IBEX Educational Standards

Grade 7

CTE.7-8.2.4	Analyze career options that match personal interests, abilities and skills.
SC.7.1.2	Explain the importance of replicable trials.
SC.7.1.3	Explain the need to revise conclusions and explanations based on new scientific evidence.

Grade 8

CTE.7-8.2.4	Analyze career options that match personal interests, abilities and skills.
CTE.8.1.1	Assess the overall effectiveness of a product design or solution.
SC.8.2.1	Describe significant relationships among society, science and technology and how one impacts the other.
SC.8.2.2	Describe how scale and mathematical models can be used to support and explain scientific data.
SC.8.6.3	Identify the characteristics and properties of mechanical and electromagnetic waves.
SC.8.7.1	Explain that every object has mass and therefore exerts a gravitational force on other objects.
SC.8.8.4	Explain how the sun is the major sources of energy influencing climate and weather on Earth.
SC.8.8.8	Describe the composition of objects in the galaxy.
SC.8.8.10	Compare the characteristics and movement pattern of the planets in our solar system.
SC.8.8.11	Describe the major components of the universe.
SC.8.8.12	Describe the role of gravitational force on the motions of planetary systems.

Physical Science

SC.PS.1.9	Explain how scientific explanations must meet a set of established criteria to be considered valid.
SC.PS.6.3	Describe different examples of the concept of entropy.
SC.PS.6.8	Describe interactions among molecules.
SC.PS.7.3	Explain the relationship among the gravitational force, the mass of an object and the distance between objects.
SC.PS.7.4	Explain the magnetic and electric forces in the universe.

Earth and Space Science

SC.ES.1.7	Revise as needed, conclusions and explanations based on new evidence.
SC.ES.1.9	Explain how scientific explanations must meet a set of established criteria to be considered valid.
SC.ES.2.1	Explain how scientific advancements and emerging technology have influenced society.
SC.ES.2.4	Describe technologies used to collect information about the universe.
SC.ES.8.3	Explain the possible origins and evolution of the solar system.
SC.ES.8.8	Describe the major internal and external souces of energy on Earth.
SC.ES.8.9	Describe the physical and nuclear dynamics involved in the life cycle of a star.

Biology

SC.BS.1.7	Revise as needed, conclusions and explanations based on new evidence.
SC.BS.1.9	Explain how scientific explanations must meet a set of established criteria to be considered valid.

SC.BS.2.1	Explain how scientific advancements and emerging technology have influenced society.

Chemistry

SC.CH.1.7	Revise as needed, conclusions and explanations based on new evidence.
SC.CH.1.9	Explain how scientific explanations must meet a set of established criteria to be considered valid.
SC.CH.2.1	Explain how scientific advancements and emerging technology have influenced society.
SC.CH.4.6	Explain that atoms combine to form molecules by sharing the outermost electron to form covalent or metallic bonds or by transferring electrons to form ionic bonds.

Physics

SC.PH.1.7	Revise as needed, conclusions and explanations based on new evidence.
SC.PH.1.9	Explain how scientific explanations must meet a set of established criteria to be considered valid.
SC.PH.2.1	Explain how scientific advancements and emerging technology have influenced society.
SC.PH.4.1	Solve problems using the universal law of gravity
SC.PH.7.4	Describe how electric and magnetic field contain energy and act as vector force fields.