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|  | **Earth /Space Science**  ***Students in kindergarten will understand that:***  ***The Earth and Earth materials, as we know them today, have developed over long periods of time, through constant change processes.***  ***Weather is observable and has specific characteristics***  ***Students will:*** | **Physical Science**  ***Students in kindergarten will understand that:***  ***All living and nonliving things are composed of matter having characteristic properties that distinguish one substance from another.***  ***Properties of matter help us to identify, group, and separate objects.***  ***Students will:*** | **Life Science**  ***Students in kindergarten will understand that:***  ***All living organisms have identifiable structures and characteristics that allow for survival.***  ***Energy flows and matter recycles through an ecosystem.***  ***All living things experience a life cycle that includes change.***  ***Students will:*** |
| **Change** | *Recognize that weather conditions change frequently, and that weather patterns change over the seasons.*  *Recognize that some changes are too slow or too fast to be easily observed. Weather can change quickly or slowly (Seasons vs. Storms)*  *Describe how the properties of certain materials can change when specific actions are applied to them, such as freezing, mixing, heating, cutting, dissolving and bending. (Water freezes to ice and ice melts when heated).* | *Explain that when a force is applied to an object, it reacts in one of three ways: the object either speeds up, slows down, or goes in a different direction.*  *Describe how the balanced and unbalanced forces are related to an object’s motion.*  *Explain that an object’s motion can be tracked and measured over time and that the data can be used to describe its position.* | *Recognize that living things have a life cycle, during which they are born, grow, and die.*  *Recognize that some plants and animals go through changes in appearance when the seasons change.*  *Recognize that some living things, which lived on Earth long ago, are now extinct, such as dinosaurs, mammoths, giant tree ferns, and horsetail trees.*  *Describe the human life cycle from birth to old age.* |
| **Interrelationships** | *Explain that the Sun provides the Earth with heat and light. Sunlight is warm and heats the Earth and it’s living things. Day and night is an effect of the Sun and the Earth.* | *Identify the observable properties of different objects, such as color, size, shape, weight and texture. (Compare heavy / light, soft / hard, smooth / rough etc.)*  *Identify the resources plants and animals use for growth and energy (light, food, shelter), and describe how their habitat (home) provides these basic needs.* | *Differentiate between living and nonliving things; and categorize objects in each group using the significant observable characteristics they share, such as color, shape and size.*  *Recognize plants and animals as living things and describe how they are alike and different.*  *Recognize that plants and animals have features that help them survive in different environments. (Fur, Thorns)*  *Recognize that living things can be found almost anyplace in the world; and that specific types of environments are required to support the many different species of plant and animal life.*  *Recognize that animals, including humans, interact with their surroundings using their senses; and that different senses provide different kinds of information.*  *Recognize that there are different species of living things in various places around the world. (No Tigers in Brockway Animal Reserve)*  *Recognize and describe how living things respond when exposed to helpful and harmful situations. (Fur thickens when animal is exposed to cold, thins when exposed to heat)*  *Recognize that humans need food, water, air, waste removal and a particular range of temperatures in their environment, just as other animals do.* |
| **Scale** | *N/A* | *Describe the size of and shape of a shadow in comparison with the object creating the shadow.* | *N/A* |
| **Modeling** | *N/A* | *Create shadows using the sun and simple objects.* | *Draw pictures of animals / insects at various stages of life cycle*  *Construct habitats for animals.* |
| **Inquiry/Process** | *Track changing weather features over time and display the results.*  *Predict and explore what will occur to water when temperatures change.* | *Predict how shadow size and placement will change in relation to the available light.* | *N/A* |