Columbus County Schools
6th Grade Science Curriculum Guide

SUBJECT: Science	**GRADE LEVEL:** 6th Grade	**GRADING PERIOD:** 1st 9 weeks
Module(s): H - Matter and Energy	Time Frame: 6 weeks (3 part unit- 2 weeks a piece) **Dates: Aug 26 - Oct. 8th 2013**	**Unit: One- Structure of Matter**
Essential Standard: 6. P.2 Understand the structure, classifications, and physical properties. 6. P.3 Understand characteristics of energy transfer and interactions of matter and energy.		

Lessons:	Technology and Literacy Standards and Tasks	Academic Vocabulary:	Assessment(s):	Additional Resources:
Lesson Name: Structure of an Atom **Clarifying Objective:** 6. P.2.1 Recognize that all matter is made up of atoms and atoms of the same element are all alike, but are different from the atoms of other elements. **Time Frame:** Dates: (2 weeks - 2 days) Aug 26- Sept. 4th (7 days)- Science process Sept. 5- Sept.9 (7 days) – Intro to matter **Essential Question:** What properties define matter? How can you determine the density of an object? (pg1 of Science fusion- Matter and Energy)	**WTL- Science 6 14.1 How did we learn about atoms?** **Literacy Standards:** CCSS.ELA-Literacy.RST.6-8.3. Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks **Technology Standards:** 6. TT.1: Use technology and other resources for the purpose of accessing, organizing, and sharing information. 6. TT.1.2 Select appropriate technology tools to organize data and information (e.g., word processor, database, spreadsheet, graphic organizer, audio, and visual recording, online collaboration tools, etc.).	• Hypothesis • Theory • Evidence • Lab Procedures • Atoms • Elements Solubility • Heat Mass • Motion Weight • Particles	**Formative:** - **Uncovering Student Ideas in Science Vol 3**- pg 84- Is it a theory? - **Uncovering Student Ideas in Science Vol** 3- pg 101- What is a hypothesis? - **Science Fusion- Matter and Energy Teacher's Edition**- pg 207 - **Science Formative Assessment 75 Practical Strategies for Linking Assessment-** Card Sorts pg 56-59, Muddiest Point pg 138, STIP pg180 - **Summative:** - Examview Module H - **Science Fusion- Matter and Energy Teacher's Edition**- online Unit Self Quiz for a review - **Online Science Fusion- Unit Assessment under teacher edition-Unit A test- Assessment guide**	NC DPI Support Document ▪ Atom animation ▪ Deep Thoughts on Matter ▪ Atoms ▪ Using Static Electricity to Introduce matter ▪ Using Static Electricity to Introduce matter ▪ Currituck County Schools ***Science Fusion Teachers Edition- Matter and Energy-*** Unit 1 pg 1-117 **6th Grade McDougal Book** - Unit B- Chapter 1, Chapter 2 Video Atoms Video Additional Resources in Dropbox

"I Can" Statements • I can write a hypothesis. • I can collect and analyze data. • I can identify the difference between dependent and independent variables. • I can measure using metric units. • I can define an element. • I can recognize that matter is made of smaller particles called atoms. • I can explain why atoms are the building blocks of all matter. • I can recognize that all atoms of the same element have the same properties.	6.SE.1 Apply responsible behaviors when using information and technology resources 6. SE.1.1 Apply ethical behavior (copyright, not plagiarizing, proper etiquette) when using resources. 6. SE.1.2 Apply the safety precautions necessary when using online resources (personal information, passwords, etc.).			
Lesson Name Heat and Energy **Clarifying Objective:** 6. P.2.2 Explain the effect of heat on the motion of atoms through a description of what happens to particles during a change in phase. 6. P.3.1 Illustrate the transfer of heat energy from warmer objects to cooler ones using examples of conduction, radiation and convection and the effects that may result.	**Literacy Standards:** CCSS.ELA-Literacy.RST.6-8.3. Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks **Technology Standards:** 6. TT.1: Use technology and other resources for the purpose of accessing, organizing, and sharing information.	• Thermal energy • Volume • Density • Expansion • Contraction • Collision • Convection • Transfer • Transform • Radiation • Pure • Substance • Freezing point • Boiling point	**Formative:** - Density Lab - **Uncovering Student Ideas in Science Vol 1**- pg 79 - **Science Fusion Matter and Energy** pg 25 Teachers edition - Why is sound not considered to be matter? - What effect does the location of an object have on its mass? **Science Formative Assessment 75 Practical Strategies for Linking Assessment-** First Word Last Word pg 89-91, Justified True or False	Science Fusion Teachers Edition- Matter and Energy- Unit 2 Lesson 3 pg 34- 118, pg 130-185, pg 158-171 Matter by Chris Cooper The Solid Truth About States of Matter with Max Axiom by Agnieszka Biskup WildSide: Weird Science Book Textbook Reference (8th grade textbook) Energy -Book 6th Grade McDougal Book - Unit B- Chapter 1, Chapter 2 Video

Time Frame: (2 weeks) Physical Properties **Dates:** Sept 10th- Sept 20th- (10 days) Changes in Matter/ Thermal Energy **Essential Question:** What is the relationship between heat and temperature? How does heat affect the motion of atoms? **"I Can" Statements** • I can identify the three phases of matter. • I can explain how heat encourages phase change. • I can identify the physical properties of matter.	6. TT.1.2 Select appropriate technology tools to organize data and information (e.g., word processor, database, spreadsheet, graphic organizer, audio, and visual recording, online collaboration tools, etc.). 6.SE.1 Apply responsible behaviors when using information and technology resources 6. SE.1.1 Apply ethical behavior (copyright, not plagiarizing, proper etiquette) when using resources. 6. SE.1.2 Apply the safety precautions necessary when using online resources (personal information, passwords, etc.).		Statements pg 126-127 ***Science Fusion Teachers Edition- Matter and Energy-*** pg 158 - Have students offer examples of conduction, convection and radiation from their everyday life. - ***Science Fusion Teachers Edition- Matter and Energy-*** pg 165- Think Fast Assessment **Summative:** - Benchmark - Examview Module H - ***Science Fusion Teachers Edition- Matter and Energy-*** pg 165- Thermal Energy and its Transfer- lesson quiz and End of unit test	▪ Cycle of matter ▪ Using Static Electricity to Introduce matter ▪ Using Static Electricity to Introduce matter Additional Resources in Dropbox
Lesson Name States of Matter **Clarifying Objective:** 6.P.2.3 Compare the physical properties of pure substances that are independent of the amount of matter present including density, melting point, boiling point, and solubility to properties	WTL-**Chemical Building Blocks: 1.1 Describing Matter** **Literacy Standards:** CCSS.ELA-Literacy.RST.6-8.3. Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks	• Thermal energy • Technological design • Insulator • Conduction • Expansion • Contraction • Pure • Substance • Freezing point • Boiling point • Solubility	**Formative:** - **Fusion Matter and Energy** pg 73 Teachers edition - **Fusion Matter and Energy** pg 25 Teachers edition - States of Matter lab - **Science Fusion- Matter and Energy Teacher's Edition**- pg 105 - Describe what happens to the particles of a substance when it changes from a gas to a liquid to a solid. Use the terms condensation and	Science Fusion Teachers Edition- Matter and Energy - pg 34- 118, pg 130-185 Matter by Chris Cooper The Solid Truth About States of Matter with Max Axiom by Agnieszka Biskup WildSide: Weird Science Book Textbook Reference (8th grade textbook)

that are dependent on the amount of matter present to include volume, mass and weight. 6. P.3.3 Explain the suitability of materials for use in technological design based on a response to heat (to include conduction, expansion, and contraction) and electrical energy (conductors and insulators). **Time Frame:** (2 weeks 2 days) Physical Properties **Dates:** Sept 23- Oct 2 (7 days) Oct 3rd - Oct 8th (4 days) **Essential Question:** What are physical and chemical properties of matter? How does the use of energy resources affect the environment? **"I Can" Statements-** ▪ I can identify the three phases of matter. ▪ I can explain how heat encourages phase change. ▪ I can identify the physical properties of matter. ▪ I can compare/contrast and give examples of conductors and insulators. ▪ I can define thermal energy.	**Technology Standards:** 6. TT.1: Use technology and other resources for the purpose of accessing, organizing, and sharing information. 6. TT.1.2 Select appropriate technology tools to organize data and information (e.g., word processor, database, spreadsheet, graphic organizer, audio, and visual recording, online collaboration tools, etc.). 6.SE.1 Apply responsible behaviors when using information and technology resources 6. SE.1.1 Apply ethical behavior (copyright, not plagiarizing, proper etiquette) when using resources. 6. SE.1.2 Apply the safety precautions necessary when using online resources (personal information, passwords, etc.).		freezing. - What happens to mass when a substance changes state? **Summative:** - Benchmark - Examview Module H - **Science Fusion- Matter and Energy Teacher's Edition**- pg 207- Changes of State- online resource- Unit test A and B and lesson quiz.	Energy -Book 6th Grade McDougal Book - Unit B- Chapter 1, Chapter 2 Video ▪ Cycle of matter ▪ Using Static Electricity to Introduce matter ▪ Using Static Electricity to Introduce matter ▪ Additional Resources in Dropbox

****Note: Some of the tasks in this unit can take multiple days to complete and therefore you may need to roll some activities to the next day and/or start a new task group in the middle of a school period. This is still in the planning stage so adjust the pace to meet your student's needs and abilities. We will make adjustments at PD days after we have worked through some of the difficulties.*****

Most Internet/video content was pulled in it's original format. Please PREVIEW and adjust for your population.

Day 1- Aug. 26th-30th **Lesson:** Procedures	**Day 2** **Lesson:** Procedures	**Day 3** **Lesson:** Procedures	**Day 4** **Lesson:** Procedures	**Day 5** **Lesson:** Procedures
Clarifying Objective: 6. P.2.1 Recognize that all matter is made up of atoms and atoms of the same element are all alike, but are different from the atoms of other elements. **Academic Vocabulary:** "Get to Know you Day"	**Clarifying Objective:** 6. P.2.1 Recognize that all matter is made up of atoms and atoms of the same element are all alike, but are different from the atoms of other elements. **Academic Vocabulary:** Lab Procedures	**Clarifying Objective:** 6. P.2.1 Recognize that all matter is made up of atoms and atoms of the same element are all alike, but are different from the atoms of other elements. **Academic Vocabulary:** Lab Procedures	**Clarifying Objective:** 6. P.2.1 Recognize that all matter is made up of atoms and atoms of the same element are all alike, but are different from the atoms of other elements. **Academic Vocabulary:** Hypothesis	**Clarifying Objective:** 6. P.2.1 Recognize that all matter is made up of atoms and atoms of the same element are all alike, but are different from the atoms of other elements. **Academic Vocabulary:** Hypothesis/ Experiment
Bell Ringer: List three things you would like the teacher to know about you. **Instructional Tasks:** Class Rules/ Procedures Get to know you worksheet/ Activity. Think-pair –share among students. Students share with one another interesting facts about themselves. **Summarizer:** Have students share one or two things about their partner in front of the class.	**Bell Ringer:** List three things you may find in a science lab. **Instructional Tasks:** Students will pair up and be given a science lab procedure. They will be required to reword the procedure and create a matching picture. Lab procedure worksheet. Find the problems in the picture(in dropbox resources) **Summarizer:** Exit slip- Write a quick summary about . . .	**Bell Ringer:** List an important lab safety rule and explain the importance of this rule. **Instructional Tasks:** Review homework worksheet Demonstrate lab tools such as, microscopes, slides, beaker, test tubes, etc. Youtube video- safety procedure rap- Students enjoy this video so I show it twice **Summarizer:** Exit Slip- The most important thing I learned today was...	**Bell Ringer:** Option 1- List two objects from the lab tool demonstration yesterday and describe the use of these tools. Option 2- **Uncovering Student Ideas in Science Vol** 3- pg 101- What is a hypothesis? **Instructional Tasks:** Review Homework/ Class discussion of Procedures/Safety Discuss the importance of hypothesis. D&T group activity. Students will be grouped and pull words to create a hypothesis. (Directions are on the worksheet, as well as discussion questions.) Draw a picture to illustrate your final hypothesis, be	**Bell Ringer:** What is the importance of creating a hypothesis before an experiment? Use complete sentences. **Instructional Tasks:** Show examples of If…then…because hypothesis and explain why the science community chooses this written form of hypothesis. (Good Hypothesis-Situations Only- Worksheet in dropbox) **Summarizer:** Discuss a couple of the hypothesis to insure the students understand how to write a thorough educated guess.

			sure to use at least 4 different colors. **Summarizer:** Write 3-5 complete sentences on what you learned by doing this activity and be sure to incorporate some of the things we discussed in class.	
Assessment: observation	**Assessment/ homework:** observation/ if the lab procedure worksheet is not completed, students will finish this for homework.	**Assessment:** SpongeBob Lab safety worksheet. Students need to highlight what Patrick and Spongebob are doing wrong and fix three errors created by Spongebob or Patrick and implement the correct procedure.	**Assessment:** Observation	**Assessment:** Observation

Day-1- Sept. 2nd –6th **Lesson:** Labor Day	**Day 2** **Lesson:** Hypothesis	**Day 3** **Lesson:** Experiment	**Day 4** **Lesson:** Matter and Energy	**Day 5** **Lesson:** Matter and Energy
Bell Ringer: **Labor Day** **Instructional Tasks:** **Summarizer:**	**Bell Ringer:** How does creating an if…then…because hypothesis important in creating an experiment? **Instructional Tasks:** Students will complete the worksheet Question and Hypothesis(Part1- Questions only today) to better understand how to create a hypothesis. This will lead us into creating an experiment for hypothesis. **Summarizer:** Think-pair- share with a classmate .. if…then…because hypothesis. Were they the same or different? Why?	**Bell Ringer:** Review your hypothesis and procedures of the experiment with your group member. **Instructional Tasks:** Students will execute the experiment from part 2 of their worksheet Question and hypothesis. Divide the students into groups and have each group test a difference substance. Students can then share their data with different groups as a think-pair- share activity. Students will then complete the graph of their experiment. **Summarizer:** Share your conclusion from your experiment with your classmates.	**Clarifying Objective:** 6. P.2.1 Recognize that all matter is made up of atoms and atoms of the same element are all alike, but are different from the atoms of other elements. **Academic Vocabulary:** Matter, mass, weight, **Bell Ringer:** What do you think/know about matter? **Instructional Tasks:** Science Fusion PowerPoint notes on their website Unit 1 lesson 1- Intro to matter (under lesson teacher support). Copy and paste to a word document to create skeleton notes. Discuss each PowerPoint as you go through them. **Summarizer:** Are mass and weight the same thing? Explain why or why not?	**Clarifying Objective:** 6. P.2.1 Recognize that all matter is made up of atoms and atoms of the same element are all alike, but are different from the atoms of other elements. **Academic Vocabulary:** density, volume **Bell Ringer:** Are volume and density the same thing? Explain why or why not? **Instructional Tasks:** Continue notes if necessary. Option 1- Pg 18-19 Teacher's edition- Matter and Energy. Daily Demo-, exploration Lab, or Quick lab will be a good resource for hands on or a demonstration activity. Option 2-Digital video lesson found on Science Fusion website (found under student or teacher.) Work on student lesson

				review. (Possible experiment- How is density determined? Using pumice and obsidian rock) pg 29 teachers edition-matter and energy) **Summarizer:** What properties define matter? Explain using at least two sentences.
Assessment: (Formative and/or Summative)	**Assessment:** Observation	**Assessment:** If students do not finish the graph portion of their worksheet, they should complete this as homework. (The completed worksheet/ activity can be used as an assessment or grade.)	**Assessment:** observation	**Assessment:** observation

Day 1 week of Sept. 9-13 **Lesson:** Matter and Energy	**Day 2** **Lesson:** Matter and Energy	**Day 3** **Lesson:** Matter and Energy	**Day 4** **Lesson:** Matter and Energy	**Day 5** **Lesson:** Matter and Energy
Clarifying Objective: 6. P.2.1 Recognize that all matter is made up of atoms and atoms of the same element are all alike, but are different from the atoms of other elements. **Academic Vocabulary:** Physical property, chemical property, malleability	**Clarifying Objective:** 6. P.2.1 Recognize that all matter is made up of atoms and atoms of the same element are all alike, but are different from the atoms of other elements. **Academic Vocabulary:** Solubility, melting point, boiling point, conductivity,	**Clarifying Objective:** 6. P.2.1 Recognize that all matter is made up of atoms and atoms of the same element are all alike, but are different from the atoms of other elements. **Academic Vocabulary:** Chemical change, physical change, Law of Conservation of Mass	**Clarifying Objective:** 6. P.2.1 Recognize that all matter is made up of atoms and atoms of the same element are all alike, but are different from the atoms of other elements. **Academic Vocabulary:** Chemical change, physical change, Law of Conservation of Mass	**Clarifying Objective:** 6. P.2.1 Recognize that all matter is made up of atoms and atoms of the same element are all alike, but are different from the atoms of other elements. **Academic Vocabulary:** Atom, element, compound, mixture, pure substance, homogeneous and heterogeneous
Bell Ringer: Give two examples of matter and two examples of things that are not matter. **Instructional Tasks:** Science Fusion PowerPoint notes on their website Unit 1 lesson 2- Properties of matter (under lesson teacher support). Copy and paste to a word document to create skeleton notes. Discuss each PowerPoint as you go through them. **Summarizer:** Predict: If you let all of the liquid evaporate out of the pitcher would you be able	**Bell Ringer:** Why do automobiles rust easier in wet climates than dryer climates? **Instructional Tasks:** Continue notes if necessary. Option 1- Pg 36-37Teacher's edition- Matter and Energy. Daily Demo, Exploration or Quick lab will be a good resource for hands on or a demonstration activity. Option 2-Digital video lesson found on Science Fusion website (found under student or teacher.)	**Bell Ringer:** Explain why or why not the size of an object does or does not affect the characteristics of an object? (characteristic properties stay the same regardless of the amount of the sample) **Instructional Tasks:** Science Fusion PowerPoint notes on their website Unit 1 lesson 3- Physical and Chemical changes (under lesson teacher support). Copy and paste to a word document to create skeleton notes. Discuss each PowerPoint	**Bell Ringer:** Explain how higher temperatures influence a chemical change? Give an Example. (higher the temperature, the quicker the reaction will occur. Ex- cake) **Instructional Tasks:** Continue notes if necessary. Option 1- Pg 64-66 S.T.E.M Project – Building a cooler- Teacher's edition. This lab will be a good resource for hands on activity. This will take at least two class periods to complete.	**Bell Ringer:** Explain the Law of Conservation of Mass in your own words. **Instructional Tasks:** Science Fusion PowerPoint notes on their website Unit 1 lesson 4- Pure substances and mixtures (under lesson teacher support). Copy and paste to a word document to create skeleton notes. Discuss each PowerPoint as you go through them. **Students can work on their S.T.E.M. projects as an option. **

to see the solid particles from the drink mix? Explain. (answer on pg 44 science fusion teachers edition- matter and energy)	Work on student lesson review. **Summarizer:** Explain the difference between physical and chemical properties of your object from home. Draw a picture of your object and label and identify the properties.	as you go through them. **Summarizer:** What happens to a substance during a physical change? (chemical identity remains the same, but physical does not) A chemical change? (a new substance with new properties is formed)	Option 2- Pg 52-53 Teacher's edition- Matter and Energy. Daily Demo or Quick lab will be a good resource for hands on or a demonstration activity. Digital video lesson found on Science Fusion website (found under student or teacher.) Work on student lesson review. **Summarizer:** What are physical and chemical changes of matter?	**Summarizer:** How could you separate a mixture of rock and sand?
Assessment: observation **Homework- Bring one object from home to discuss physical and chemical properties.**	**Assessment:** Collect the summarizer as an assessment grade.	**Assessment:** observation	**Assessment:** S.T.E.M. Project and option two may be used as an assessment grade.	**Assessment:** S.T.E.M. Project and option two may be used as an assessment grade.

Day 1- Sept. 16th-20th	**Day 2**	**Day 3**	**Day 4**	**Day 5**
Lesson: Matter and Energy	**Lesson:** Matter and Energy	**Lesson:** Matter and Energy	**Lesson:** Matter and Energy	**Lesson:** Matter and Energy
Clarifying Objective: 6. P.2.1 Recognize that all matter is made up of atoms and atoms of the same element are all alike, but are different from the atoms of other elements. **Academic Vocabulary:** Atom, element, compound, mixture, pure substance, homogeneous and heterogeneous	**Clarifying Objective:** 6. P.2.2 Explain the effect of heat on the motion of atoms through a description of what happens to particles during a change in phase. **Academic Vocabulary:** Solid, liquid, gas	**Clarifying Objective:** 6. P.2.2 Explain the effect of heat on the motion of atoms through a description of what happens to particles during a change in phase. **Academic Vocabulary:** Solid, liquid, gas	**Clarifying Objective:** 6.P.2.3 Compare the physic properties of pure substanc that are independent of the amount of matter present including density, melting p boiling point, and solubilit properties that are depende the amount of matter prese to include volume, mass an weight. **Academic Vocabulary:** Freezing, melting, boiling, evaporation, condensation, sublimation, deposition	**Clarifying Objective:** 6.P.2.3 Compare the physical properties of pure substances that are independent of the amount of matter present including density, melting point, boiling point, and solubility to properties that are dependent on the amount of matter present to include volume, mass and weight. **Academic Vocabulary:** Freezing, melting, boiling, evaporation, condensation, sublimation, deposition
Bell Ringer: Complete the classifying matter graphic organizer pg 81 (Science Fusion – Teachers edition- Matter and energy) **Instructional Tasks:** Continue notes if necessary. **Option 1**- Pg 70-71 Teacher's edition- Matter and Energy. Daily Demo, Exploration or Quick lab will be a good resource for hands on or a	**Bell Ringer:** What can you find in a fish tank that is a solid, liquid and gas? **Instructional Tasks:** Science Fusion PowerPoint notes on their website Unit 1 lesson 5- States of matter (under lesson teacher support). Copy and paste to a word document to create skeleton notes.	**Bell Ringer:** What happens to the kinetic energy of particles of the substance as the substance changes from liquid to gas? (it increases) **Instructional Tasks:** Continue notes if necessary. **Option 1**- Pg 70-71 Teacher's edition- Matter and Energy. Daily Demo, Exploration or Quick lab will be a good resource for hands on or a	**Bell Ringer:** What is the boiling and freezing point of water? List it in Fahrenheit and Celsius. **Instructional Tasks:** Science Fusion PowerPoint notes on their website Unit 1 lesson 6- Changes of State (under lesson teacher support). Copy and paste to a word document to create skeleton notes.	**Bell Ringer:** Water freezes and melts at 0 degrees Celsius. Why can water freeze and melt at the same temperature? (answer on Pg 108 Science fusion- matter and energy **Instructional Tasks:** Continue notes if necessary. **Option 1**- Pg 100-101 Teacher's edition- Matter and Energy. Daily Demo, Exploration or Quick lab will be a good resource for

demonstration activity. **Option 2-** Digital video lesson found on Science Fusion website (found under student or teacher.) Work on student lesson review. **Summarizer:** How do pure substances and mixtures compare?	Discuss each PowerPoint as you go through them. Use students to show how the particles of the solid liquid and gas looks like. Gas- have the students spread out, liquid- have students kind of close together, solid- have the students stand shoulder to shoulder **Summarizer:** Draw a picture of the particles in a solid form, liquid form and gas.	demonstration activity. **Option 2-** Digital video lesson found on Science Fusion website (found under student or teacher.) Work on student lesson review. **Summarizer:** Summative Assessment Activity on pg 75 Matter Menu pg. 75 Teacher's Edition	Discuss each PowerPoint as you go through them. **Summarizer:** Visualize It- Teacher edition- Matter and Energy pg 107. Pull up the picture and have students analyze, label and categorize the picture. Directions are listed.	hands on or a demonstration **Option 2**-Digital video lesson found on Science Fusion website (found under student or teacher.) Work on student lesson review. **Summarizer:** What would happen to the amount of matter on Earth if mass was not conserved during a change of state? (answer on Pg 112 Science fusion- matter and energy)
Assessment: Bellringer can be used as an assessment.	**Assessment:** observation/ picture	**Assessment:** Summative assessment – Matter Menu pg. 75 Teacher's Edition	**Assessment:** observation	**Assessment:** Exit slip may be picked up for an assessment.

Day 1- Sept 23- 27 **Lesson:** Matter and Energy	**Day 2** **Lesson:** Matter and Energy	**Day 3** **Lesson:** Matter and Energy	**Day 4** **Lesson:** Matter and Energy	**Day 5- Sept 27th** **Lesson:** NO SCHOOL
Clarifying Objective: 6. P.3.1 Illustrate the transfer of heat energy from warmer objects to cooler ones using examples of conduction, radiation and convection and the effects that may result. **Academic Vocabulary:** Thermal Energy, conduction, heat, conductor, insulator, calorie, convection, radiation	**Clarifying Objective:** 6. P.3.1 Illustrate the transfer of heat energy from warmer objects to cooler ones using examples of conduction, radiation and convection and the effects that may result. **Academic Vocabulary:** Thermal Energy, conduction, heat, conductor, insulator, calorie, convection, radiation	**Clarifying Objective:** 6. P.3.3 Explain the suitability of materials for use in technological design based on a response to heat (to include conduction, expansion, and contraction) and electrical energy (conductors and insulators). **Academic Vocabulary:** renewable, nonrenewable resources, fossil fuels	**Clarifying Objective:** 6. P.3.3 Explain the suitability of materials for use in technological design based on a response to heat (to include conduction, expansion, and contraction) and electrical energy (conductors and insulators). **Academic Vocabulary:** renewable, nonrenewable resources, fossil fuels	**Clarifying Objective:** **Academic Vocabulary:**
Bell Ringer: What happens to the particles in an object as it is heated up? **Instructional Tasks:** Science Fusion PowerPoint notes on their website Unit 2 lesson 3- Thermal Energy and Heat (under lesson teacher support). Copy and paste to a word document to create skeleton notes. Discuss each PowerPoint as you go through them	**Bell Ringer:** Explain the difference between conduction, convection, and radiation. **Instructional Tasks:** Continue notes if necessary. **Option 1**- Pg 160-161 Teacher's edition- Matter and Energy. Daily Demo or Quick lab will be a good resource for hands on or a demonstration activity Option 2- Digital video lesson found on Science	**Bell Ringer:** Define the academic vocabulary terms. **Instructional Tasks:** Science Fusion PowerPoint notes on their website Unit 2 lesson 4- Thermal Energy and Heat (under lesson teacher support). Copy and paste to a word document to create skeleton notes. Discuss each PowerPoint as you go through them	**Bell Ringer:** What are some examples of energy use that you have already encountered today? (bus, lights, car, food for the body) **Instructional Tasks:** **Option 1**- Pg 174-175 Teacher's edition- Matter and Energy. Daily Demo or Quick lab will be a good resource for hands on or a demonstration activity Option 2- Digital video lesson found on Science	**Bell Ringer:** **Instructional Tasks:** **Summarizer:**

Summarizer: What are two factors that determine the thermal energy of a substance?	Fusion website (found under student or teacher.) Work on student lesson review/ study guide. **Summarizer:** What is the relationship between heat and energy?	**Summarizer:** Name one renewable and no-renewable resource. Explain.	Fusion website (found under student or teacher.) Work on student lesson review/ study guide. **Summarizer:** How does the use of energy resources affect the environment?	
Assessment: observation	**Assessment:** Lesson quizzes (Science Fusion online) for homework as a unit packet due two days before a test. Students will be responsible for working on their unit packet on their own time.	**Assessment:** observation/ class discussion	**Assessment:** Science Fusion pg 179 matter and energy. Our energy use tic-tac-toe	**Assessment:**

Day 1- Sept 30th- Oct. 4th **Lesson:** Matter and Energy	**Day 2** **Lesson:** Matter and Energy	**Day 3** **Lesson:** Matter and Energy	**Day 4** **Lesson:** Matter and Energy	**Day 5** **Lesson:** Matter and Energy
Clarifying Objective: Review 6.p.2.1, 6.p.2.2, 6.p.3.1, 6.p.3.3 **Academic Vocabulary:**	**Clarifying Objective:** Review 6.p.2.1, 6.p.2.2, 6.p.3.1, 6.p.3.3 **Academic Vocabulary:**	**Clarifying Objective:** Review 6.p.2.1, 6.p.2.2, 6.p.3.1, 6.p.3.3 **Academic Vocabulary:** Unit 1 Vocab, Unit 2 Lesson 3 Vocab	**Clarifying Objective:** Review 6.p.2.1, 6.p.2.2, 6.p.3.1, 6.p.3.3 **Academic Vocabulary:** Unit 1 Vocab, Unit 2 Lesson 3 Vocab	**Clarifying Objective:** **Academic Vocabulary:**
Bell Ringer: Teacher creates based on student needs **Instructional Tasks:** "Catch up day". Reteach a concept some students may have not understand. **Summarizer:** Teacher creates based on student needs	**Bell Ringer:** Teacher creates based on student needs **Instructional Tasks:** "Catch up day". Reteach a concept some students may have not understand. **Summarizer:** Teacher creates based on student needs	**Bell Ringer:** Do you think that solids can undergo convection? Explain (no, particles in a solid cannot move freely so they cannot change places as different areas become more or less dense.) **Instructional Tasks:** As a review students will go over and correct their lesson quizzes from homework. We will check and discuss each question. This will possibly take two class periods to complete. **Summarizer:** 3-2-1; 3 things I found important, 2 things I found interesting, 1 question I still have. Collect this slip for the bellringer	**Bell Ringer:** List three common questions the students had the day before as the bellringer. Students can work in pairs to find the answer. Students need to prepare to share the answer to the class. **Instructional Tasks:** Students should finish the review and go over and correct their lesson quizzes from homework. We will check and discuss each question. This will possibly take two class periods to complete. **Summarizer:** List three test/study strategies that can help you prepare for the test on Tuesday.	**Bell Ringer:** **Instructional Tasks:** **Summarizer:**
Assessment: observation. Discussion,	**Assessment:** observation. Discussion,	**Assessment:** Lesson quizzes (Science	**Assessment:** Review Grade	**Assessment:**

labs	labs	Fusion online) for homework as a unit packet due two days before a test. Students will be responsible for working on their unit packet on their own time.		

Day 1- Oct. 7th- Oct. 11th **Lesson:** Matter and Energy	**Day 2** **Lesson:** Matter and Energy	**Day 3** **Lesson:**	**Day 4** **Lesson:**	**Day 5** **Lesson:**
Clarifying Objective: Review 6.p.2.1, 6.p.2.2, 6.p.3.1, **Academic Vocabulary:** Unit 1 Vocab, Unit 2 Lesson 3 Vocab	**Clarifying Objective:** Review 6.p.2.1, 6.p.2.2, 6.p.3.1, **Academic Vocabulary:** Unit 1 Vocab, Unit 2 Lesson 3 Vocab	**Clarifying Objective:** Begin Unit 2 **Academic Vocabulary:**	**Clarifying Objective:** **Academic Vocabulary:**	**Clarifying Objective:** **Academic Vocabulary:**
Bell Ringer: What kind of matter makes up a cloud? (water; remind students that clouds are made of liquid water and not water vapor) **Instructional Tasks:** **Option 1**-Teacher's option of review activity. **Option 2-** Bill Nye video on Atoms in Dropbox with worksheet. ParrMr Science Songs on youtube. Includes words to the songs. **Summarizer:** Name something you found interesting from the review/ song/ video.	**Bell Ringer:** Option 1- Study with a partner before the test. Option 2- Create two questions for the test. Teacher will choose questions for a bonus question. **Instructional Tasks:** Test **Summarizer:** Individual activity for students who have completed their test early.	**Bell Ringer:** **Instructional Tasks:** (Labs, Readings, Literacy and Technology Tasks, Write to Learn, Assignments, Group Work, Research, Etc.) **Summarizer:**	**Bell Ringer:** **Instructional Tasks:** (Labs, Readings, Literacy and Technology Tasks, Write to Learn, Assignments, Group Work, Research, Etc.) **Summarizer:**	**Bell Ringer:** **Instructional Tasks:** (Labs, Readings, Literacy and Technology Tasks, Write to Learn, Assignments, Group Work, Research, Etc.) **Summarizer:**
Assessment: Observation	**Assessment:** Review packet can be taken up for a grade.	**Assessment:** (Formative and/or Summative)	**Assessment:** (Formative and/or Summative)	**Assessment:** (Formative and/or Summative)