Essential Questions to answer for CRCT

How does the Big Bang Theory shape our beliefs about the universe today?
How can the solar system be modeled so we see a smaller and accurate version of how it looks?
Is there life on other planets? Why or Why not?
How does the Earth differ from the other planets?
How are asteroids and comets different?
How do the stars move in the sky?
Why does the moon appear to change shapes?
Can we model the phases of the Moon? How?
How do lunar and solar eclipses differ?
How are lunar and solar eclipses alike?
Why does the Earth have different seasons?
How does the tilt of the earth affect the seasons and Earth's climate?
How are the earth's layers alike and different?
What challenges stand in the way of sending explorers to the center of the earth?
How do the earth's crust, mantle and core affect temperature, density and composition?
Describe physical properties of the crust, mantle, and core

How does the movement of lithospheric plates cause major geological events?
What evidence do scientists have that continents were once joined together?
Why do mountains often occur in ranges thousands of kilometers long?
What evidence do scientists have that lithospheric plates move?
How does the movement of lithospheric plates cause volcano eruptions?
How does the movement of lithospheric plates cause earthquakes?
Where on the earth's surface is lithospheric plate movement most evident?
How does the locations of earthquakes relate to the locations of plate boundaries?
How do geologists infer what events (earthquakes, deposition, weathering and erosion) took place on earth's surface?
What can fossils tell us about movements of the plates in the past?
Why do earthquakes occur?
Why do tsunamis not commonly occur on the east coast of the United States?
How do plate movements form mountains and ocean basins?
How has the movement of lithospheric plates over time caused the earth's surface to change?
How do rivers and oceans change the appearance of the earth's surface?
What impact does plate movement have on the earth's surface?
How do minerals contribute to rock composition?
How do natural objects compare to manufactured objects?
How are rocks and minerals used by 6th graders?
How can classifying rocks aid understanding how they are formed?
How are rocks formed?
How are rocks classified?
Is the rock cycle really a cycle? Explain your answer.
How does fossil and geological evidence indicate the change of climate and appearance of earth's surface?
How do fossils help scientists to know the climate of places in the past?
What are fossils, how do they form, and how are they used to interpret Earth's history?
What conditions are favorable for fossilization?
What rock types contain fossils?

Essential Questions to answer for CRCT

How does water and wind change the surface of the earth?
How do rivers and oceans change the appearance of the earth's surface?
In what ways does human interaction impact change of the earth's surface?
How have scientific views changed over the years on how the earth's surface is formed?
How does the formation of soil relate to the processes of weathering and erosion?
What are the characteristics of weathering, and how does weathering differ from erosion?
What is meant by weathering? How many different kinds of weathering processes are there?
How are weathering and erosion different?
How are weathering and erosion related?
In what ways does human interaction impact change of the earth's surface?
How might conservation and resource strategies be used today to affect your future? Give examples.
Which strategies to conserve energy would be easiest for your family to use and why?
How does the sun's energy impact our lives?
How does the sun's energy produce wind?
What is the sun's relationship to wind and water energy?
What is the role of the sun in the water cycle?
How is wind and water energy used? Why is it important?
How can water impact our way of living?
How does the amount of saltwater differ from the amount of freshwater on Earth
What elements are found in the water of the world's oceans?
How are the geological features that exist on land similar to the geological features on the ocean floor?
Where are plate tectonic features located other than at plate boundaries?
How are hydrothermal vents and geysers produced?
Where are sources of geothermal energy on the sea-floor? On continents?
What are renewable resources produced by tectonic processes?
How much of the Earth is covered by each of the following: saltwater, ice and freshwater?
Why is Earth's water constantly in motion?
What are the most important sources of water for human use?
What are the forces that drive the water cycle?
What are the three different phases or states of water?
What are the conditions under which each of the states of water form?
How are local weather events and processes tied to the water cycle?
How does the water cycle clean Earth's freshwater supply?
How can weather observations be used to predict these events? Why do droughts and floods occur?
Where are hurricanes most likely to occur?
Are natural disasters randomly or evenly disbursed?
Can you see a relationship
between air pressure and the weather?
Do sunny days tend to have high or low pressure? How about rainy days?
How does an ocean affect the weather and climate of adjacent land?
How does the sun's heating of water in the tropics affect climate in the rest of the world?
How does wind form?
How does the sun's energy cause winds and hurricanes?
Why are tornadoes uncommon in mountainous regions?
How do tornadoes form?
Are natural disasters random or evenly dispersed?