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| **Lesson 1** | **Describing Matter** |  |
| **Keys** | Every Form of matter has two kinds of properties – physical and chemical properties | |
| **Vocabulary** | Matter |  |
| Chemistry |  |
| Substance |  |
| Physical Property |  |
| Chemical Property |  |
| **Lesson 2** | **Classifying Matter** |  |
| **Keys** | Scientists know that all matter in the universe is made of more than 100 different substances, called elements | |
| A mixture can be heterogeneous or homogeneous. | |
| **Vocabulary** | Element |  |
| Atom |  |
| Chemical Bond |  |
| Molecule |  |
| Compound |  |
| Chemical Formula |  |
| Mixture |  |
| **Lesson 3** | **Measuring Matter** |  |
| **Keys** | The SI unit of mass is the kilogram (kg). | |
| The SI unit of volume is the cubic meter (m3). | |
| You can determine the density of a sample of matter by dividing its mass by its volume | |
| **Vocabulary** | Weight |  |
| Mass |  |
| International System of Units (SI) |  |
| Volume |  |
| Density |  |
| **Lesson 4** | **Changes in Matter** |  |
| **Keys** | A substance that undergoes a physical change is still the same substance after the change. | |
| Unlike a physical change, a chemical change produces new substances with new and different properties. | |
| Every chemical and physical change in matter includes a change in energy | |
| **Vocabulary** | Physical change |  |
| Chemical change |  |
| Law of conservation of mass |  |
| Temperature |  |
| Thermal Energy |  |
| Endothermic Change |  |
| Exothermic Change |  |
| Chemical Energy |  |

* Be able to give examples of all the vocabulary words
* Be able to calculate density

Possible Essay Questions:

1. Explain the differences in finding the density of a rectangular solid object and finding the density of an irregular solid object.
2. Explain the difference between a mixture and a compound.
3. Explain how you could find out whether or not an unknown liquid is water.
4. Is the melting of an ice cube considered a physical change or a chemical change? Explain your reasoning.
5. When an electric current is passed through water during the process of electrolysis, two gases are formed. One gas has a boiling point of -183°C and the other has a boiling point of -253°C. Is this event a physical change or a chemical change? Explain.