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| **School Name:** | **Peachtree Middle School** | | | | | | | | | | |
| **Weekly Components** | | | | | | | | | | | |
| **Teacher:**  **Co-­‐Teacher/Para:** | Mrs. Crowder/ Mr. Burdette | | | | **Week of:** | | | **Unit Implementation Week:** | | | |
| Sept 18th -Sept. 22nd | | | 7 | | | |
| **Course:** | 8th Grade Physical Science | | | | **Unit Name:** | | | | | | |
| Structure and Properties of Matter | | | | | | |
| **Priority Standards:**  **(content specific)** | S8P1. OBTAIN, EVALUATE, and COMMUNICATE information about the structure and properties of matter.  a. DEVELOP and USE a model to COMPARE and CONTRAST pure substances (elements and compounds)  and mixtures. (Clarification statement: Include heterogeneous and homogeneous mixtures. Types of  bonds and compounds will be addressed in high school physical science.)  b. DEVELOP and USE models to DESCRIBE the movement of particles in solids, liquids, gases, and plasma  states when thermal energy is added or removed.  c. PLAN and CARRY OUT investigations to COMPARE and CONTRAST chemical (i.e., reactivity,  combustibility) and physical (i.e., density, melting point, boiling point) properties of matter.  d. CONSTRUCT an ARGUMENT based on observational evidence to support the claim that when a change  in a substance occurs, it can be classified as either chemical or physical. (Clarification statement:  Evidence could include ability to separate mixtures, development of a gas, formation of a precipitate,  change in energy, color, and/or form.)  e. DEVELOP models (e.g., atomic-level models, including drawings, and computer representations)  by ANALYZE patterns within the periodic table that illustrate the structure, composition, and  characteristics of atoms (protons, neutrons, and electrons) and simple molecules. | | | | | | | | | | |
| **S****upporting Standards:**  **(content specific)** | Standard:  S8P1  f. Construct an explanation based on evidence to describe conservation of matter in a chemical reaction including the resulting differences between products and reactants. (Clarification statement: Evidence could include models such as balanced chemical equations.)    S8P2. Obtain, evaluate, and communicate information about the law of conservation of energy to develop arguments that energy can transform from one form to another within a system.  d. Plan and carry out investigations on the effects of heat transfer on molecular motion as it relates to the collision of atoms (conduction), through space (radiation), or in currents in a liquid or a gas (convection).  Crosscutting Concepts:  • Cause and Effect  • Energy and Matter  • Structure and Change  • Patterns  • Scale, Proportion, and Quantity | | | | | | | | | | |
| **Non-­‐Content Standards: (WIDA, interdisciplinary standards, literacy, etc.)** |  | | | | | | | | | | |
| **Learning Targets:**  **(what learners will be able to do at the end of the learning**  **activity)** | In this lesson, students gain an understanding of what elements, molecules, compounds and mixtures look like at the molecular level. Students use marshmallows to represent atoms and toothpicks to represent bonds. The purpose of the lesson is not for them to learn how to bond, but to notice what the particles might look like in each type of matter. Typically, this lesson requires two days from start to finish | | | | | | | | | | |
| **Essential Question(s): (address philosophical foundations; contain**  **multiple answers; provoke inquiry)** | 1. What's the difference between substances and mixtures? How do particles combine into new substances? What evidence can show how the physical and chemical properties of the substances change?"  2. How can one explain the structure, properties, and interactions of matter?  3. How do substances/particles combine or change (react) to make new substances? How does one characterize and explain these reactions and make predictions about them?  4. What makes objects attract or repel each other? | | | | | | | | | | |
| **Big Idea(s):**  **(main ideas, foundational understandings, conclusions, or generalizations)** | 1. Mixtures can be separated by physical means whereas substances cannot. Students develop their own procedures to separate a mixture and then carry out their plan using lab tools of their choice!  2. The properties of matter can influence a structure and its function.  3. Energy has a direct relation to the cause and effect of the properties and structure of matter.  4. There is an attraction between positive protons and negative electrons that hold an atom together. | | | | | | | | | | |
| **Academic Vocabulary:** |  | | | | | | | | | | |
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| **S****TEM/STEAM/**  **Interdisciplinary**  **Integration:** |  | | | | | | | | | | |
| **Engaging Performance**  **Scenario:** |  | | | | | | | | | | |
| ***In the areas below, place an “X” in the box(es) to indicate the selected strategies and resources.*** | | | | | | | | | | | |
| **Research-­‐Based Instructional Strategies: (weekly strategies chosen to guide teaching and learning)** | **OPENING: Engaging Instructional Activity** | Activate Prior Knowledge |  | Questioning (Raises questions) | |  | Clarify Previous Lesson | |  | Phenomenon |  |
| Provide  Feedback |  | Scaffold  Instruction | |  | Create Interest | |  | Other: |  |
|  | | | | | | | | | | |
| **WORK PERIOD:**  **Exploring, Explaining, Extending, and Elaborating** | Facilitate  Learning |  | Academic  Discussions | |  | Cooperative  Learning | |  | Other: |  |
| Demonstrate/ Model |  | Generating and Testing  Hypotheses | |  | Independent Learning | |  | Other: |  |
| Explain/Apply/Ex  tend concepts and skills |  | High-­‐Level Questioning | |  | Interdisciplinary Writing | |  | Other: |  |
|  | | | | | | | | | | |
| **CLOSING: Evaluating** | Summarize Lesson |  | Provide Alternate Explanations | |  | Respond to EQs | |  | Other: |  |
| Allow students  to assess their own learning |  | Quick Write | |  | 3-­‐2-­‐1/K-­‐W-­‐L | |  | Other: |  |

DCSD RCD Aligned Lesson Plan Template 7/23/2017 5:04 PM Components of this lesson plan may change according to the needs of the students.

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| **21st Century Learning Skills:**  **(weekly strategies chosen to guide student engagement)** | | Teamwork and Collaboration | | | |  | Innovation and Creativity | | | |  | Accessing and Analyzing Information |  |
| Initiative and Leadership | | | |  | Critical Thinking and  Problem Solving | | | |  | Effective oral and Written  Communication |  |
| Curiosity and Imagination | | | |  | Flexibility and Adaptability | | | |  | Other: |  |
| **Intervention Strategies** | | | | | | | | | | | | | |
| **Intervention Strategies (Tiers 1, 2, 3)**  **Additional Support in Classroom** | | | **Specially Designed Instruction for Exceptional Education Students** | | | | | | | **Strategies for English Language Learners** | | | |
|  | Re-­‐Voicing | |  | Conferencing | | | | | |  | Visuals/Realia | | |
|  | Explaining | |  | Additional time | | | | | |  | Front-­‐loading | | |
|  | Prompting for Participation | |  | Small group collaboration | | | | | |  | Echoing/Choral response | | |
|  | Challenging or countering | |  | Modify quantity of work | | | | | |  | Color-­‐coding | | |
|  | Asking “Why?” “How” | |  | Take student’s dictation | | | | | |  | Multiple exposures in different media | | |
|  | Reread | |  | Scaffold information | | | | | |  | Pair-­‐share | | |
|  | Practice new academic vocabulary | |  | Differentiated  content/process/product | | | | | |  | Modeling | | |
|  | Assistive technology | |  | Consistent reward system | | | | | |  | Language scaffolds: eg, sentence frames | | |
|  | Pre-­‐teach & re-­‐teach in a different way | |  | Refer to students’ IEP or 504 plan | | | | | |  | Deconstruct complex sentences | | |
|  | Use of manipulatives | |  | Assistive technology | | | | | |  | Increase student-­‐to-­‐student talk | | |
|  | Collaborative work | |  |  | | | | | |  | Strategies vocabulary instruction | | |
|  | Create differentiated text sets | |  |  | | | | | |  | Additional think time | | |
| **Gifted – Extensions for Learning** | | | | | | | | | | | | | |
|  | **Tier 1** | | | | | | | | | | | | |
|  | Flexible-­‐Learning Groups | |  | | Varied Pacing with Anchor Options | | | | |  | Varied Supplemental Materials | | |
|  | Choice of Books | |  | | Work Alone or Together | | | | |  | Computer Mentors | | |
|  | Homework Options | |  | | Flexible Seating | | | | |  | Think-­‐Pair-­‐Share | | |
|  | Use of Reading Buddies | |  | | Varied Scaffolding | | | | |  | Open-­‐ended Activities | | |
|  | Various Journal Prompts | |  | | Varied Computer Programs | | | | |  | Explorations by Interest | | |
|  | Student/Teacher Goal Setting | |  | | Design-­‐A-­‐DAY | | | | |  | Options for Competition | | |
|  | **Tier 2** | | | | | | | | | | | | |
|  | Gifted Edu. Cluster Classes | |  | | Alternative Assessments | | | | |  | Community Mentorships | | |
|  | Gifted Edu. Collaboration Classes | |  | | Subject Advancement within class | | | | |  | Stations | | |
|  | Tiered Activities and Products | |  | | Curriculum Compacting | | | | |  | Group Investigations | | |
|  | Use of Literature Clubs | |  | | Tiered Centers | | | | |  | Assess Students in Multiple Ways | | |
|  | Multiple Testing Options | |  | | Spelling by Readiness | | | | |  | Student choice | | |
|  | Multiple Texts | |  | | Varying Organizers | | | | |  | Simulations | | |
| **Tier 3** | | | | | | | | | **Tier 4** | | | | |
|  | Advanced Content (all core content) | | | | | | |  | Above grade level accelerated (all core content) | | | | |
|  | Resource Classes | | | | | | |  | Advanced Placement Classes | | | | |
|  | Independent/Directed Study | | | | | | |  | International Baccalaureate Classes | | | | |
|  | Socratic Seminars | | | | | | |  | Internship/Mentorships | | | | |
| **Differentiated Instruction**  **(content, process, product)** | | | | | | | | **Assessment Evidence**  **(formative, summative)** | | | | | |
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| **Resources:**  **(weekly materials chosen to support teaching and learning)** | Textbooks |  | Lab Materials |  | Other: (List the other resources below.) | |
| Audio/Visual Aids |  | Course Syllabus |  |  |  |
| Handouts |  | Dictionaries |  |  |  |
| White Boards |  | Video Clips |  |  |  |
| Electronic Devices |  | Promethean Board |  |  |  |
| Supplemental Texts |  | Manipulatives |  |  |  |
| Calculators |  | Internet (tech) |  |  |  |
| **Daily Lesson Plan for Monday** | | | | | | |
| **Pre-­‐Instructional Activity: (sponge; bell-­‐ringer; journal; allows attendance to be taken)** | Play a short review game to prepare for Chapter 4 Assessment | | | | | |
| **Opening (ENGAGE): (introduces the lesson; summarizes previous lesson; clarifies misconceptions)** | Distribute Chapter 4 Test | | | | | |
| **Work Period (EXPLORE/EXPLAIN/ EXTEND/ELABORATE):**  **(allows students to practice concept; assesses student learning)** | Take Chapter 4 Assessment | | | | | |
| **Closing (EVALUATE): (summarizes lesson; ensures understanding; clarifies misconceptions)** | Collect Assessment and Distribute Chapter 3 Outliine and vocabulary foldable | | | | | |
| **Daily Lesson Plan for Tuesday** | | | | | | |
| **Pre-­‐Instructional Activity:** | Warm-Up Day 1- Atoms | | | | | |
| **Opening (ENGAGE):** | Brain Pop Video- Atoms | | | | | |
| **Work Period (EXPLORE/EXPLAIN/**  **EXTEND/ELABORATE):** | Students take notes and complete interactive actitivites that describe atoms and its substomic parts. Students use graphic organizers to identify characteristics of each part. | | | | | |
| **Closing (EVALUATE):** | Complete each activity and assessment page. Finish for homework | | | | | |
| **Daily Lesson Plan for Wednesday** | | | | | | |
| **Pre-­‐Instructional Activity:** | Warm-Up Day 2- Atoms | | | | | |
| **Opening (ENGAGE):** | Provide students with different examples of metal, non-metals, and metalloids. Discuss characteristics and Think-Pair-Share Similarities and Differences List them and explain reasoning. | | | | | |
| **Work Period (EXPLORE/EXPLAIN/ EXTEND/ELABORATE):** | Students will use ppt to complete notes and interactive acivities that classify metals, non-metals, and metalliod elements and common charcteristics. | | | | | |

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| **Closing (EVALUATE):** | Complete and paste all foldables and acticites in the notebook. Answer assessment questions finish for HW. |
| **Daily Lesson Plan for Thursday** | |
| **Pre-­‐Instructional Activity:** | Warm-Up Day 3 |
| **Opening (ENGAGE):** | Students revisit posters of elements, compounds, and mixtures. |
| **Work Period (EXPLORE/EXPLAIN/**  **EXTEND/ELABORATE):** | Take Notes Chapter 3 Section 3. Compound and Mixtures Students will distinguish between an atom, element, compund, and mixture. |
| **Closing (EVALUATE):** | Summarize Notes- complete Foldable Atoms, Elements, Compoundd, and Mixtures |
| **Daily Lesson Plan for Friday** | |
| **Pre-­‐Instructional Activity:** | Warm- up Day 4 and 5 |
| **Opening (ENGAGE):** | Group students and assign the task of summarizing the Chapter. |
| **Work Period**  **(EXPLORE/EXPLAIN/ EXTEND/ELABORATE):** | Complete Classwork Sections 1-3 Chapter 3 Glencoe Textbook. Write a summary for each section of the chapter. Use notes, activites, and the textbook as a resourse. |
| **Closing (EVALUATE):** | Review answers of classwork with a Gallary Walk. Each group will use a colored marker to add or take away summary points as they walk around. Groups will return to original poster to evaluate feedback from other groups. Essential Questions are posed and radomly answered by groups to inphasize Big Ideas and misconceptions. |