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| <b>Name:</b> 4 <sup>th</sup> grade  | <b>Subject:</b> Electricity   | <b>Grade:</b> 4th   | <b>Unit:</b> Electricity & Magnetism  | <b>Date:</b> 3/25 – 3/29   |
| <b>MONDAY</b>   | <b>TUESDAY</b>  | <b>WEDNESDAY</b>  | <b>THURSDAY</b>   | <b>FRIDAY</b>  |
| <b>SOL &amp; Student Objective:</b> The student will investigate and understand the characteristics of electricity. Key concepts include: a)conductors and insulators b) basic circuits c) static electricity   | <b>SOL &amp; Student Objective:</b> The student will investigate and understand the characteristics of electricity. Key concepts include: a)conductors and insulators b) basic circuits c) static electricity | <b>SOL &amp; Student Objective:</b> 4.1 The student will demonstrate an understanding of scientific reasoning, logic, and the nature of science by planning and conducting investigations | <b>SOL &amp; Student Objective:</b> 4.1 The student will demonstrate an understanding of scientific reasoning, logic, and the nature of science by planning and conducting investigations | <b>SOL &amp; Student Objective:</b> Will vary according to student needs |
| <b>Materials:</b> Interactive notes p.2, batteries, wire, light bulbs, bulb holder, items to act as conductors and insulators, tape, conductor/insulator worksheet, thread, small bits of paper, balloons, book, pencil shavings, worksheets: static and conductor/insulator, nylon, plastic wrap, plastic ruler, | <b>Materials:</b> batteries, wire, light bulbs, bulb holders, switches, tape, circuits worksheet, study guide   | <b>Materials:</b> Students' presentation boards   | <b>Materials:</b> Students' presentation boards, Electricity Quiz   | <b>Materials:</b> Review materials for assessed need                     |
| <b>Key Vocabulary:</b> electricity, conductor, insulator, electrons, dry cell, static electricity, positive, negative   | <b>Key Vocabulary:</b> electricity, conductor, insulator, electrons, circuit, open circuit, closed circuit, dry cell, parallel circuit, series circuit  | <b>Key Vocabulary:</b> hypothesis, variables, procedure, results, data, constant  | <b>Key Vocabulary:</b> hypothesis, variables, procedure, results, data, constant  | <b>Key Vocabulary:</b> Will vary with topic of review                    |

| <i>Lesson Outline/Notes:</i>  | <i>Lesson Outline/Notes:</i>   | <i>Lesson Outline/Notes:</i>   | <i>Lesson Outline/Notes:</i>  | <i>Lesson Outline/Notes:</i>  |
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| <p><b>Lesson:</b></p> <p>Students will glue, highlight, and illustrate interactive notes. Teacher will discuss important concepts and vocabulary.</p> <p>Teacher will rub a balloon with nylon and hold it near the paper bits, then ask students what is happening. Explain that static electricity is built up when certain substances are rubbed together and a transfer of electrons occurs. Objects can be positively or negatively charged. Depending on whether two objects have the same or different charges, they will repel or attract. Introduce the static worksheet and explain that students will get to do their own experiments to use static electricity to attract or repel a variety of</p> | <p><b>Lesson:</b> Teacher will review materials from yesterday's lesson, then discuss circuits.</p> <p>Students will draw a series of circuits, both open and closed, in their journals, illustrating the flow of electrons and using the dry cell symbols (+) and (-). They will also draw and differentiate between a series circuit and a parallel circuit, again, showing the flow of electrons.</p> <p>Students will build open and closed circuits, as well as series and parallel circuits. Students will complete the worksheet of the teacher's choosing.</p> <p><b>HW:</b> Study guide</p> | <p><b>Lesson:</b></p> <p>Teacher will review last night's study guide with students. Students will make any necessary corrections.</p> <p>Teacher may take a few minutes to clear up any lingering misconceptions on electricity.</p> <p>Students will present their science fair projects. Teacher will grade project as it is being presented.</p> | <p><b>Lesson:</b></p> <p><b>Quiz on Electricity</b></p> <p>Students will present their science fair projects. Teacher will grade project as it is being presented.</p> <p><b>Math and Science Night</b></p> | <p><b>Lesson:</b></p> <p>Today will be a day of review targeted to meet assessed needs. Teacher will develop review materials according to students' needs.</p> |

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| <p>materials.</p> <p>Teacher will demonstrate building a simple circuit that includes a conductor or insulator. Teacher will discuss the observable differences between a circuit with a conductor and one with an insulator. Teacher will demonstrate trying different materials to determine if they are conductors or insulators, explaining how to make predictions and record results using the chosen worksheet.</p> <p>Teacher will give students a safety talk about working with the materials, including the importance of not connecting one end of the battery to the other with nothing but wire.</p> <p>Working in pairs or small groups, students will conduct experiments and</p> |  |  |  |  |
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| <p>complete the worksheets chosen by the teacher.</p> <p><b>Note:</b> Teachers may choose to run these experiments as stations.</p> <p><b>Exit Card:</b> Show the student one item and ask whether they think it is a conductor or insulator and why.</p>   |  |   |   |  |
| <p><b>Evaluation/Assessment:</b><br/> <b>F:</b> successful completion of worksheet<br/> Responses to exit card</p>  | <p><b>Evaluation/Assessment:</b><br/> <b>F:</b> successful completion of worksheet</p>   | <p><b>Evaluation/Assessment:</b><br/> Summative: Project evaluations<br/> Formative: answers on study guide</p>                         | <p><b>Evaluation/Assessment:</b><br/> Summative: Project evaluations, quiz results</p>  | <p><b>Evaluation/Assessment:</b><br/> Formative: responses to review activities</p>  |
| <p><b>My Changes to the lesson:</b><br/> I will start with a review of last week’s content. I will then complete the interactive notes for the day. Next, students will complete a hands on activity where they will determine if something is a conductor or insulator.</p> <p>If time, I will show students a parallel circuit and the concepts behind the circuit.</p> | <p><b>My Changes to the lesson:</b><br/> For morning work, students will have book work to complete to reinforce the material in a different way.</p> <p>I will complete the static electricity activity in this lesson.</p> <p>If time, I will also show a Studyjams on static electricity.</p> | <p><b>My Changes to the lesson:</b><br/> I will review the study guide answers and answer any questions that the students may have.</p> | <p><b>My Changes to the lesson:</b><br/> I will not change this lesson due to the fact that I have to give time for students to take the quiz and listen to their project presentation.</p> | <p><b>My Changes to the lesson:</b><br/> If students need to finish their presentations, I will give them time to do so.</p> |

***Blooms Taxonomy (Key Words to use when lesson planning)***

***Remember-*** choose, describe, define, identify, label, list, locate, match, memorize, name, omit, recite, recognize, select, state

***Understand-*** classify, defend, demonstrate, distinguish, explain, express, extend, give example, illustrate, indicate, interrelate, interpret, infer, judge, match, paraphrase, represent, restate, rewrite, select

***Apply-*** apply, choose, dramatize, explain, generalize, judge, organize, paint, prepare, produce, select show, sketch, solve, use

***Analyze-*** analyze, categorize, classify, compare, differentiate, distinguish, identify, infer, point out, select, subdivide, survey

***Evaluate-*** appraise, judge, criticize, defend, compare

***Create-*** choose, combine, compose, construct, create, design, develop, do, formulate, hypothesize, invent, make, make up, originate, organize, plan, produce, role play, tell

**Marzano Strategies-**

Identify Similarities and Differences

Summarizing and Note taking

Reinforce Effort & Recognition

Homework and Practice

Nonlinguistic Representations

Cooperative Learning

Set Objectives/Provide Feedback

Generating/ Testing Hypothesis

Questions/Ques/Advanced Organizers