 Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



Investigate changes in mass for chemical and physical processes.



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| --- | --- | --- | --- | --- |
| Know | |  | Apply  2  1 | |
| Ideas | |  |  |  |
| K1 | Combustion is a reaction with oxygen in which energy is transferred to the surroundings as heat and light. |  | A1 | Explain why a reaction is an example of combustion or thermal decomposition. |
| K2 | Thermal decomposition is a reaction where a single reactant is broken down into simpler products by heating. |  | A2 | Predict the products of the combustion or thermal decomposition of a given reactant and show the reaction as a word equation. |
| K3 | Chemical changes can be described by a model where atoms and molecules in reactants rearrange to make the products and the total number of atoms is conserved. |  | A3 | Explain observations about mass in a chemical or physical change. |
| A4 | Use particle diagrams to show what happens in a reaction. |
|  | |  | A5 |  |
| Skills | |
| K4 | Write word equations from information about chemical reactions. |  |  |  |
|  | |  |  |  |
| Key words | |  |
|  |
| K5 | **Fuel:** Stores energy in a chemical store which it can release as heat. |  |  |  |
| K6 | **Chemical reaction:** A change in which a new substance is formed. |  | A6 |  |
| K7 | **Physical change:** One that changes the physical properties of a substance, but no new substance is formed. |  |  |  |
| K8 | **Reactants:** Substances that react together, shown before the arrow in an equation. |  |  |  |
| K9 | **Products:** Substances formed in a chemical reaction, shown after the reaction arrow in an equation. |  |  |  |
| K10 | **Conserved:** When the quantity of something does not change after a process takes place. |  |  |  |
| 3 | Extend |  |  |  |
| E1 | Compare the pros and cons of fuels in terms of their products of combustion. |  |  |  |
| E2 | Use known masses of reactants or products to calculate unknown masses of the remaining reactant or product. |  |  |  |
| E3 | Devise a general rule for how a set of compounds reacts with oxygen or thermally decomposes. |  |  |  |
| E4 | Balance a symbol equation. |  |  |  |
| E5 | Use mass of reactant in equation to determine mass of product eg magnesium and oxygen. |  |  |  |
| E6 |  |  |  |  |
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| E7 |  |  |  |  |
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