**Life Before Oxygen**

•What role did cyanobacteria play in the evolution of life?

•Explain how changes in Earth's atmosphere affected the kinds and distribution of life forms.

•How is looking for primitive life forms in hot vents like a time capsule of Earth's history?

•Why do the samples from the geyser recall an "era when we humans could not have survived?"

•Are there any organisms today that are continuing to make profound changes upon Earth's atmosphere? (You might discuss how people are changing our climate.)

**Deep Sea Vents and Life’s Origins**

•How does all the life you saw in the video survive without sunlight?

•What are deep-sea vents? How are they formed?

•How do deep-sea vent organisms survive in such extreme conditions?

•Choose an organism that intrigues you and describe it.

•What is the ultimate food source in the vent community? or How do these organisms get food?

•Describe the Mid-Atlantic Ridge.

**Cave’s: Extreme Conditions for Life**

•What is an extremophile?

•What are the environmental challenges facing cave organisms? Explain how some organisms meet these challenges.

•After learning about the conditions under which extremophiles live, do you think it is reasonable to argue that life could probably exist on other planets? Explain.