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| M. Angileri  10-2-17 | **6th grade science** | | **Lesson Plans: Structures of Matter #3** | | | | |
| NGSS Standard | **MS-PS 1-1**  **PS1.A**  **S &E**  **CCC** | | |  |  | | --- | --- | |  | Develop models to describe the atomic composition of simple molecules and extended structures. |   **Structure and Properties of Matter**  Substances are made from different types of atoms, which combine with one another in various ways. Atoms form molecules that range in size from two to thousands of atoms.  Solids may be formed from molecules, or they may be extended structures with repeating subunits (e.g., crystals**)**  ***Developing and Using Models:*** Develop a model to predict and/or describe phenomena  ***Scale, Proportion, and Quantity:***  Time, space, and energy phenomena can be observed at various scales using models to study systems that are too large or too small. | | | | |
| Vocabulary: | | **Matter:** Anything that has mass and occupies space.  **Chemistry:** The study of the properties of matter.  **Substance:** A single kind of matter that is pure and has a specific set of properties.  **Physical property:** A characteristic of a pure substance that can be observed without changing it into another substance.  **Chemical property:** A characteristic of a pure substance that describes its ability to change into a different substance.  **Element:** A pure substance that cannot be broken down into other substances by chemical or physical means.  **Atom:** The basic particle from which all elements are made.  **Chemical bond:** The force that holds two atoms together.  **Molecule:** A particle made of two or mare atoms bonded together.  **Compound;** A pure substance made of two or more elements chemically bonded.  **Mixture:** Two or more substances that are mixed together but are not chemically combined.  **Solution:** An example of a homogeneous mixture; forms when substances dissolve. | | | | | |
|  | | **MONDAY** | | **TUESDAY** | **WEDNESDAY** | **THURSDAY** | **FRIDAY** |
| Content Objective: | | SW demonstrate application of atomic structure by constructing models of elements and compounds. | | SW demonstrate application of atomic structure by constructing models of elements and compounds. | SW demonstrate comprehension of Structures of Matter by representing their opinion with evidence from the text. | SW demonstrate comprehension of Chemical Bonds by explaining their understanding of the video. | SW demonstrate application of the scientific process by carrying out the procedure in the Rock Candy Lab. |
| Language objective | | SW orally make connections among the text and the modeling activity on the Structure of Matter using sentence frames. | | SW write to make connections among the text and the modeling activity on the Structure of Matter using sentence frames. | SW write to defend their opinion by siting evidence from the text. | SW defend their answers about the Chemical Bonding video using content specific vocabulary. | SW write to answer questions about the Structures of Matter using sentence frames. |
| **Essential Question:** | | **Why are atomic models necessary?** | | **Why are atomic models necessary?** | **Why are atomic models necessary?** | **Why are atomic models necessary?** | **Why are atomic models necessary?** |
| In class today | | Start up: Lab sheet day 1  Notebook question  Activity: Combining atoms day 2 | | Activity: Combining atoms Day 3 wrap up  Follow up questions | Prereading graphic organizer (copy in notebook)  Read and discuss Structures of Matter STEMscopedia article  Homework: Guide with evidence | Knowledge Statements (in Notebook)  Video: Chemical Bonding (Questions)  Part 2 : Element worksheet | Rock Candy Lab  Science rock: Elements and compounds |
| Learning Target | | I can use classroom materials to build models of atoms and molecules. | | I can relate use my models to understand the structure of molecules and compounds. | I can read to gather information about atoms to answer questions. | I can answer questions about atomic bonding after watching the video. | I can follow procedures in a scientific investigation. |