Challenger Learning Center of San Antonio

6th Grade Science TEKS Correlation
Comet Mission

Science TEKS	Simulator/Prep Book Activities
(a.) Introduction	
1. Conducting field & laboratory investigations using scientific methods, analyzing data, making informed decisions, & using tools such as beakers and test tubes to collect, analyze, and record information. Students also use computers and information technology tools to support scientific investigations.	▪ Analyze data: All MC positions ▪ Make informed decisions: All MC positions except Com & Data ▪ Use beakers: Bio and LS in the SS ▪ Use computers: All positions except Com in the SS and MC. ▪ Use test tubes: LS in the SS and the "Acids & Bases" activity in the Mission Prep book {classroom preparation}.
2. As students learn science skills, they identify components of the solar system including the Sun & planets. In addition, students identify changes in objects including position, direction, and speed when acted upon by a force.	▪ Identify components of the solar system: Predicted path of Comet Tempel 1 and "Investigating a Comet," "Famous Comets," and "Cometary Orbits" activities in the Comet book {classroom preparation}. ▪ Identify changes in objects: Formation of comet tail(s), movement of comet around the sun, and the "Investigating Falling Particles" and "Particle Collection" activities in the Comet book {classroom preparation}.
4. Students should know how science has built a vast body of changing and increasing knowledge described by physical, mathematical, and conceptual models, and also should know that science may not answer all questions.	▪ Conceptual models: Origin of comets – models of Kuiper Belt and Oort Cloud, including information in the Comet Prep book {classroom preparation}. ▪ Physical model: "Latitude & Longitude" activity in Mission Prep book {classroom preparation}.
5. A system is a collection of cycles, structures, and processes that interact. Students should understand a whole in terms of its components and how these components relate to each other and to the whole. All systems have basic properties that can be described in terms of space, time, energy, & matter. Change and constancy occur in systems and can be observed and measured as patterns. These patterns help to predict what will happen next and can change over time.	▪ Understanding a whole: Parts of a comet including the nucleus, coma, and types of tails as described on the Basic Comet Facts handout, and the "Cookin' up a Comet" activity in the Comet book {classroom preparation}. ▪ Change & constancy observed as patterns: Difference between short period and long period comets with examples {classroom preparation}.
6. Students should understand that certain types of questions can be answered by investigations, and that methods, models, and conclusions built from these investigations change as new observations are made. Models of objects and events are tools for understanding the natural world and can show how systems work. They have limitations that and based on new discoveries are constantly being modified to more closely reflect the natural world.	▪ Investigations: Investigate close-up view of unknown object. Nav, Med, Bio, Rem, Iso 1, Iso 2, Iso 3, and LS in MC. ▪ Conclusions change as new observations are made: Spectral Analysis of the unknown object and the unknown object Navigation worksheet. Nav, Med, Bio, Rem, Iso 1, Iso 2, Iso 3, and LS in MC.