The Ocean Explorer Multimedia Discovery Missions are a series of 13 interactive multimedia presentations and learning activities that take you to the deep sea, on great ocean journeys, and above the waves. This monthly newsletter provides an overview of the entire 2017 field season, which includes live video feeds from a deep-sea research submersible. The ROV dive sites will include deep-sea coral and sponge habitats, bottom water column and all the known and unknown creatures living at depth in this area of the Central Pacific.

The 2017 field season is well underway! Visit the NOAA Ocean Explorer website or use your live video feeds on your computer or mobile device to watch hydrothermal vents up close and personal. See the high levels of minerals and sulfides contained in the chimney. Can you see the vent fluid which looks like dark smoke due to the high levels of minerals and sulfides contained in the chimney? Fluids from these vents rise to the ocean surface, where they cool and either condense or erupt as water. Food chain: photosynthesis, chemosynthesis (e.g., hydrothermal vents), and bacterial decomposition.

Chemosynthesis and Hydrothermal Vent Life

Hydrothermal Vent Life

Chemosynthesis is a process that allows aerobic exogenous nutrition for an organism and may occur in the absence of sunlight. Hydrothermal vents are the results of hydrothermal activity, a process that is very common in the ocean. Hydrothermal vents may occur in the absence of sunlight, and their source of energy is completely different and obtained through chemosynthesis. Chemosynthesis is the process by which energy is derived from the high levels of minerals and sulfides contained in the chimney. Fluids from these vents rise to the ocean surface, where they cool and either condense or erupt as water. Fluids from these vents rise to the ocean surface, where they cool and either condense or erupt as water. Food chain: photosynthesis, chemosynthesis (e.g., hydrothermal vents), and bacterial decomposition.