Crosscutting Concept Card Sort

|  |  |  |  |
| --- | --- | --- | --- |
| **Patterns** | **Cause & Effect** | **Scale, Proportion, & Quantity** | **Systems & System Models** |
| **Energy & Matter** | **Structure & Function** | **Stability & Change** |  |
| Students observe weather patterns over time by making qualitative and quantitative observations. | Students record the phases of the moon during a full moon cycle. | Students analyze and interpret data in order to see how different structural plans failed or succeeded. | Students use a dichotomous key in order to classify various organisms. |
| Students design an investigation to compare the effects of different surfaces on the speed at which a car moves down a ramp. | Students participate in a station activity in which they explore the effects of various factors on pitch and volume. | Students design an investigation in order to determine if plants needs sunlight and water to grow. | Students ask questions to identify magnetic relationships. |
| Develop a model to help students understand that matter is too small to be seen. | Develop a model of the solar system in order to see the size differences of the sun, the planets, and their moons. | Students use standard measurement tools or qualitative terms to compare/contrast traits of objects (bigger/smaller, hotter/colder, faster/slower). | Students will identify evidence of rock formation and fossils to support an explanation for changes in a landscape over time. |
| After observing mealworms, students draw a model of their life cycle. | Students participate in an activity in which they receive information via their senses and then make connections to how that information is processed in the brain. | Students engage in argumentation about the role keystone species play in a particular ecosystem. | Students make observations of how energy is transferred from object to object and/or place to place. |

|  |  |  |  |
| --- | --- | --- | --- |
| Student build a solar oven in order to see how energy is transferred from the sun to the oven. | Students investigate the properties of matter by exploring different solids, liquids, and gases. | Students will develop a drawing to show how the shape of an object helps it function as needed. | Students make a claim about the merit of a solution to a problem caused when the environment changes and the types of plants and animals that live there may change |
| After learning about ecosystems, students design a plant with features that allow it to survive in a particular ecosystem. | Students design and build a building for a particular function. |  | Students develop a model that mimics the function of an animal in dispersing seeds or pollinating plants. |
| Students use a water table to explore how wind and water change the landscape. | Students design an investigation in order to determine how feedback systems maintain a relatively stable internal environment despite external changes. |  | Students analyze and interpret data from fossils to provide evidence of the organisms and the environments they lived in. |