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| **Science – Grade 5 Earth and Space Sciences** |
| **SC.5.11. Space Systems: Earth’s Stars and Solar System** | **Access Points** |
| **Standard / Indicator** | **Extension** |
| SC.5.11.3 Gather and analyze data to communicate understanding of space systems: Earth’sstars and solar system. |   | **A** | **B** | **C** |
| SC.5.11.3.A Support an argumentthat the gravitational force exerted by Earth on objects is directed down. Assessment does not include mathematical representation of gravitational force. | Use evidence (data and observation) to support the claim that gravity pulls objects on Earth downward. | Use data/observation to describe that objects dropped from a height are pulled toward Earth by gravity. | Use observation to predict that dropped objects are pulled down due to gravity. | Identify the direction that dropped objects will fall (down/toward the ground). |
| SC.5.11.3.B Support an argumentthat differences in the apparent brightness of the sun compared to other stars is due to their relative distances from Earth. Assessment is limited to relative distances, not sizes, of stars. Assessment does not include other factors that affect apparent brightness (such as stellar masses, age, and stage). | Use models to explain that the sun appears brighter than other stars because it is much closer to Earth. | Use models to explain that the sun appears brighter than other stars because it is much closer to Earth. | Given a model of the sun and one or more stars, identify which is brightest/closest to Earth.  | Given two objects that emit light, recognize which object is brighter. |
| SC.5.11.3.C Represent data in graphical displaysto reveal patterns of daily changes in the length and direction of shadows, day and night, and the seasonal appearance of some stars in the night sky. Assessment does not includecauses of seasons. | Use data to investigate patterns in the relative location of the sun, the hours of daylight, and the day-and-night cycle. | Use data and observation to describe daily patterns in the sun’s location (sunrise, noon, sunset), and seasonal differences in the hours of daylight and darkness. | Identify the relative location of the sun at different times of the day and the relative length of day and night in summer and winter. | Recognize that the sun is present in the local sky during the day but is not present in the local sky at night.  |

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| **Science – Grade 05 Earth and Space Sciences** |
| **SC.5.13. Earth's Systems** | **Access Points** |
| **Standard / Indicator** | **Extension** |
| SC.5.13.4 Gather and analyze data to communicate understanding of Earth’s systems. |   | **A** | **B** | **C** |
| SC.5.13.4.A Develop a modelusing an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.Assessment is limited to the interactions of two systems at a time. | Use models of natural Earth processes to identify ways that two systems (geosphere [land], biosphere [organisms], hydrosphere [water], atmosphere [air]) interact, resulting in observable changes.  | Given a model of a natural Earth process, identify which two systems interact and one or more changes that are likely to occur.  | Given a picture or model of an Earth system, identify one or more parts of that system. | Given a picture or model of an Earth system and two possible parts of that system, recognize a part of the system. |
| SC.5.13.4.B Describe and graphthe amounts of saltwater and fresh water in various reservoirs to provide evidence about the distribution of water on Earth.Assessment is limited to oceans, lakes, rivers, glaciers, groundwater, and polar ice caps but does not include the atmosphere. | Use graphs or charts to describe that most water on Earth is saltwater (about 97%) and is found in oceans, while fresh water (about 3%) is found in lakes, rivers, groundwater, and glaciers/ice. | Given a graph or chart, identify which type of water, saltwater or fresh water, is more abundant, and where each type of water is usually found (oceans vs. lakes, rivers, groundwater, glaciers/ice).  | Given the location of a body of water (ocean, river, lake), identify whether it contains saltwater or fresh water. | Given a sample or picture of water and two other objects, recognize water.  |
| SC.5.13.4.C Obtain and combine informationabout ways individual communities use science ideas to protect the Earth’s resources and environment. | Use information about Earth’s resources, the environments in which they are found, and ways that resources and environments can be protected or conserved.  | Use information about Earth’s resources in the student’s environment to identify one or more ways that a resource or its source can be conserved (reduce, reuse, recycle). | Given an Earth resource used by the student (e.g., water, electricity, paper, fossil fuels), identify one way to conserve it. | Recognize that Earth resources in the student’s environment (e.g., water, metal, wood) are limited. |
| SC.5.13.4.E Define a simple design problemreflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost. | Given a simple and relevant problem or need within the student’s community, participate in designing a solution that meets specified criteria and constraints on materials, time, or cost. | Given a simple, relevant problem or need with one or more criteria and constraints, identify tools and/or materials that could be used to design a solution. | Given a common tool or material within the student’s environment, identify ways that it can be used to solve a problem. | Given a simple scenario, recognize the function or use of a tool or material. |