

DESIGNING AND BUILDING REMOTE OPERATED VEHICLES (ROV) TO HUNT FOR MARINE NATURAL PRODUCTS

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This presentation will focus on the construction and use of three generations of ROV's. The first is a small kit sold under the name of "*Sea Perch*." This kit acquainted students with some of the basic ideas and concepts of building an ROV including waterproofing electronics, buoyancy and tethering over a distance. The second (impellor driven) and third generation (propeller driven) were constructed from parts purchased at hardware stores and on-line vendors. These are designed to hold and transport a seven pound underwater video camera and collect marine sediment. The original designs are made to go to a depth of 130 feet with the follow up design aimed at collecting samples from the 200-250 depth feet range. The sediment samples, collected from the ocean, are analyzed for marine natural products produced by microorganisms in the sediment. Video footage form the explorations will be included in the presentation. The ROV's will be part of the demonstration.