

## **NOAA OE PDO Evaluation Plan**

**NOAA OER Vision:** A society that understands the importance of a healthy ocean to all life on Earth and is informed and inspired by discoveries that reveal the wonders, mysteries, and workings of the ocean.

**NOAA OER Mission:** Support National and NOAA objectives by exploring the Earth's largely unknown ocean in all its dimensions for the purpose of discovery and the advancement of knowledge, using state-of-the-art technologies in evolutionary and revolutionary ways.

**NOAA OER Education Mission:** Develop and sustain high-quality, effective interactions between ocean explorers and America's educators in an effort to reach out in new ways to the public to enhance the literacy of learners with respect to ocean issues.

**Goal:** The goal of OE Professional Development Offerings\* is to increase professional educator understanding of and appreciation for deep-sea exploration and NOAA's discoveries, and improve participating educator's instruction about ocean science, exploration and discoveries.

*\* PDOs include onsite *Learning Ocean Science through Ocean Exploration: Introductory and Follow-up* workshops, and the onsite and online *Okeanos Explorer* workshops, *Why Do We Explore?* and *How Do We Explore?*.*

**Objective 1:** As a result of providing PDOs, OER will provide effective professional development in support of participants' professional development needs using lessons that are expressly tied to OER's ocean exploration missions, in an effort to bring ocean science and technology into classrooms.

Project Activities	Expected Outcomes	Indicators	Data Collection Methods (what)	Implementation of Assessment (when and who)
PDOs are hosted by Alliance Partners  Or online via a partnership with the College of Exploration	OER has developed and sustains high quality, educator professional development workshops (onsite and online)	Each of 15 Alliance Partners hosts two PDOs annually  Host one online workshop per year, budget dependent  Workshops designed consistent with PD best practices	OE Management records  PD best practices checklist	Annually; OE Staff  Annually; Evaluators
	Participants indicate the PDOs met their professional development goals	Positive responses on PDO assessments	Survey/questionnaire responses	Post PDOs; Participants
	PDO participants are motivated to incorporate more ocean science into their classroom teaching	Positive responses on PDO assessments  Positive responses during guided reflections	Survey/questionnaire responses  Responses to facilitator recorded on PDO summary form (onsite)	Post PDOs; Participants  During each PDO; participants responses summarized by facilitators
	Educators implement OER PDO lessons with their students **	Direct observation of instruction and implementation **  ID implemented lesson plans **	Classroom observations **  Review of lesson plans used **	Observations of randomly selected educators; Evaluators **
	Participants report that they use OE education tools and resources ( <i>Okeanos Explorer</i> ,	Positive responses to PDO assessments	Survey/questionnaire responses	Pre each Follow-up PDO; Participants (LOSTOE)

	OER curricula, OE Website, RSS feeds, Tweets, OceanAGE Careers) to support and enhance instruction of ocean science, reasons for ocean exploration, technology and related careers	Positive responses during guided reflections	Responses to facilitator recorded on PDO summary form	During each Follow-up PDO; participants responses summarized by facilitators (LOSTOE)
	Participants indicate the PDOs enabled them to improve their teaching about ocean science	Positive responses to PDO assessments	Survey/questionnaire responses	Post each Follow-up PDO; Participants (LOSTOE)
Facilitators introduce content related to ocean exploration and related discoveries	Participants indicate greater confidence in their ability to teach ocean science content to their students	Positive responses to PDO assessments	Survey/questionnaire responses	Pre and post each PDO; Participants Online workshop post survey
	Participants indicate having acquired adequate knowledge to teach ocean science content to their students	Positive responses to PDO assessments	Survey/questionnaire responses	Pre and post each PDO; Participants Online workshop post survey
Facilitators lead participants in trying out standards-based activities related to presented content	During OE PDOs, participants practice doing ocean science and technology activities  Online: Participants are introduced to ocean science and technology activities	PDO Agenda content	Analysis of agenda content and onsite PDO summary forms	Annually; Evaluators and facilitators/OE staff
Facilitators familiarize participants to Ocean Literacy Essential Principles and Fundamental Concepts (OLEPs and FCs)	Each presented lesson is aligned with OLEPs and FCs	Presentation content Online workshop content	Analysis of Presentation content and PDO summary forms (onsite) Analysis of workshop content (online)	Annually; Evaluators and facilitators/OE staff
Facilitators familiarize participants to the new	Presented lessons are correlation to the K-12	PPT content	Analysis of PPT content and PDO summary forms	Annually; Evaluators and

K-12 Framework (2011/2012) and the Next Generation Science Standards (2012/2013)	Framework (2011/2012); to the NGSS (2012/2013)	Online workshop content	(onsite) Analysis of workshop content (online)	facilitators/OE staff
Facilitators introduce and explore ways to follow ocean exploration expeditions and discoveries, and access existing, new, or improved OE resources	During OE PDOs, participants become familiar with Ocean Explorer tools and resources ( <i>Okeanos Explorer</i> , OER curricula, OE Web site, Digital Atlas, RSS feeds, Tweets, OceanAGE Careers)	PDO Agenda content Positive responses to PDO assessments	Analysis of agenda content and PDO summary forms Survey/questionnaire responses	Annually; Evaluators and facilitators/OE staff Post PDOs; participants
Facilitators guide reflections with participants about the ways OE tools, materials and resources address national and local standards	During OE PDOs, participants identify how the lessons, materials and resources presented during workshops meet their local and national standards	Responses during guided reflections	Responses to onsite facilitator recorded on PDO summary form Review online discussion room and survey comments.	During each onsite PDO; participants responses summarized by facilitators Post online offering: evaluators
	During OE PDOs, participants discuss and reflect about how the workshop content and materials they have used since a previous PDO fit their content standards and student needs	Responses during guided reflections	Responses to facilitator recorded on PDO onsite summary form	During each PDO; participants responses summarized by facilitators
Facilitators guide reflections with participants about the ways OE materials and resources can fit their instruction and address	During OE PDOs participants discuss and reflect about how presented content and materials can be adapted to fit the specific needs of their students	Responses during guided reflections	Responses to facilitator recorded on PDO onsite summary form Review online discussion room and survey comments.	During each PDO; participants responses summarized by facilitators Post online offering: evaluators

the needs of their students	During OE PDOs, participants identify where OE materials fit into their teaching and how they will use OE resources to benefit their students	Responses during guided reflections	Responses to facilitator recorded on PDO summary form	During each PDO; participants responses summarized by facilitators
-----------------------------	---	-------------------------------------	---	--

**Objective 2:** As a result of participating in OER PDOs, participants will be introduced to cutting-edge exploration expeditions carried out by expert ocean explorers and technology that will engage them in creative and exciting ways to use the science and technology associated with exploring the world's ocean in their classrooms.

Project Activities	Expected Outcomes	Indicators	Data Collection Methods	Implementation of Assessment
PDOs are hosted by Alliance Partners  Or online via technology partners (TCOE)	OER has developed and sustains high quality, educator professional development workshops (onsite/online)	Each of 15 Alliance Partners hosts an two PDOs annually  Host one online workshop per year, budget dependent  Workshops designed consistent with PD best practices	OE Management records  PD best practices checklist	Annually; OE Staff  Annually; Evaluators
	PDOs introduce to ocean science and technology content	Responses to PDO assessments  PDO Agenda content	Survey/questionnaire responses  Analysis of agenda content	Post PDOs; Participants  Annually; Evaluators
Facilitators introduce and explore ways to follow ocean exploration expeditions and discoveries, and access existing, new, or improved OE resources	During OE PDOs, participants become familiar with Ocean Explorer tools and resources ( <i>Okeanos Explorer</i> , OER curricula, OE Web site, Digital Atlas, RSS feeds, Tweets, OceanAGE Careers)	PDO Agenda content  Responses to PDO assessments	Analysis of agenda content and onsite PDO summary forms  Survey/questionnaire responses	Annually; Evaluators and facilitators/OE staff  Post PDOs; participants
Facilitators lead participants in trying out standards-based activities	During OE PDOs, participants practice doing ocean science and	PDO Agenda content	Analysis of agenda content and PDO	Annually; Evaluators and facilitators/OE staff

related to presented content	technology activities. Online: Participants are introduced to ocean science and technology activities.		summary forms	
	After using OE materials, resources, and tools, PDO participants report student excitement about, engagement and interest in OE science, discoveries, technologies, tools, and careers	Responses during guided reflections	Responses to facilitator recorded on onsite PDO summary form	During each Follow-up PDO; participants responses summarized by facilitators
Facilitators introduce and discuss the technologies employed to explore the deep ocean	Participants increase their awareness of technologies required to explore the deep ocean	Responses to PDO assessments	Survey/questionnaire responses Post online workshop survey	Pre/Post each onsite PDO; Participants Evaluators
Facilitators introduce educators to premier ocean scientists/ explorers and their research and exploration	Participants connect directly with premier ocean scientists and explorers and their scientific endeavors	PDO agenda content	Analysis of agenda content and onsite PDO summary forms	Annually; Evaluators and facilitators/OE staff
Facilitators introduce educators to ways to connect students to the work and lives of ocean scientists working with the <i>Okeanos Explorer</i> through use of the OE Web site	Participants identify ways to connect students to the work and lives of ocean scientists working with the <i>Okeanos Explorer</i> on the OE Web site	Responses to PDO assessments Responses during guided reflections	Survey/questionnaire responses Responses to facilitator recorded on onsite PDO summary form	Post each PDO; participants During each PDO; participants responses summarized by facilitators
Facilitators guide reflections with	During OE PDOs, participants discuss and	Responses during guided	Responses to facilitator recorded on onsite PDO	During each PDO; participants responses summarized by

participants about the ways OE materials and resources can fit their instruction and address the needs of their students	reflect about how presented content and materials can be adapted to fit the specific needs of their students	reflections	summary form	facilitators
	During OE PDOs, participants identify where OE materials fit into their instruction and how they will use OE resources to benefit their students	Responses during guided reflections	Responses to facilitator recorded on PDO summary form	During each PDO; participants responses summarized by facilitators
	During OE PDOs, participants discuss and reflect about how the workshop content and materials they have used since the previous PDO fits their teaching standards and student needs (LOSTOE)	Responses during guided reflections	Responses to facilitator recorded on onsite PDO summary form	During each PDO; participants responses summarized by facilitators



**Objective 3:** As a result of participating in OER PDOs, participants will exhibit an increased awareness of the importance of, and NOAA's role in, ocean exploration.

Project Activities	Expected Outcomes	Indicators	Data Collection Methods	Implementation of Assessment
<p>PDOs are hosted by Alliance Partners</p> <p>Or online via technology partners (TCOE)</p>	<p>OER has developed and sustains high quality, educator professional development workshops (onsite/online)</p>	<p>Each of 15 Alliance Partners hosts two PDOs annually</p> <p>Host one online workshop per year, budget dependent</p> <p>Workshops designed consistent with PD best practices</p>	<p>OE Management records</p> <p>PD best practices checklist</p>	<p>Annually; OE Staff</p> <p>Annually; Evaluators</p>
<p>Facilitators demonstrate and discuss that the ocean is largely unexplored (OELP 7)</p>	<p>Participants are aware that the ocean is largely unexplored (OLEP 7)</p>	<p>Responses to PDO assessments</p>	<p>Survey/questionnaire responses</p>	<p>Pre/Post PDOs; Participants</p>
<p>Facilitators discuss the value of deep ocean exploration</p>	<p>Participants increase their awareness of the value of ocean exploration</p>	<p>Responses to PDO assessments</p>	<p>Survey/questionnaire responses</p>	<p>Pre/Post PDOs; Participants</p>
<p>Facilitators introduce participants to NOAA OER's role in deep ocean discovery</p>	<p>Participants increase their awareness of NOAA's role in ocean exploration</p>	<p>Responses to PDO assessments</p>	<p>Survey/questionnaire responses</p>	<p>Pre/Post PDOs; Participants</p>

**Objective 4:** As a result of participating in OER PDOs, participants will exhibit greater confidence in their ability to teach ocean science and deep ocean exploration content to their students.

Project Activities	Expected Outcomes	Indicators	Data Collection Methods	Implementation of Assessment
PDOs are hosted by Alliance Partners  Or online via technology partners (TCOE)	OER has developed and sustains high quality, educator professional development workshops (onsite/online)	Each of 15 Alliance Partners hosts two PDOs annually  Host one online workshop per year, budget dependent  Workshops designed consistent with PD best practices	OE Management records  PD best practices checklist	Annually; OE Staff  Annually; Evaluators
	Participants are motivated to incorporate more ocean science into their classroom teaching	Responses to PDO assessments	Survey/questionnaire responses	Post PDOs; Participants
	Educators implement lessons with their students **	Direct observation of instruction and implementation **  ID implemented lesson plans **	Classroom observations **  Review of lesson plans used **	Observations of randomly selected educators; evaluators **
	Participants indicate the PDOs enabled them to improve their teaching about ocean science	Responses to PDO assessments	Survey/questionnaire responses	Pre Follow-up? PDOs; Participants
	Participants are motivated to continue professional development through OE	Participation in PDOs and on-line courses by	Comparisons of onsite PDO sign in sheets and responses to online course	Post onsite PDOs; OE staff and Participants

	PD offerings (workshops, online courses)	previous PDO participants	survey	
Facilitators introduce content related to ocean exploration and related discoveries	Participants indicate greater confidence in their ability to teach ocean science content	Positive responses to PDO assessments	Survey/questionnaire responses	Pre and post PDOs; Participants
	Participants indicate having acquired adequate knowledge to teach ocean science content	Positive responses to PDO assessments	Survey/questionnaire responses Post online workshop survey	Pre and post PDOs; Participants Evaluators
Facilitators lead participants in trying out standards-based activities related to presented content	During OE PDOs, participants practice doing ocean science and technology activities  Online: Participants are introduced to ocean science and technology activities	PDO Agenda content	Analysis of agenda content and PDO summary forms	Annually; Evaluators and facilitators/OE staff
Facilitators familiarize participants to Ocean Literacy Essential Principles and Fundamental Concepts (OLEPs and FCs)	Each presented lesson is aligned with OLEPs and FCs	Presentation content Online content	Analysis of Presentation content and PDO summary forms Analysis of online PD content	Annually; Evaluators and facilitators/OE staff
Facilitators introduce and explore ways to follow ocean exploration expeditions and discoveries, and access existing, new, or improved OE resources	Participants increase their awareness of Ocean Explorer tools and resources ( <i>Okeanos Explorer</i> , OER curricula, OE Web site, Digital Atlas, RSS feeds, Tweets, OceanAGE Careers)	PDO Agenda content Responses to PDO assessments	Analysis of agenda content and onsite PDO summary forms Survey/questionnaire responses	Annually; Evaluators and facilitators/OE staff Pre and post PDOs; participants

Facilitators demonstrate and discuss that the ocean is largely unexplored (OELP 7)	Participants are aware that the ocean is largely unexplored (OLEP 7)	Responses to PDO assessments	Survey/questionnaire responses	Pre and post PDOs; Participants
Facilitators discuss the value of deep ocean exploration	During OE PDOs, participants increase their awareness of the value of ocean exploration	Responses to PDO assessments	Survey/questionnaire responses	Pre and post PDOs; Participants
Facilitators introduce and discuss the technologies employed to explore the deep ocean	During OE PDOs, participants increase their awareness of technologies required to explore the deep ocean	Responses to PDO assessments	Survey/questionnaire responses	Pre and post PDOs; Participants
Facilitators introduce educators to premier ocean scientists/ explorers and their research and exploration	During OE PDOs, participants connect directly with premier ocean scientists and explorers and their scientific endeavors	PDO agenda content Online workshop agenda	Analysis of agenda content and onsite PDO summary forms	Annually; Evaluators and facilitators/OE staff
Facilitators introduce educators to ways to connect students to the work and lives of ocean scientists working with the <i>Okeanos Explorer</i> through use of the OE Web site	During OE PDOs, participants identify ways to connect students to the work and lives of ocean scientists working with the <i>Okeanos Explorer</i> on the OE Web site	Responses to PDO assessments Responses during guided reflections	Survey/questionnaire responses Responses to facilitator recorded on onsite PDO summary form	Post each PDO; participants During each PDO; participants responses summarized by facilitators
Facilitators guide reflections with participants about the ways OE tools, materials and resources address national and local standards	During OE PDOs, participants identify how the lessons, materials and resources presented during workshops meet their local and national standards	Responses during guided reflections	Responses to facilitator recorded on PDO summary form	During each PDO; participants responses summarized by facilitators

	During OE PDOs, participants discuss and reflect about how the workshop content and materials they have used since the previous PDO fits their content standards and student needs	Responses during guided reflections	Responses to facilitator recorded on onsite PDO summary form  Post online workshop survey	During each PDO; participants responses summarized by facilitators  Evaluators
Facilitators guide reflections with participants about the ways OE materials and resources can fit their instruction and address the needs of their students	During OE PDOs, participants discuss and reflect about how presented content and materials can be adapted to fit the specific needs of their students	Responses during guided reflections	Responses to facilitator recorded on onsite PDO summary form  Post online workshop survey	During each PDO; participants responses summarized by facilitators  Evaluators
	Participants identify where OE materials fit into their instruction and how they will use OE resources to benefit their students	Responses during guided reflections	Responses to facilitator recorded on onsite PDO summary form  Post online workshop survey	During each PDOs; participants responses summarized by facilitators  Evaluators
	Participants indicate greater confidence in their ability to teach ocean science content to their students using OE education resources ( <i>Okeanos Explorer</i> , curricula, OE Website, RSS feeds, Tweets, OceanAGE Careers)	Responses to PDO assessments	Survey/questionnaire responses  Post online workshop survey	Pre and post PDOs; Participants  Evaluators

**Objective 5:** As a result of participating in OER PDOs, participants will become aware of the resources available on the Ocean Explorer Web site.

Project Activities	Expected Outcomes	Indicators	Data Collection Methods	Implementation of Assessment
<p>PDOs are hosted by Alliance Partners</p> <p>Or online via technology partners (TCOE)</p>	<p>OER has developed and sustains high quality, educator professional development workshops (onsite/online)</p>	<p>Each of 15 Alliance Partners hosts two PDOs annually</p> <p>Host one online workshop per year, budget dependent</p> <p>Workshops designed consistent with PD best practices</p>	<p>OE Management records</p> <p>PD best practices checklist</p>	<p>Annually; OE Staff</p> <p>Annually; Evaluators</p>
<p>Facilitators introduce and explore ways to follow ocean exploration expeditions and discoveries, and access existing, new, or improved OE resources</p>	<p>During OE PDOs, participants become familiar with Ocean Explorer tools and resources (<i>Okeanos Explorer</i>, OER curricula, OE Web site, Digital Atlas, RSS feeds, Tweets, OceanAGE Careers)</p>	<p>PDO Agenda content</p> <p>Positive responses to PDO assessments</p>	<p>Analysis of agenda content and PDO summary forms</p> <p>Survey/questionnaire responses</p>	<p>Annually; Evaluators and facilitators/OE staff</p> <p>Post PDOs; participants</p>
<p>Facilitators introduce educators to ways to connect students to the work and lives of ocean scientists working with the <i>Okeanos Explorer</i> through use of the OE Web site</p>	<p>During OE PDOs, participants identify ways to connect students to the work and lives of ocean scientists working with the <i>Okeanos Explorer</i> on the OE Web site</p>	<p>Responses to PDO assessments</p> <p>Responses during guided reflections</p>	<p>Survey/questionnaire responses</p> <p>Responses to facilitator recorded on onsite PDO summary form</p>	<p>Post each PDO; participants</p> <p>During each PDO; participants responses summarized by facilitators</p>
<p>Facilitators guide</p>	<p>During OE PDOs,</p>	<p>Responses during guided</p>	<p>Responses to facilitator</p>	<p>During each PDO; participants</p>

reflections with participants about the ways OE materials and resources can fit their instruction and address the needs of their students	participants discuss and reflect about how presented content and materials can be adapted to fit the specific needs of their students	reflections	recorded on onsite PDO summary form	responses summarized by facilitators
	During OE PDOs, participants identify where OE materials fit into their instruction and how they will use OE resources to benefit their students	Responses during guided reflections	Responses to facilitator recorded on onsite PDO summary form	During each PDO; participants responses summarized by facilitators
	During OE PDOs, participants discuss and reflect about how the workshop content and materials they have used from the previous PDO fit their teaching standards and student needs	Responses during guided reflections	Responses to facilitator recorded on PDO summary form	During each PDOs; participants responses summarized by facilitators

**Objective 6:** As a result of participating in OER PDOs, participants will be able to effectively use the OER professional development curricula, the OE Web site and other supporting resources in their instruction.

Project Activities	Expected Outcomes	Indicators	Data Collection Methods	Implementation of Assessment
PDOs are hosted by Alliance Partners Or online via technology partners (TCOE)	OER has developed and sustains high quality, educator professional development workshops (onsite/online)	Each of 15 Alliance Partners hosts two PDOs annually Host one online workshop per year, budget dependent Workshops designed consistent with PD best practices	OE Management records PD best practices checklist	Annually; OE Staff Annually; Evaluators
	Participants indicate their intention to implement lessons and use the OE website between PDOs	Responses to PDO assessments	Survey/questionnaire responses	Post each PDO; Participants
	Participants are motivated to incorporate more ocean science into their classroom teaching	Responses to PDO assessments	Survey/questionnaire responses	Post each PDO; Participants
	Educators implement OER PDO lessons with their students **	Direct observation of instruction and implementation ** ID implemented lesson plans **	Classroom observations ** Review of lesson plans used **	Observations of randomly selected educators; evaluators **
	Participants report that they use OE education tools and resources	Responses during guided reflections	Survey/questionnaire responses	During each Follow-up PDO; participants responses summarized



	( <i>Okeanos Explorer</i> , curricula, OE Website, RSS feeds, Tweets, OceanAGE Careers) to support and enhance their teaching of ocean science, exploration, technology and STEM related careers	Responses to PDO assessments	Responses to facilitator recorded on PDO summary form	by facilitators (LOSTOE) Post each Follow-up PDO; Participants (LOSTOE)
	Participants indicate the PDOs enabled them to improve their instruction about ocean science	Positive responses to PDO assessments	Survey/questionnaire responses	Post each Follow-up PDO; Participants
	Students demonstrate their learning about ocean science and ocean exploration **	Direct observation of student products (reports, presentations, tests, etc.) **	Classroom observations ** Review of student products **	Observations of randomly selected educators; evaluators **
	After using OE materials, resources, and tools, PDO participants report student excitement about, engagement, and interest in OE science, discoveries, technologies, tools, and careers	Responses during guided reflections	Responses to facilitator recorded on PDO summary form	During each Follow-up PDO; participants responses summarized by facilitators
Facilitators lead participants in trying out standards-based activities related to presented content	During OE PDOs, participants identify ways to connect students to the work and lives of ocean scientists on the OE Web site	Responses to PDO assessments	Survey/questionnaire responses	Post each PDO; Participants
	During OE PDOs, participants increase their awareness of Ocean Explorer tools and resources ( <i>Okeanos</i>	Responses to PDO assessments	Survey/questionnaire responses	Post each PDO; Participants

	<i>Explorer</i> , curricula, OE Web site, Digital Atlas, RSS feeds, Tweets, OceanAGE Careers)			
	During OE PDOs, participants identify how the lessons, materials and resources presented during workshops meet their local and national standards	Responses during guided reflections	Responses to facilitator recorded on onsite PDO summary form	During each PDO; participants responses summarized by facilitators
Facilitators introduce educators to ways to connect students to the work and lives of ocean scientists working with the <i>Okeanos Explorer</i> through use of the OE Web site	During OE PDOs, participants identify ways to connect students to the work and lives of ocean scientists working with the <i>Okeanos Explorer</i> on the OE Web site	Responses to PDO assessments Responses during guided reflections	Survey/questionnaire responses Responses to facilitator recorded on onsite PDO summary form	Post each PDO; participants During each PDO; participants responses summarized by facilitators
Facilitators introduce and explore ways to follow ocean exploration expeditions and discoveries, and access existing, new, or improved OE resources	During OE PDOs, participants identify where OE materials fit into their instruction and how they will use OE resources to benefit their students	Responses during guided reflections	Responses to facilitator recorded on onsite PDO summary form	During each PDO; participants responses summarized by facilitators
Facilitators guide reflections with participants about the ways OE tools, materials and resources address national and local standards	Participants indicate greater confidence in their ability to teach ocean science content to their students using OE education resources ( <i>Okeanos Explorer</i> , curricula, OE Website, RSS feeds, Tweets, OceanAGE Careers)	Responses to PDO assessments	Survey/questionnaire responses	Pre/Post PDOs; Participants

	During OE PDOs, participants report on the lesson and website searches they conducted since the previous onsite PDO	Responses during lesson implementation reports PDO Agenda content	Responses to facilitator recorded on PDO summary form Analysis of agenda content and onsite PDO summary form	During Follow-up PDOs; participants responses summarized by facilitators(LOSTOE) Annually; Evaluators and facilitators/OE staff
Facilitators guide reflections with participants about the ways OE materials and resources can fit their instruction and address the needs of their students	During OE PDOs, participants discuss and reflect about how presented content and materials can be adapted to fit the specific needs of their students	Responses during guided reflections	Responses to facilitator recorded on onsite PDO summary form	During each PDO; participants responses summarized by facilitators
	During OE PDOs, participants identify where OE materials fit into their instruction and how they will use OE resources to benefit their students	Responses during guided reflections	Responses to facilitator recorded on onsite PDO summary form	During each PDO; participants responses summarized by facilitators
	During OE PDOs, participants discuss and reflect about how the workshop content and materials they have used since the previous PDO fit their teaching standards and student needs	Responses during guided reflections	Responses to facilitator recorded on onsite PDO summary form	During each Follow-up PDO; participants responses summarized by facilitators

\*\* Tier 3 Evaluation

**Intermediate Outcomes not assessed in this plan**

- Educators use OE resources to support and enhance student understanding of ocean science, exploration, engineering and technology and related careers.
- PDO participants share their OE PDO experiences with colleagues.

*These were identified in earlier efforts and evaluator didn't want to lose them. They are not covered in this plan as they can only be verified via Tier 3 eval.*

**Long-term Outcomes not assessed in this plan**

- Enhanced environmental literacy of the American citizenry.
- Increased excitement about and valuing of ocean discovery.