead>
<tbody>
<tr>
<td>2/28</td>
<td>A</td>
<td>none</td>
<td>5G - drop</td>
<td>none</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5R/5E - go over hw</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Start Mystery Powder Lab</td>
<td></td>
</tr>
<tr>
<td>3/1</td>
<td>B</td>
<td>none</td>
<td>Met Trip - Ancient Egypt &amp; Greece</td>
<td>none</td>
</tr>
<tr>
<td>3/2</td>
<td>C</td>
<td>none</td>
<td>All - continue Mystery Powder Lab</td>
<td>pg. 138-139</td>
</tr>
</tbody>
</table>
Week 23 top

Big Idea: Substances undergo chemical reactions which form new substances whose properties differ from the properties of the original substance.

Related Links for more information:
- Chem 4 Kids: Elements, Atoms
- BrainPOP - Atomic Model Movie, Atoms, Radioactivity, Periodic Table, Atoms and Elements, Chemical Bonding

Objectives: Students will be able to
- describe properties and uses of acids
- describe properties and uses of bases
- explain the difference between strong acids and bases and weak acids and bases
- read and interpret information from a pH scale
- identify acids and bases using pH
- use indicators to identify acids and bases
- collect data from 6 different white powders based upon physical and chemical properties
- follow correct lab safety procedures
- analyze data and use a flow chart
- identify unknown substances

<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Science Starters</th>
<th>Classwork</th>
<th>Homework</th>
</tr>
</thead>
<tbody>
<tr>
<td>2/21</td>
<td>X</td>
<td>none</td>
<td>no school</td>
<td>none</td>
</tr>
<tr>
<td>2/22</td>
<td>C</td>
<td>none</td>
<td>All - go over Cons. of Mass Lab BrainPOP - Acids/Bases movie Acids/Bases Venn diagram</td>
<td>test signed? pgs. 127, 129</td>
</tr>
<tr>
<td>2/23</td>
<td>D</td>
<td>none</td>
<td>All - pH Sort Activity BrainPOP Movie: pH Scale</td>
<td>pgs. 131-133</td>
</tr>
<tr>
<td>2/24</td>
<td>E</td>
<td>none</td>
<td>All - Cabbage Juice Lab</td>
<td>pg. 135</td>
</tr>
<tr>
<td>2/25</td>
<td>F</td>
<td>none</td>
<td>5R/5E - drop 5G - Start Mystery Powder Lab</td>
<td>tba</td>
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</tbody>
</table>

Notebook:
- pg. 126 - Law of Conservation of Mass
- pg. 127 - Conservation of Mass Analysis
- pg. 128 - Acids/Bases Venn Diagram
Week 22 top

Big Idea: Substances undergo chemical reactions which form new substances whose properties differ from the properties of the original substance.

NJCCC Standards: 5.1, 5.2, 5.6

Objectives: Students will be able to

- write and balance simple chemical equations
- explain how a balanced equation shows the law of conservation of mass
- describe properties and uses of acids
- describe properties and uses of bases

<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Science Starters</th>
<th>Classwork</th>
<th>Homework</th>
</tr>
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<tr>
<td>2/14</td>
<td>E</td>
<td>none</td>
<td>All Classes - go over HW BrainPOP Movie: Chemical Equations Balancing Equations pg. 124</td>
<td>pgs. 122-23</td>
</tr>
<tr>
<td>2/15</td>
<td>F</td>
<td>none</td>
<td>5E/5R - drop Go over hw 5G - Finish Bal. Eq.</td>
<td>pg. 125</td>
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<tr>
<td>2/16</td>
<td>A</td>
<td>none</td>
<td>5G -drop Go over hw 5R/5E - finish Bal. Eq.</td>
<td>pg. 125</td>
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<tr>
<td>2/18</td>
<td>X</td>
<td>none</td>
<td>No School Today</td>
<td>none</td>
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</table>

Notebook:

- pg. 121 - Practice naming compounds
- pg. 122 - Ions Vocab pg. 1
- pg. 123 - Ions Vocab pg. 2
- pg. 124 - Balancing Equations Activity
- pg. 125 - Practice- Balancing Equations pg. 2
### Week 21 Top

**Big Idea:** Chemical Compounds are classified into groups based on their bonds and on their properties.

**Big Idea:** Substances undergo chemical reactions which form new substances whose properties differ from the properties of the original substance.

**NJCCC Standards:** 5.1, 5.2, 5.6

**Objectives:** Students will be able to
- construct 3-D models of molecules
- practice ionic and covalent bonding
- explain what an isomer is
- interpret and write simple chemical formulas
- explain what an oxidation number is
- differentiate between positive and negative ions
- create and name binary compounds
- use the ‘criss-cross’ method for oxidation numbers/subscripts in a chemical formula

<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Science Starters</th>
<th>Classwork</th>
<th>Homework</th>
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<td>2/7</td>
<td>F</td>
<td>Cmpd Challenge 1</td>
<td>ERBs in morning - special schedule 5R/5E - drop 5G - Finish Molecular Models Lab</td>
<td>p. 118-119</td>
</tr>
<tr>
<td>2/8</td>
<td>A</td>
<td>Cmpd Challenge 1</td>
<td>5G - drop 5E/5R - Finish Molecular Models Lab</td>
<td>p. 118-119</td>
</tr>
<tr>
<td>2/9</td>
<td>B</td>
<td>Cmpd Challenge 2</td>
<td>Go over hw Review for Chemistry Test</td>
<td>Study/Review</td>
</tr>
<tr>
<td>2/10</td>
<td>C</td>
<td>none</td>
<td>Periodic Table Test pgs. 102-119</td>
<td>none</td>
</tr>
<tr>
<td>2/11</td>
<td>D</td>
<td>Cmpd Challenge 3</td>
<td>Special Schedule - Talent Show Bond with a Classmate</td>
<td>p. 120-121</td>
</tr>
</tbody>
</table>

**Notebook:**
- pg. 114-117 - Making Molecular Models, Models Answer Key PPT
- pg. 118 - Molecular Models Analysis
- pg. 119 - Practice: Counting Atoms
- pg. 120 - Bond with a Classmate, Tags
- pg. 121 - Practice naming compounds

**Related Links for more information:**
- Chem 4 Kids: Elements, Atoms
- BrainPOP - Atomic Model Movie, Atoms, Radioactivity, Periodic Table
## Atoms and Elements, Chemical Bonding

**Week 20 Top**

**Big Idea:** Atoms combine to form ionic and covalent bonds.

**Big Idea:** Substances undergo chemical reactions which form new substances whose properties differ from the properties of the original substance.

**NJCCC Standards:** 5.1, 5.2, 5.6

### Objectives: Students will be able to

- research an element and know important uses for it
- describe chemical bonding
- predict whether an atom is likely to form bonds
- explain how ionic bonds form
- describe how positive and negative ions form
- explain why ionic compounds are neutral
- explain how covalent bonds form
- know the difference between Ionic and Covalent Bonds
- recognize the individual elements in a formula
- recognize the subscript as the number of atoms
- construct 3-D models of molecules
- practice ionic and covalent bonding
- explain what an isomer is
- interpret and write simple chemical formulas

### Date | Day | Science Starters | Classwork | Homework |
<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>1/31</td>
<td>A</td>
<td>none</td>
<td>ERBs this week, special schedules, shortened classes</td>
<td>poster due 2/4</td>
</tr>
<tr>
<td>2/1</td>
<td>B</td>
<td>none</td>
<td>All - wrap up bonding, start molecular models</td>
<td>pg. 113</td>
</tr>
<tr>
<td>2/2</td>
<td>C</td>
<td>none</td>
<td>SNOW DAY</td>
<td>poster due 2/4</td>
</tr>
<tr>
<td>2/3</td>
<td>D</td>
<td>none</td>
<td>Letter to scientists due 2/3 in English</td>
<td>poster due 2/4</td>
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<tr>
<td>2/4</td>
<td>E</td>
<td>none</td>
<td>Molecular Models</td>
<td>review notes</td>
</tr>
</tbody>
</table>

### Notebook:
- **Element Project & data collection**
- pg. 112 - Ionic and Covalent Bonding Notes, Smart Board File
- pg. 113 - Practice - Ionic or Covalent?
- pg. 114-117 - Making Molecular Models, Models Answer Key PPT
- pg. 118 - Molecular Models Analysis
- pg. 119 - Practice: Counting Atoms
- pg. 120 - Bond with a Classmate, Tags
- pg. 121 - Analysis - Bond with a classmate

### Related Links for more information:
- Chem 4 Kids: Elements, Atoms,
- BrainPOP - Atomic Model Movie, Atoms, Radioactivity, Periodic Table,
Atoms and Elements, Chemical Bonding

- Element Research Links
  - Periodic Table Videos
  - Popular Science Periodic Table
  - Los Alamos Periodic Table
  - Jefferson Labs Periodic Table
  - Mii - Elements in Minerals
  - Visual Elements Periodic Table
  - Interactive Periodic Table
  - Chemicool Periodic Table
  - Podcasts - click on your element to listen!
  - Search: Fisher Catalog - see how much it is to buy your element

Week 19 top

Big Idea: Elements are organized on the periodic table according to their properties

Big Idea: Atoms combine to form ionic and covalent bonds.

NJCCC Standards: 5.1, 5.2, 5.6

Objectives: Students will be able to

- recognize periodic trends of elements, including the number of valence electrons, atomic size, and reactivity
- accurately read and interpret information from the periodic table
- make a Bohr Diagram
- draw a Lewis Structure
- research an element and know important uses for it
- describe chemical bonding
- predict whether an atom is likely to form bonds
- explain how ionic bonds form
- describe how positive and negative ions form
- explain why ionic compounds are neutral
- explain how covalent bonds form
- know the difference between Ionic and Covalent Bonds

<table>
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<tr>
<th>Date</th>
<th>Day</th>
<th>Science Starters</th>
<th>Classwork</th>
<th>Homework</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/24</td>
<td>B</td>
<td>PTB 3</td>
<td>5R/5E - finish Bohr Diagrams, start Lewis Structures&lt;br&gt;5G - Lewis Structures</td>
<td>5R/5E pg. 109&lt;br&gt;5G - pg. 111&lt;br&gt;sign/correct quiz</td>
</tr>
<tr>
<td>1/25</td>
<td>C</td>
<td>Bohr 1</td>
<td>5E/5R - wrap up Lewis Structures&lt;br&gt;Element Project Research&lt;br&gt;5G - go over hw&lt;br&gt;Element Project Research</td>
<td>5R/5E - pg. 111</td>
</tr>
<tr>
<td>1/26</td>
<td>D</td>
<td>Bohr 2</td>
<td>5R/5E - go over hw&lt;br&gt;All - Element Project Research</td>
<td>Kairos Night</td>
</tr>
</tbody>
</table>
Week 18 top

Big Idea: Elements are organized on the periodic table according to their properties

Big Idea: Atoms combine to form ionic and covalent bonds.

NJCCC Standards: 5.1, 5.2, 5.6

Objectives: Students will be able to

- explain how elements are arranged in the modern periodic table
- compare metals, nonmetals, and metalloids based on their properties and location on the periodic table
- identify the number of valence electrons in an atom
- identify the number of shells, or energy levels, for an atom
- recognize periodic trends of elements, including the number of valence electrons, atomic size, and reactivity
- accurately read and interpret information from the periodic table
- make a Bohr Diagram

<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Science Starters</th>
<th>Classwork</th>
<th>Homework</th>
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<td>MLK, Jr. - No School</td>
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</tbody>
</table>

Related Links for more information:

- Chem 4 Kids: Elements, Atoms,
- BrainPOP - Atomic Model Movie, Atoms, Radioactivity, Periodic Table, Atoms and Elements, Chemical Bonding
- Element Research Links
  - Periodic Table Videos
  - Popular Science Periodic Table
  - Los Alamos Periodic Table
  - Jefferson Labs Periodic Table
  - Mii - Elements in Minerals
  - Visual Elements Periodic Table
  - Interactive Periodic Table
  - Chemcool Periodic Table
  - Podcasts - click on your element to listen!
  - Search: Fisher Catalog - see how much it is to buy your element

Notebook:

- pg. 108 - How to Draw Bohr Diagrams: Notes, PPT.
- pg. 109 - Practice: Bohr Diagrams
- pg. 110 - Lewis Structure Notes Booklet/Foldable Pgs 1, 4 & pgs 2, 3, PowerPoint Lesson
- pg. 111 - Practice: Lewis Structures
- Element Project & data collection
- pg. 112 - Ionic and Covalent Bonding Notes, Smart Board File
- pg. 113 - Practice - Ionic or Covalent?

Poster due 2/4

snow day!

Poster due 2/4

5R/5E - drop

5G - Intro to Ionic and Covalent Bonding

Poster due 2/4

all classes - review for quiz
<table>
<thead>
<tr>
<th>Date</th>
<th>Letter</th>
<th>Activity</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/18</td>
<td>D</td>
<td>none</td>
<td>SNOW DAY! pgs. 100, 101, families only on pg. 102</td>
</tr>
<tr>
<td>1/19</td>
<td>E</td>
<td>none</td>
<td>All - quests signed and corrected (&lt;75%) by Friday All - Quiz 5R/5E- Periods and Groups pg. 104 5G - go over hw, (PT game filler) 5G - 106-107</td>
</tr>
<tr>
<td>1/20</td>
<td>F</td>
<td>PTB 1</td>
<td>5G - go over hw Bohr Diagrams pg. 108 5R/5E - Drop Day 5G - pg. 109</td>
</tr>
<tr>
<td>1/21</td>
<td>A</td>
<td>PTB 1</td>
<td>2 hour Delayed Opening 5G - Drop Day 5R/5E - Continue Periods and Groups, start Bohr Diagrams pg. 108 5R/5E - pgs. 105, 106, 109</td>
</tr>
</tbody>
</table>

Notebook:
- pg. 104 - Shells and Valence Electrons Study Guide Notes, PPT
- pg. 105 - Practice: Periods & Groups
- pg. 106 - Atoms Vocab pg. 1
- pg. 107 - Atoms Vocab pg. 2
- pg. 108 - How to Draw Bohr Diagrams: Notes, PPT,
- pg. 109 - Practice: Bohr Diagrams
- pg. 110 - Lewis Structure Notes Booklet/Foldable Pgs 1, 4 & pgs 2, 3, PowerPoint Lesson
- pg. 111 - Practice: Lewis Structures
- pg. 112 - Ionic and Covalent Bonding Notes, Smart Board File
- pg. 113 - Practice - Ionic or Covalent? |

Related Links for more information:
- BrainPOP - Atomic Model Movie, Atoms, Radioactivity, Periodic Table, Atoms and Elements, Chemical Bonding

Week 17 top

Big Idea: Elements are organized on the periodic table according to their properties

NJCCC Standards: 5.1, 5.2, 5.6

Objectives: Students will be able to
- describe the properties of the elements in the groups of the periodic table
- accurately read and interpret information from the periodic table
- explain how elements are arranged in the modern periodic table
- compare metals, nonmetals, and metalloids based on their properties and location on the periodic table
- identify the number of valence electrons in an atom
- identify the number of shells, or energy levels, for an atom
• recognize periodic trends of elements, including the number of valence electrons, atomic size, and reactivity

<table>
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<tr>
<th>Date</th>
<th>Day</th>
<th>Science Starters</th>
<th>Classwork</th>
<th>Homework</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/10</td>
<td>E</td>
<td>none</td>
<td>All - Quest Today If time, continue notes on periodic table</td>
<td>none</td>
</tr>
<tr>
<td>1/11</td>
<td>F</td>
<td>Atomic Math 2</td>
<td>5R/5E - drop Continue Coloring Periodic Table, Notes, Video Clips</td>
<td>ready pg. 101, 103</td>
</tr>
<tr>
<td>1/12</td>
<td>A</td>
<td>none</td>
<td>SNOW DAY!!</td>
<td>none</td>
</tr>
<tr>
<td>1/13</td>
<td>B</td>
<td>Atomic Math 3</td>
<td>5G - finish Continue Coloring Periodic Table, Notes, Video Clips BrainPOP Movie: Periodic Table</td>
<td>5G-Color large periodic table 5R/5E - 101, 103</td>
</tr>
<tr>
<td>1/14</td>
<td>C</td>
<td>Atomic Math 4</td>
<td>5G - Periods and Groups 5R/5E - Finish Coloring Periodic Table, Notes, Video Clips BrainPOP Movie: Periodic Table</td>
<td>5G-pg. 105 5R/5E - Color Large periodic table</td>
</tr>
</tbody>
</table>

Notebook:
- pg. 101 - BrainPOP FYI: Mendeleev
- pg. 102 - Color the Periodic Table Notes, PPT, and Periodic Table (kept in folder)
- pg. 103 - BrainPOP FYI: Language, Periodic Table Elements
- pg. 104 - Shells and Valence Electrons Study Guide Notes, PPT
- pg. 105 - Practice: Periods & Groups
- pg. 106 - Atoms Vocab pg. 1
- pg. 107 - Atoms Vocab pg. 2

Related Links for more information:
- Chem 4 Kids: Elements, Atoms
- BrainPOP - Atomic Model Movie, Atoms, Radioactivity, Periodic Table Atoms and Elements

Week 16 top

Big Idea: Atoms are composed of small particles that determine the properties of the atom

Big Idea: Elements are organized on the periodic table according to their properties

NJCCC Standards: 5.1, 5.2, 5.6

Objectives: Students will be able to
- determine the number of protons, neutrons, and electrons, and the mass of an element using the periodic table.
- define atomic number and atomic mass
• describe Mendeleev's work on the organization of the Periodic table
• explain how elements are arranged in the modern periodic table
• compare metals, nonmetals, metalloids based on their properties and location on the periodic table
• describe the difference between a period and a group
• explain why elements in a group often have similar properties
• describe the properties of the elements in the groups of the periodic table
• accurately read and interpret information from the periodic table

<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Science Starters</th>
<th>Classwork</th>
<th>Homework</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/3</td>
<td>F</td>
<td>Element Challenge 5</td>
<td>5R/5E - drop day</td>
<td>read 92-93, 96-97</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5G - wrap up video clips, read some 1st person accounts of Trinity Test</td>
<td></td>
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<tr>
<td>1/4</td>
<td>A</td>
<td>Element Challenge 5</td>
<td>5G - drop day</td>
<td>read 92-93, 96-97</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5R/5E - wrap up video clips, read some 1st person accounts of Trinity Test</td>
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<tr>
<td>1/5</td>
<td>B</td>
<td>Element Challenge 6</td>
<td>BrainPOP Movie - Atoms Begin Atoms Family Notes, Power Point, and Atoms Family Math</td>
<td>review notes</td>
</tr>
<tr>
<td>1/6</td>
<td>C</td>
<td>Element Challenge 7</td>
<td>Finish up Atoms Family, Start coloring the period table notes and ppt</td>
<td>pg. 100 review notes</td>
</tr>
<tr>
<td>1/7</td>
<td>D</td>
<td>Atomic Math 1</td>
<td>Continue Coloring Periodic Table, Notes, Video Clips</td>
<td>review notes quest Monday</td>
</tr>
</tbody>
</table>

Notebook:

• pg. 92 - Read About It: BrainPOP Gold Foil Experiment
• pg. 93 - Read About It: BrainPOP Niels Bohr
• pg. 94 - Einstein's letter to FDR
• pg. 95 - FDR to Einstein
• pg. 96 - BrainPOP: Robert Oppenheimer
• pg. 97 - BrainPOP FYI: Radioactivity and Comic Books
• pg. 98 - Atoms Family Notes, PPT
• pg. 99 - BrainPOP: Atoms Advance Activity
• pg. 100 - Atoms Family Math
• pg. 101 - BrainPOP FYI: Mendeleev
• pg. 102 - Color the Periodic Table Notes, PPT, and Periodic Table (kept in folder)
• pg. 103 - BrainPOP FYI: Language, Periodic Table Elements

Related Links for more information:

• Chem 4 Kids: Elements, Atoms
• BrainPOP - Atomic Model Movie, Atoms, Radioactivity
• Atoms and Elements
• Atomic Bomb Testing - NY Times Photos
• Trinity Test - video clip History Channel
• "Fat Man Little Boy" video clip
• Manhattan Project
• Einstein's letter to Roosevelt
• Einstein and the atomic bomb video clip
• 50 years - Trinity Test
• Duck and Cover - video

Week 15 top

**Big Idea:** Atoms are composed of small particles that determine the properties of the atom

**NJCCC Standards:** 5.1, 5.2, 5.6

**Objectives:** Students will be able to

- describe some of the experiments that lead to the current atomic theory
- compare the different atomic models
- explain how the atomic theory has changed as scientists have discovered new information about the atom
- describe the size of the atom
- name the parts of the atom

<table>
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<tr>
<th>Date</th>
<th>Day</th>
<th>Science Starters</th>
<th>Classwork - Special schedules all week</th>
<th>Homework</th>
</tr>
</thead>
<tbody>
<tr>
<td>12/13</td>
<td>B</td>
<td>none</td>
<td>go over Chromo Lab due, Reflections due&lt;br&gt;All classes meet at the same class time&lt;br&gt;Intro to the atom activity, BrainPOP</td>
<td>none</td>
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<tr>
<td>12/14</td>
<td>C</td>
<td>none</td>
<td>Wrap up Atom Activity&lt;br&gt;Start Timeline Notes</td>
<td>none</td>
</tr>
<tr>
<td>12/15</td>
<td>D</td>
<td>none</td>
<td>Timeline notes continued</td>
<td>none</td>
</tr>
<tr>
<td>12/16</td>
<td>E</td>
<td>none</td>
<td>Einstein/FDR and Manhattan Project</td>
<td>none</td>
</tr>
<tr>
<td>12/17</td>
<td>X</td>
<td>none</td>
<td>Trinity Test continued&lt;br&gt;Special Schedule 12:00 Dismissal&lt;br&gt;7:00 Christmas Sing</td>
<td>enjoy the break!</td>
</tr>
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</table>

**Notebook:**

- pg. 88 - Chromatography Lab
- pg. 89 - Analysis Chromatography Lab
- pg. 90 - BrainPOP - Atomic Model Notes
- pg. 91 - Foldable: Atomic Model Timeline, PDF Notes
- pg. 92 - Read About It: BrainPOP Gold Foil Experiment
- pg. 93 - Read About It: BrainPOP Niels Bohr
- pg. 94 - Einstein’s letter to FDR
- pg. 95 - FDR to Einstein

**Related Links for more information:**

- BrainPOP - Atomic Model Movie
- [Atoms and Elements](http://middle3.fatcow.com/myplanbook-2010-2011.htm)
- [Trinity Test - video clip History Channel](http://middle3.fatcow.com/myplanbook-2010-2011.htm)
- "Fat Man Little Boy" video clip
- Manhattan Project
- [Einstein’s letter to Roosevelt](http://middle3.fatcow.com/myplanbook-2010-2011.htm)
- [Einstein and the atomic bomb video clip](http://middle3.fatcow.com/myplanbook-2010-2011.htm)
- 50 years - Trinity Test

Week 14 top
Big Idea: Matter can be classified into elements, compounds, and mixtures

NJCCC Standards: 5.1, 5.2, 5.6

Objectives: Students will be able to

- know and identify the parts of a solution- solute and solvent
- know that mixtures can be separated by physical means

<table>
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<tr>
<th>Date</th>
<th>Day</th>
<th>Science Starters</th>
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<tr>
<td>12/6</td>
<td>C</td>
<td>Element Challenge 1</td>
<td>Rainbow Lab</td>
<td>84-85 review ppt</td>
</tr>
<tr>
<td>12/7</td>
<td>D</td>
<td>Element Challenge 2</td>
<td>Wrap up Rainbow Lab &amp; review</td>
<td>study</td>
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<tr>
<td>12/8</td>
<td>E</td>
<td>None</td>
<td>Science Test pgs. 54-85</td>
<td>pg. 87</td>
</tr>
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<td>12/9</td>
<td>F</td>
<td>Element Challenge 3</td>
<td>5R/5E Drop Chromatography Lab</td>
<td>89</td>
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<tr>
<td>12/10</td>
<td>A</td>
<td>Element Challenge 3</td>
<td>5G Drop Chromatography Lab</td>
<td>89</td>
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</table>

Notebook:

- pg. 84 - Cut 'n Paste Matter Vocab pg 1 ppt
- pg. 85 - Cut 'n Paste Matter Vocab pg 2 ppt
- pg. 86 - Solutions - Rainbow Lab
- pg. 87 - Analysis Rainbow Lab
- pg. 88 - Chromatography Lab
- pg. 89 - Analysis Chromatography Lab

Related Links for more information:

- Chem 4 Kids: Matter, States of Matter, Phase Changes, Elements, Solutions
- BrainPOP - States of Matter Movie, Phase Changes Movie, Property Changes Movie, Compounds and Mixtures
- Interactive Websites to learn more about Matter
  - Behavior of Matter: Solids, Liquids, and Gases
  - Gasses, Liquids, and Solids
  - Reversible/Irreversible Changes
  - Melting and Freezing Points
  - Compounds and Mixtures
  - Mixtures and Solutions - Junkyards
  - Atoms and Elements
- Solids, Liquids, and Gases pdf/ppt
- Mixtures and Solutions - pdf/ppt
- Mixing rates: Hot vs. Cold Water

Week 13  top
NJCCC Standards: 5.1, 5.2, 5.6

Objectives: Students will be able to

- identify some elements, compounds, or mixtures
- differentiate between an element, compound, and mixture
- describe properties of mixtures
- know and identify the parts of a solution- solute and solvent

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<td>No Classes - Professional Development</td>
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<td>11/30</td>
<td>E</td>
<td>Common Cmpds 3</td>
<td>Catch Up/Wrap up pgs. 77-79 BrainPOP: Compounds and Mixtures Introduction to Mixtures and Solutions Demo: Do hot and cold water mix?</td>
<td>pgs 77-81</td>
</tr>
<tr>
<td>12/1</td>
<td>F</td>
<td>Common Cmpds 4</td>
<td>5R/5E - drop Day 5G- Sugar Lab</td>
<td>none</td>
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<tr>
<td>12/2</td>
<td>A</td>
<td>Common Cmpds 4</td>
<td>5G - Drop Day 5R/5E- Sugar Lab</td>
<td>none</td>
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<tr>
<td>12/3</td>
<td>B</td>
<td>none</td>
<td>Special Schedule- Friday Flick 1-3pm Discuss Sugar Lab, soda/sugar demo, BBC Solutions Demo pg. 83, jars left open to evaporate - how long until we see sugar again? Pop quiz</td>
<td>none</td>
</tr>
</tbody>
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Notebook:

- pg. 74 - Elements, Compounds, & Mixtures Notes, PPT Activity
- pg. 75 - Map: Elements, Compounds, & Mixtures
- pg. 76 - Lego Activity - Building Blocks of Matter
- pg. 77 - Categorize: Element, Compound, or Mixture?
- pg. 78 - Practice: Element, Compound, or Mixture?
- pg. 79 - Read About it: BrainPOP - Earth, Air, Fire, and Water
- pg. 80 - BrainPOP: Mixtures and Compounds Mixtures Quiz
- pg. 81 - Read About it: BrainPOP - Microwave Popcorn
- pg. 82 - Sugar Lab
- pg. 83 - BBC: Solutions
- pg. 84 - Solutions - Rainbow Lab
- pg. 85 - Analysis Rainbow Lab
- pg. 86 - Chromatography Lab
- pg. 87 - Analysis Chromatography Lab
- pg. 88 - Cut 'n Paste Matter Vocab pg 1
- pg. 89 - Cut 'n Paste Matter Vocab pg 2

Related Links for more information:

- Chem 4 Kids: Matter, States of Matter, Phase Changes, Elements, Solutions
- BrainPOP - States of Matter Movie, Phase Changes Movie, Property Changes Movie, Compounds and Mixtures
- Interactive Websites to learn more about Matter
  - Behavior of Matter: Solids, Liquids, and Gases
  - Gasses, Liquids, and Solids
  - Reversible/Irreversible Changes
  - Melting and Freezing Points
  - Compounds and Mixtures
  - Mixtures and Solutions - Junkyards
  - Atoms and Elements
- Solids, Liquids, and Gases pdf/ppt
Week 12 top

Big Idea: Matter can be classified into elements, compounds, and mixtures

NJCCC Standards: 5.1, 5.2, 5.6

Objectives: Students will be able to

- describe pure substances
- describe the characteristics of elements and give examples
- explain how elements can make up molecules and compounds
- describe properties of compounds
- explain how compounds can be broken down into elements
- give examples of common compounds
- differentiate between a molecule and a compound
- identify some elements, compounds, or mixtures
- build models of elements, compounds, and mixtures
- differentiate between an element, compound, and mixture

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<tr>
<td>11/22</td>
<td>C</td>
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<td>Wrap up E, C, M activity and Flow Chart pgs. 74-75</td>
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<td></td>
<td></td>
<td>Introduce Lego Lab pg. 76</td>
<td></td>
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<tr>
<td>11/23</td>
<td>D</td>
<td>none</td>
<td>Special Schedule</td>
<td>none</td>
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<td></td>
<td></td>
<td>Complete Lego Lab and start practice</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>pages 76-78</td>
<td></td>
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<td>11/24</td>
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<td>No School</td>
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<td>11/25</td>
<td>X</td>
<td>none</td>
<td>Happy Thanksgiving!</td>
<td>none</td>
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<tr>
<td>11/26</td>
<td>X</td>
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<td>No School</td>
<td>none</td>
</tr>
</tbody>
</table>

Notebook:

- pg. 74 - Elements, Compounds, & Mixtures Notes, PPT Activity
- pg. 75 - Map: Elements, Compounds, & Mixtures
- pg. 76 - Lego Activity - Building Blocks of Matter
- pg. 77 - Categorize: Element, Compound, or Mixture?
- pg. 78 - Practice: Element, Compound, or Mixture?
- pg. 79 - Read About it: BrainPOP - Earth, Air, Fire, and Water

Related Links for more information:

- Chem 4 Kids: Matter, States of Matter, Phase Changes, Elements
- BrainPOP - States of Matter Movie, Phase Changes Movie, Property Changes Movie
- Interactive Websites to learn more about Matter
  - Behavior of Matter: Solids, Liquids, and Gases
  - Gasses, Liquids, and Solids
  - Reversible/Irreversible Changes
  - Melting and Freezing Points
  - Compounds and Mixtures
  - Mixtures and Solutions - Junkyards
  - Atoms and Elements
- Solids, Liquids, and Gases pdf/ppt
- Mixtures and Solutions - pdf/ppt
Week 11 top

Big Idea: Matter is described by its properties and may undergo changes

Big Idea: Matter can be classified into elements, compounds, and mixtures

NJCCC Standards: 5.1, 5.2, 5.6

Objectives: Students will be able to

- give examples for physical properties of matter
- give examples of physical change
- identify indicators that a physical change took place
- describe two chemical properties: flammability and reactivity
- gives examples of chemical change
- explain what happens during a chemical change
- identify indicators that a chemical change took place
- distinguish between physical and chemical changes
- record detailed observations
- describe pure substances
- describe the characteristics of elements and give examples
- explain how elements can make up molecules and compounds
- describe properties of compounds
- explain how compounds can be broken down into elements
- give examples of common compounds
- differentiate between a molecule and a compound

<table>
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<th>Homework</th>
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<tr>
<td>11/15</td>
<td>D</td>
<td>Oologist 2</td>
<td>Physical and Chemical Properties pgs. 64-65</td>
<td>Famous Scientist due 11/16</td>
</tr>
<tr>
<td>11/16</td>
<td>E</td>
<td>Oologist 5</td>
<td>Physical and Chemical Changes Activity pgs. 66-67</td>
<td>65-68</td>
</tr>
<tr>
<td>11/17</td>
<td>F</td>
<td>Common Cmpds 1</td>
<td>5R/5E - drop Candle Observation pgs. 70-72</td>
<td>pgs. 69, 73</td>
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<tr>
<td>11/18</td>
<td>A</td>
<td>Common Cmpds 1</td>
<td>5G - drop Candle Observation pgs. 70-72</td>
<td>pg. 73</td>
</tr>
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<td>11/19</td>
<td>B</td>
<td>Common Cmpds 2</td>
<td>Elements, Compounds, and Mixtures pgs. 74-75</td>
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Notebook:

- pg. 63 - Read About it: BrainPOP - What's an icebox?
- pg. 64 - Physical and Chemical Properties, Changes Foldable
- pg. 65 - Physical & Chemical Properties, BrainPOP Property Changes
- pg. 66 - Physical & Chemical Change Activity
- pg. 67 - Analysis: Physical & Chemical Change Activity
- pg. 68 - BrainPOP FYI: Oxidation
- pg. 69 - BrainPOP: Property Changes Quiz
- pgs. 70 -72 - Candle Observations
- pg. 73 - Candle Observation Analysis
- pg. 74 - Elements, Compounds, & Mixtures Notes, PPT Activity
- pg. 75 - Map: Elements, Compounds, & Mixtures

Related Links for more information:

• Chem 4 Kids: Matter, States of Matter, Phase Changes, Elements
• BrainPOP - States of Matter Movie, Phase Changes Movie, Property Changes Movie
• Interactive Websites to learn more about Matter
  o Behavior of Matter: Solids, Liquids, and Gases
  o Gasses, Liquids, and Solids
  o Reversible/Irreversible Changes
  o Melting and Freezing Points
  o Compounds and Mixtures
  o Mixtures and Solutions - Junkyards
  o Atoms and Elements
• Solids, Liquids, and Gases pdf/ppt
• Mixtures and Solutions - pdf/ppt

Week 10 top

Big Idea: "If I have seen further, it is by standing on the shoulders of giants." Sir Isaac Newton

Big Idea: Matter exists in various physical states, which are determined by the movement of the matter's particles.

NJCCC Standards: 5.1, 5.2, 5.6

Objectives: Students will be able to

• describe the properties shared by all particles of matter
• describe the four states of matter
• explain the differences between the four states of matter
• describe how energy is involved in changes of state
• describe what is happening during melting and freezing
• compare evaporation and condensation
• explain what happens during sublimation
• give examples for physical properties of matter
• give examples of physical change
• identify indicators that a physical change took place
• describe two chemical properties: flammability and reactivity
• gives examples of chemical change
• explain what happens during a chemical change
• identify indicators that a chemical change took place
• distinguish between physical and chemical changes

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<th>Classwork</th>
<th>Homework</th>
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<tr>
<td>11/8</td>
<td>E</td>
<td>none</td>
<td>Go over Penny Boat Results</td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Quiz #4 and new seats</td>
<td>Famous Scientist due 11/16</td>
</tr>
<tr>
<td>11/9</td>
<td>F</td>
<td>Oologist Set 1</td>
<td>States of Matter Notes, BrainPOP</td>
<td>pgs. 56, 57</td>
</tr>
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<td>11/10</td>
<td>A</td>
<td>Oologist Set 1</td>
<td>States of Matter Notes, BrainPOP</td>
<td>pgs. 56, 57</td>
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<tr>
<td>11/11</td>
<td>B</td>
<td>Oologist Set 3</td>
<td>Phase Changes, BrainPOP</td>
<td>pgs. 60 - 62</td>
</tr>
<tr>
<td>11/12</td>
<td>C</td>
<td>Oologist Set 4</td>
<td>Physical and Chemical Properties, BrainPOP</td>
<td>pg 63</td>
</tr>
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</table>

Notebook:
• pg. 54 - BrainPOP: States of Matter Notes
Week 9 top

Big Idea: Forces in fluids are related to pressure and density and can affect the motion of objects in the fluid

Big Idea: "If I have seen further, it is by standing on the shoulders of giants." Sir Isaac Newton

NJCCC Standards: 5.1, 5.2, 5.3

Objectives: Students will be able to

- state that the density of water is 1g/cm³
- understand that objects with a density less than water will float, and objects with a density greater than water will sink
- predict whether an object will float or sink in a fluid
- explain how the overall density of an object can change
- understand that objects with a density less than water will float, and objects with a density greater than water will sink
- understand the concept that objects float due to the buoyant force of the water it displaces
- realize that when the mass of water displaced is equal to or greater than the mass of the object, the object will float
- design a boat to carry the largest cargo of pennies and stay afloat
- appreciate how scientists have contributed to the advancement of science and technology over time
- use technology and reference materials to research the life and work of a scientist
- present their information in the form of a "wanted poster" featuring their scientist
<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
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<th>Homework</th>
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<tr>
<td>11/1</td>
<td>F</td>
<td>Density 4</td>
<td>5R/5E - drop day</td>
<td>sign quiz pgs. 50-51</td>
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<td></td>
<td></td>
<td></td>
<td>5G - go over hw pages 46-49</td>
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<td></td>
<td>Explain &amp; Start Penny Boat Challenge</td>
<td></td>
</tr>
<tr>
<td>11/2</td>
<td>A</td>
<td>Density 4</td>
<td>5G - Drop</td>
<td>sign quiz pages 50-51</td>
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<td>5R/5E - go over pages 46-49</td>
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<td>Explain &amp; Start Penny Boat Challenge</td>
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<td>11/3</td>
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<td>Density 6</td>
<td>go over pg. 50-51</td>
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<td>Penny Boat Challenge final designs and Start Competition</td>
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<td>11/4</td>
<td>C</td>
<td>none</td>
<td>Library: Research Famous Scientists</td>
<td>pg. 52</td>
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<td>Assign Famous Scientists</td>
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<tr>
<td>11/5</td>
<td>D</td>
<td>none</td>
<td>Quiz Monday Posters due 11/16</td>
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<td>Club: Research Famous Scientists</td>
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Notebook:

- pg. 46 - Buoyancy Notes
- pg. 47 - Review: Buoyancy Cut 'n Paste Vocab
- pg. 48 - Cartesian Diver Observation
- pg. 49 - BrainPOP: Cartesian Diver Reading
- pg. 50: Read About it BrainPOP - Swim Bladder Reading
- pg. 51 - BrainPOP: Buoyancy Quiz
- pg. 52 - Penny Boat Challenge
- pg. 53 - Penny Boat Challenge - Sketches, ideas, data

Related Links:

- Interactive Web Site: Density/Buoyancy
- Floating log vs floating ship vs sinking rock graphic
- Buoyancy - PBS
- Buoyancy - MythBusters Video Clip
- Buoyancy - Rubber Duckies

Week 8 top

Big Idea: Forces in fluids are related to pressure and density and can affect the motion of objects in the fluid

NJCCC Standards: 5.1, 5.2, 5.3

Objectives: Students will be able to

- state that the density of water is \(1\text{g/cm}^3\)
- understand that objects with a density less than water will float, and objects with a density greater than water will sink
- predict whether an object will float or sink in a fluid
- explain how the overall density of an object can change
Notebook:
- pg. 40 - Practice using the Formula: Mass, Volume, or Density?
- pg. 41 - Quiz Print Out: BrainPOP Measuring Matter
- pg. 42 - Float or Sink - Laptop Activity Link
- pg. 43 - Analysis: Float or Sink Lab
- pg. 44 - Dunkin' for Density
- pg. 45 - Dunkin' for Density Analysis
- pg. 46 - Buoyancy Notes
- pg. 47 - Review: Buoyancy Cut 'n Paste Vocab
- pg. 48 - Cartesian Diver Observation
- pg. 49 - BrainPOP: Cartesian Diver Reading
- pg. 50: Read About it BrainPOP - Swim Bladder Reading
- pg. 51 - BrainPOP: Buoyancy Quiz

Related Links:
- BrainPOP Movies: Metric System, Metric Units, Measuring Matter
- Fun Brain Measure it! Practice reading a ruler
- Pour to Score - logic problem using volume
- Can you fill it? Fill the container with the fewest # of pours
- Can you balance the animals? Uses metric and non metric units, practice conversions.
- Can you balance the poddles?

Week 7 top

**Big Idea:** Forces in fluids are related to pressure and density and can affect the motion of objects in the fluid

**NJCCC Standards:** 5.1, 5.2, 5.3

**Objectives:** Students will be able to

- realize that density is a physical property of matter
- describe the relationship between mass and volume as it relates to density
- use observations to predict the relative density of an object
- describe the relationship between mass and volume as it relates to density
- use the following formulas when appropriate: \( d = \frac{m}{v} \), \( m = vx \), \( v = \frac{m}{d} \)
- complete a self-paced interactive density tutorial
- state that the density of water is \( 1 \text{g/cm}^3 \)
- understand that objects with a density less than water will float, and objects with a density greater than water will sink
- predict whether an object will float or sink in a fluid
- explain how the overall density of an object can change

<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Science Starters</th>
<th>Classwork</th>
<th>Homework</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/18</td>
<td>C</td>
<td>Mass 1</td>
<td>Continue: MVD Matrix pg. 36</td>
<td>Review for quiz</td>
</tr>
<tr>
<td>10/19</td>
<td>D</td>
<td>Mass 2</td>
<td>Density Notes pg. 38 and practice problems pgs. 39 &amp; 40</td>
<td>Study for quiz &amp; pg. 41</td>
</tr>
<tr>
<td>10/20</td>
<td>E</td>
<td>none</td>
<td>Quiz - pgs. 20-35 Complete pg 40, go over pg. 41</td>
<td>Kairos Night</td>
</tr>
<tr>
<td>10/21</td>
<td>F</td>
<td>Mass 3</td>
<td>5R/5E - drop 5G - Float or Sink Activity pgs. 42-43</td>
<td>pg. 43</td>
</tr>
</tbody>
</table>
### Week 6

**Big Idea:** Matter is described by its properties and may undergo changes

**NJCCC Standards:** 5.1, 5.2, 5.3

**Objectives:** Students will be able to

- recognize that 1 cm³ is equivalent to 1 mL
- complete a self-paced tutorial online for measurement skills, collecting and recording data, and using a data chart
- complete a self-paced tutorial online for recording masses on a Triple Beam Balance
- hold, carry, and use the Triple Beam Balance correctly
- identify the parts of a Triple Beam Balance
- find the mass of a solid to the nearest 0.1 gram
- take and record precise measurements
- differentiate between mass and weight
- realize that density is a physical property of matter
- describe the relationship between mass and volume as it relates to density
- use observations to predict the relative density of an object

<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Science Starters</th>
<th>Classwork</th>
<th>Homework</th>
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</thead>
<tbody>
<tr>
<td>10/11</td>
<td>X</td>
<td>none</td>
<td>Columbus Day - No School</td>
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<tr>
<td>10/12</td>
<td>E</td>
<td>Volume 1</td>
<td>go over pgs. 29-31, TBB pg. 32</td>
<td>none</td>
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<tr>
<td>10/13</td>
<td>F</td>
<td>Volume 2</td>
<td>5G/5E - Drop 5G- TBB Lab pg. 34</td>
<td>pgs. 33, 35</td>
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<tr>
<td>10/14</td>
<td>A</td>
<td>Volume 2</td>
<td>5G - Drop 5E/5R - TBB Lab pg. 34</td>
<td>pgs. 33, 35</td>
</tr>
<tr>
<td>10/15</td>
<td>B</td>
<td>Length 5</td>
<td>BrainPOP Movie: Measuring Matter Demo/Activity - density bottles BrainPOP Handouts pg 36</td>
<td>pg. 37</td>
</tr>
</tbody>
</table>
- **Week 5: top**

**Big Idea:** Matter is described by its properties and may undergo changes

**NJCCC Standards:** 5.1, 5.2, 5.3

**Objectives:** Students will be able to

- use a ruler to measure length in cm and/or mm
- make metric conversions by moving the decimal place
- find the volume of a rectangular prism using the formula LxWxH
- define the word meniscus
- accurately use a graduated cylinder to measure volume
- find the volume of irregular objects using water displacement
- recognize that 1 cm³ is equivalent to 1 mL
- complete a self-paced tutorial online for measurement skills, collecting and recording data, and using a data chart

<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Science Starters</th>
<th>Classwork</th>
<th>Homework</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/4</td>
<td>F</td>
<td>Length 2</td>
<td>5G - Finish Volume of a Solid pg. 22</td>
<td>pgs. 23, 24, 25</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>5R/5E - drop</td>
<td></td>
</tr>
<tr>
<td>10/5</td>
<td>A</td>
<td>Length 2</td>
<td>5R/5E - Finish Volume of a Solid pg.22</td>
<td>pgs. 23, 24, 25</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5G- drop</td>
<td></td>
</tr>
<tr>
<td>10/6</td>
<td>B</td>
<td>Length 4</td>
<td>go over hw</td>
<td>pgs. 27, 28</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Start Irregular Volume pg. 26</td>
<td></td>
</tr>
<tr>
<td>10/7</td>
<td>C</td>
<td>Length 3</td>
<td>go over hw</td>
<td>pgs. 29, 31</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Finish Irreg. Volume Lab pg. 26</td>
<td></td>
</tr>
<tr>
<td>10/8</td>
<td>D</td>
<td>none</td>
<td>Shortened Classes - Assembly</td>
<td>none</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Laptop: BBC Measure Activity pg. 30</td>
<td></td>
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</tbody>
</table>

**Notebook:**

- pg. 22 - Volume Lab: Pre-Lab, Length, Width, & Height
- pg. 23 : Practice: Measuring in mm pg. 1
- pg. 24 - Practice: Volume of a regular solid pg. 1
- pg. 25 - Practice: Volume of a regular solid pg. 2
- pg. 26 - Irregular Volume Lab: Pre-Lab, Water Displacement

**Related Links:**

- BrainPOP Movies: Metric System, Metric Units, Measuring Matter
- Fun Brain Measure it! Practice reading a ruler
- Pour to Score - logic problem using volume
- Can you fill it? Fill the container with the fewest # of pours
- Can you balance the animals? Uses metric and non metric units, practice conversions.
- Can you balance the poddles?
Related Links:

- BrainPOP Movies: Metric System, Metric Units, Measuring Matter
- Fun Brain Measure it! Practice reading a ruler
- Pour to Score - logic problem using volume
- Can you fill it? Fill the container with the fewest # of pours
- Can you balance the animals? Uses metric and non metric units, practice conversions.
- Can you balance the poddles?

Week 4: t#topop

Big Idea: Matter is described by its properties and may undergo changes

NJCCC Standards: 5.1, 5.2, 5.3

Objectives: Students will be able to

- use a stem and leaf plot to collect and analyze data, and make a conclusion
- describe the effects of soap on surface tension
- name the tools used to collect and analyze data
- explain the importance of the International System of Units
- select the appropriate units to use for particular measurements
- describe the two properties of matter: mass and volume
- identify the units used to measure mass and volume
- use a ruler to measure length in cm and/or mm
- make metric conversions by moving the decimal place
- find the volume of a rectangular prism using the formula LxWxH

<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Science Starters</th>
<th>Classwork</th>
<th>Homework (phase in continues)</th>
</tr>
</thead>
<tbody>
<tr>
<td>9/27</td>
<td>A</td>
<td>B Words 5G -drop day</td>
<td>5R/5E - continue drops of water on a penny lab</td>
<td>none</td>
</tr>
<tr>
<td>9/28</td>
<td>B</td>
<td>C Words Wrap up Penny Lab</td>
<td>Intro to the Metric System Notes pg. 18</td>
<td>pg. 17, pg 19</td>
</tr>
<tr>
<td>9/29</td>
<td>C</td>
<td>Penny Challenge Go over HW</td>
<td>Continue metric activity pg. 18</td>
<td>pg. 20</td>
</tr>
<tr>
<td>9/30</td>
<td>D</td>
<td>Length 1 Go over HW</td>
<td>Finish metric activity pg. 18</td>
<td>pg. 21 Study pgs. 8-19</td>
</tr>
<tr>
<td>10/1</td>
<td>E</td>
<td>None Go over HW Quiz pgs. 8 - 19</td>
<td>Begin Volume of a solid pg. 22</td>
<td>None</td>
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</table>
Notebook:

- pg. 16 - Drops of Water on a Penny
- pg. 17 - Analysis
- pg. 18 - Metric System Notes Foldable
- pg. 19 - Practice: Metric Units
- pg. 20 - Practice: Measuring in cm & mm
- pg. 21 - Practice Reading a Ruler pg 1
- pg. 22 - Volume Lab: Pre-Lab, Length, Width, & Height
- pg. 23 - Practice: Volume of a regular solid pg. 1

Related Links:

- BrainPOP Movies: Metric System, Metric Units, Measuring Matter
- Fun Brain Measure it! Practice reading a ruler
- Pour to Score - logic problem using volume
- Can you fill it? Fill the container with the fewest # of pours
- Can you balance the animals? Uses metric and non metric units, practice conversions.
- Can you balance the poddles?

Week 3: top

Big Idea: Scientific Progress is made by asking meaningful questions and conducting careful investigations.

NJCCC Standards: 5.1, 5.2, 5.3

Objectives: Students will be able to

- work cooperatively with their lab partner and lab group
- understand that scientists develop theories based on given information, and that those theories change with the addition of new information
- understand that given the same information, scientists may develop theories that are different from each other
- observe the "skin" that forms as a result of surface tension and explain, on a molecular level, why certain objects are able to float on the surface
- use a plastic pipette properly and with good control
- use a stem and leaf plot to collect and analyze data, and make a conclusion
- describe the effects of soap on surface tension

<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Science Starters</th>
<th>Classwork</th>
<th>Homework (phase in continues)</th>
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</thead>
<tbody>
<tr>
<td>9/20</td>
<td>B</td>
<td>Lab Equip 1</td>
<td>All: D&amp;T Activity pg. 12</td>
<td>none</td>
</tr>
<tr>
<td>9/21</td>
<td>C</td>
<td>Lab Equip 2</td>
<td>All: Wrap Up D&amp;T Activity</td>
<td>pgs. 11/13 if not done in class</td>
</tr>
<tr>
<td>9/22</td>
<td>D</td>
<td>Lab Equip 3</td>
<td>All: Surface Tension Demo pg. 14</td>
<td>pgs. 14/15</td>
</tr>
<tr>
<td>9/23</td>
<td>E</td>
<td>Lab Equip 4</td>
<td>Drops of Water on a Penny pg. 16 (picture day)</td>
<td>none</td>
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<tr>
<td>9/24</td>
<td>F</td>
<td>B Words</td>
<td>5E/5R - Drop Day</td>
<td>none</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>5G - Continue Drops of Water on a Penny</td>
<td>none</td>
</tr>
</tbody>
</table>

Notebook:
- pg. 12 - D&T Class Activity
- pg. 13 - Analysis - D&T Activity
- pg. 14 - Surface Tension Demo
- pg. 15 - Review: Vocab List
- pg. 16 - Drops of Water on a Penny
- pg. 17 - Analysis

Related Links:
- BrainPOP Movies: Scientific Method.

Week 2: top

Big Idea: Scientific Progress is made by asking meaningful questions and conducting careful investigations.

NJCCS Standards: 5.1, 5.2

Objectives: Students will be able to...
- view themselves as scientists
- work cooperatively with their lab partner and lab group
- recognize common safety symbols and know their meanings
- become familiar with and follow lab safety rules
- differentiate between observations and inferences
- differentiate between quantitative and qualitative data
- develop reasonable explanations using their observations and prior knowledge

<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Science Starters</th>
<th>Classwork</th>
<th>Homework (phase in continues)</th>
</tr>
</thead>
<tbody>
<tr>
<td>9/13</td>
<td>C</td>
<td>none</td>
<td>No science classes today- Laptop roll out phase 2</td>
<td>none</td>
</tr>
<tr>
<td>9/14</td>
<td>D</td>
<td>Safety 1</td>
<td>5R/5E - Start &quot;I am a scientist&quot; ppt &amp; drawing on pg. 7</td>
<td>pg. 7/9</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>If time, begin safety lesson pg. 8</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5G - pg. 7 draw a scientist Safety Lesson pg. 8</td>
<td></td>
</tr>
<tr>
<td>9/15</td>
<td>E</td>
<td>Safety 2</td>
<td>All - 10 Question Notebook quiz Class Discussion: Observations, Inferences, Quantitative &amp; Qualitative, begin Mystery Footprints pg. 10, 11</td>
<td>none</td>
</tr>
<tr>
<td>9/16</td>
<td>F</td>
<td>A Words</td>
<td>5R/5E - drop day</td>
<td>none</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>5G - Finish Mystery Footprints</td>
<td></td>
</tr>
<tr>
<td>9/17</td>
<td>A</td>
<td>A Words</td>
<td>Lewis Morris Park- special activity</td>
<td>none</td>
</tr>
</tbody>
</table>

Notebook:
- pg. 7 - I am a Scientist, ppt
- pg. 8 - SpongeBob Safety Challenge
- pg. 9 - What's wrong Safety Pictures
- pg. 10 - Mystery Footprints PPT, Notes
- pg 11 - Practice: Qualitative, Quantitative, Observation, Inference
Week 1: top

Big Idea: Scientific Progress is made by asking meaningful questions and conducting careful investigations.

NJCCC Standards: 5.1, 5.2

Objectives: Students will be able to...

- become familiar with the science classroom, procedures, and rules
- set up table of contents in science notebook, number pages to 20, and begin scavenger hunt

<table>
<thead>
<tr>
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<th>Homework</th>
</tr>
</thead>
<tbody>
<tr>
<td>9/6</td>
<td>X</td>
<td>No School - Labor Day</td>
<td>none</td>
<td></td>
</tr>
<tr>
<td>9/7</td>
<td>X</td>
<td>No School - New Student Picnic</td>
<td>First Day of School! Special Schedule - all classes meet Go over procedures and class rules Hand out notebooks Start Scavenger Hunt pg. 6</td>
<td>none</td>
</tr>
<tr>
<td>9/8</td>
<td>A</td>
<td>none</td>
<td>none</td>
<td></td>
</tr>
<tr>
<td>9/9</td>
<td>X</td>
<td>No School</td>
<td>none</td>
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</tr>
<tr>
<td>9/10</td>
<td>B</td>
<td>none</td>
<td>All - Complete and go over Scav Hunt, Start &quot;I am a scientist&quot; ppt pg. 7</td>
<td>none</td>
</tr>
</tbody>
</table>

Notebook:

- pg. 6 - Scavenger Hunt
- pg. 7 - I am a Scientist, ppt

Related Links:

- BrainPOP Movies: Scientific Method.

Old Lesson Plans posted below: top

- 5th Grade
  - 2009-2010
  - 2008-2009

- 6th Grade
  - 2003-2004
  - 2002-2003
  - 2000-2001
- Lesson of the Week Archive 2001-2007