

Gray's Reef Education Cruises

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Resources

GRNMS Vessel, Staff (captain, mate, educator, cruise coordinator), fuel, equipment (trawl net, water quality monitoring equipment, YSI data sonde, data sheets, field microscope, hand lenses, sorting pans, etc.)

Activities

Gray's Reef conducts one education cruise per month during the school year for nine educators per cruise. Cruises are four hours long and occur on a Saturday to maximize participation of educators.

Outputs

Nine educators on a NOAA research vessel gain experience and become skilled in ocean science data collecting and knowledgeable in research programs. An evaluation is conducted by the host educator through personal interviews after the cruise. Handouts and materials are given as well as data sheets.

Long-term Outcomes

Educators become ocean stewards and adapt responsible practices at home and school that protect and conserve the Ocean. They pass along their knowledge and impart responsible stewardship to students, family and community.

Mid-term Outcomes

Educators learn about research and exploration conducted by GRNMS, ONMS and NOAA and that each project and mission supports the overarching missions and goals of resource protection and management.

Short-term Outcomes

Educators become skilled and knowledgeable in water quality monitoring, the impacts of marine debris, the impacts of watersheds and non-point source pollution, climate change, ocean acidification and acoustic fish tagging project and learn how to use a research vessel to trawl a net, conduct data collection and the importance of operating a NOAA vessel for research and exploration.

Project Title: NOAA Gray's Reef Education Cruise

Goal: To train educators in ocean science so they help create an ocean literate society

Resources	Activities Outputs	Short Term Outcomes	Mid Term Outcomes	Long Term Outcomes
<p>GRNMS Vessel = ~\$1K Fuel and maintenance costs</p> <p>Staff (captain = \$500, mate = \$300, educator = \$300, cruise coordinator = \$150)</p> <p>Equipment = \$1K (trawl net, water quality monitoring equipment, YSI data sonde, data sheets, field microscope, hand lenses, sorting pans, etc.)</p>	<p>Conduct education cruises = 4 hours Depending on site budget up to eight cruises per school year</p> <p>Vessel and equipment reparation time = 4 hours</p> <p>Develop handouts, materials, data sheets, equipment = 1 hour</p> <p>Coordination of participants from initial announcement to final roster with medical statements = 10 hours</p> <p>Evaluation through post cruise discussion with each participant summarized into a written report = 3 hours</p>	<p>Educators become skilled and knowledgeable in water quality monitoring and acoustic fish tagging project and learn how to use a research vessel to trawl a net, conduct data collection and the importance of operating a research vessel.</p> <p>Educators learn about research and exploration conducted by GRNMS, ONMS and NOAA and that each project and mission supports the overarching missions and goals of resource protection and management.</p> <p>Objective: Participants become knowledgeable ocean science educators with background experience aboard a NOAA research vessel; they become experienced in conducting water quality monitoring tests and adapt practices to classroom lessons.</p>	<p>Educators value importance of watershed and apply information into lessons</p> <p>Educators become ocean stewards (adapt responsible practices at home and school that protect and conserve the ocean.)</p> <p>Value importance of ocean science research and exploration</p> <p>Value resource protection and management</p> <p>Objective: Participants adapt responsible practices at home and school that protect and conserve the ocean; (i.e. use ocean friendly household products for cleaning; use reusable bags instead of plastic; eat only sustainable fish species; recycle; carpool, etc.)</p>	<p>Educators become ocean stewards</p> <p>They pass along their knowledge and impart responsible stewardship to students, family and community.</p> <p>Watersheds bring clean water into estuary and ocean; fishing is sustainable; pollution is reduced and mitigated; ocean acidification is reversed; coral reef systems are healthy; world peace is achieved ;)</p> <p>Objective: To reduce human impact on watersheds, our Ocean and ultimately on Gray's Reef NMS; to restore our planet to a balanced ecosystem; to mitigate the impacts of an ever increasing human on our natural resources and especially our Ocean</p>