**Discussion Questions: 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.)

**Discussion Questions: 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.

**Discussion Questions: Caves: 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.