ISTAR Grade 6 Science Performance Level Descriptors (PLDs)

Developing Proficiency	Meeting Proficiency	Exceeding Proficiency
A student performing at a **Developing Proficiency** level demonstrates emerging skills in introductory science concepts and terms. He/she is able to:	A student performing at a **Meeting Proficiency** level demonstrates proficient skills in basic science concepts and terms. He/she has all of the knowledge and skills shown under Developing Proficiency and is also able to:	A student performing at an **Exceeding Proficiency** level demonstrates exemplary skills in applying science concepts and terms. He/she has all of the knowledge and skills shown under Developing Proficiency and Meeting Proficiency and is also able to:
Physical Science: • identify that materials that can be seen or touched have volume and/or weight. • identify/measure the weight of an individual object. • identify that matter has properties. • identify kinetic and potential as classifications for energy. • identify some forms of energy.	**Physical Science:** • describe that all materials, whether or not they can been seen with the naked eye or touched with the hand, have volume or weight. • identify/measure the weight of multiple individual objects or a group of objects. • place different types of matter into groups based on common properties. • describe that kinetic energy is the energy of motion. • identify which object in a given scenario has kinetic energy. • identify that heat, light, electricity, motion and sound are all forms of energy.	**Physical Science:** • explain that all materials, whether or not they can been seen with the naked eye or touched with the hand, have both volume and weight. • predict/calculate the weight of a group of objects if given the weight of each object in the group. • describe that matter can be classified into groups based on properties that are similar. • describe what property/properties a group of different types of matter has in common. • identify which object in a given scenario has the most/least kinetic energy. • identify the form(s) of energy given off by an object/organism in a given scenario.
Earth Science: • identify Earth, the sun and the moon as parts of our solar system. • identify that Earth is a planet. • express that Earth is not the only planet. • identify that Earth has different seasons.	**Earth Science:** • describe that Earth is a planet in our solar system. • describe that the sun is in the center of our solar system. • describe that planets are different from one another. • identify a particular season by observing a picture showing the most common weather elements that occur during that season.	**Earth Science:** • explain that Earth is not the only planet in our solar system. • explain that Earth is the only planet in our solar system that supports life. • describe at least one characteristic that differentiates Earth from other planets. • describe at least two weather elements that are commonly observed during a given season.
Life Science: • express that plants and animals interact with each other when they are in the same area/environment. • express that plants and animals can sometimes be helped by an interaction with another plant or animal or sometimes be harmed by an interaction with another plant or animal.	**Life Science:** • describe that organisms can be classified according to what they eat and how they interact with other organisms in their ecosystem. • identify food resources for commonly known animals. • identify when a relationship between organisms is helpful/harmful to one of the organisms that are interacting.	**Life Science:** • identify an organism as a producer or a consumer. • identify an organism as predator or prey. • describe whether the relationship between organisms is helpful/harmful for each organism in the relationship based on a given scenario.

• identify that plants and animals need food to survive.	• describe that food provides energy to an organism.	• explain why a relationship between organisms is helpful/harmful for each organism in the relationship. • explain that food converts to energy once it is consumed by an organism. • explain that the energy that has been gained from the conversion of food is used by an organism to perform functions necessary to sustain life.
Science, Engineering and Technology: • identify examples of human-created technology/tools that help humans. • express that energy can be transferred.	**Science, Engineering and Technology:** • identify examples of technology based on human body parts/systems and identify what they would take the place of in the human body. • identify when an energy transfer is taking place. • identify the kind of energy needed by an organism or object.	**Science, Engineering and Technology:** • explain how examples of technology that are based on human or animal parts/systems can be used to assist humans. • predict what will happen if an energy transfer occurs in a given scenario.
The Nature of Science: • express that a prediction can be made based on prior knowledge. • identify a commonly used tool that could be used to take a particular measurement in a given scenario.	**The Nature of Science:** • express a scientific prediction based on a given scenario/investigation. • describe a prediction on the outcome of investigation based on prior knowledge. • identify the appropriate units in which a measurement should be recorded in a given scenario.	**The Nature of Science:** • explain why a particular prediction is most likely to be correct based on a given scenario. • describe evidence from previous investigations that make a particular prediction for the current scenario more plausible than the others. • identify the most appropriate scientific tool that should be used to take a particular measurement in a given scenario. • identify the appropriate units in which a measurement should be recorded when using a particular scientific tool in a given scenario.
The Design Process • identify that scientific problems exist. • identify that scientific problems can be solved. • identify some materials that could be used to solve a scientific problem.	**The Design Process** • identify a scientific problem in a given scenario. • describe that scientific problems can be solved using science and engineering. • select all the materials necessary to solve a given scientific problem.	**The Design Process** • identify the most important scientific problem that needs to be solved in a given scenario. • select the best solution to a given scientific problem. • explain why materials selected to solve a given scientific problem can be used to solve the problem and why those materials are most appropriate for that purpose.