

## Student Knowledge Assessment - Notice to Workshop Participants

### Workshop Requirements

Participants in the *Learning Ocean Science and Exploration through an Online Environment* workshop have agreed to teach one Ocean Service Education **and** one Ocean Explorer lesson plan activity of their choice during the 2007 fall semester. As part of the workshop requirements, teachers will administer a brief student pre-and post-lesson questionnaire (requiring about 15 minutes each) which will assess the students' overall attitudes toward ocean science related subjects and evaluate students' change in knowledge of the ocean science topic(s).

### Student Assessments

Participants in this workshop have the option of selecting from over 250 different lesson plans and/or activities to integrate into their curriculum. In order to meet each of the participants' choices of curriculum and the unique needs of the students, we are asking each teacher to develop and administer a ten item quiz that their own students will take as part of the pre- and post-lesson questionnaire.

The purpose of the quiz is to assess any change in students' knowledge based on measures taken prior to and following their participation in the lesson/activity that teachers have chosen to implement in the classroom. The ten items will remain the same for the pre- and post- questionnaire, and the workshop evaluator will grade and record each of the assessments with the correct answer key teachers provide. **The assessment is solely a workshop evaluation measure, and students will be reassured in the survey introduction that their scores will not be reported nor their grades affected.**

### Instructions

At least three weeks prior to the start of your lesson, please submit via email the ten knowledge assessment items you have developed, including the answer key. The items will be added to the pre- and post-questionnaires for your students, and will be printed and shipped for you to administer to your students and return to us at the end of the lesson.

The following are examples of the types of subject knowledge questions that have been developed for the online tutorials and case studies in the Ocean Service Education Web site. You may wish you use and/or adapt these types of questions for your pre- and post-assessments.

1. Individual coral animals are called \_\_\_\_\_. (*polyps*)
2. After food is consumed by corals, waste products are expelled through the \_\_\_\_\_. (*mouth*)
3. Contamination of air, land, or water by substances that can adversely impact human health and the environment is known as \_\_\_\_\_. (*pollution*)

4. Sometimes, it is not the type of material, but its \_\_\_\_\_ that determines whether or not the material is a pollutant. (*concentration*)
5. Waters whose salt content is between that of freshwater and that of seawater are called \_\_\_\_\_. (*brackish*)
6. \_\_\_\_\_ are a major influence on many estuaries. (*tides*)
7. \_\_\_\_\_ established the Survey of the Coast, which later evolved into the National Geodetic Survey. (*Thomas Jefferson*)
8. The National Geodetic Survey uses markers made from long steel rods driven to \_\_\_\_\_ (pushed the ground until they won't go any farther). (*refusal*)
  
9. A species that occurs in an environment naturally is called a(n):
  - a. exotic species
  - b. natural species
  - c. native species *X*
  - d. non-indigenous species
  - e. alien species
  
10. When an exotic species overwhelms a native species, it becomes:
  - a. a native species
  - b. an invasive species *X*
  - c. an indigenous species
  - d. an indigent species
  
11. Oil is ONLY harmful to an animal if it is ingested (swallowed).
  - a. True
  - b. False *X*
  
12. Scientists might "fingerprint" a sample of oil collected at a spill site:
  - a. to determine where the oil originated.
  - b. to determine its chemical components.
  - c. to attempt to determine who spilled it.
  - d. to determine how and if it has weathered.
  - e. All of the above. *X*

## Instructions for Administration of Student Questionnaires

Dear NOAA Workshop Participant:

Thank you again for participating in the evaluation of NOAA's online education resources. Enclosed are the materials you will need to administer the pre-and post-lesson questionnaires to your students, and the follow-up questionnaire for you to complete. Please follow these steps:

1. Review the student questionnaires to ensure the 10-item knowledge assessment on the questionnaire is the same that you submitted to Liz Danter via email.
2. Administer the pre-lesson questionnaire to your students within the week preceding the introduction of the NOAA related lesson or activity. Please assist them with placing the correct student code on the questionnaire, so that the pre- and post-questionnaires may be correctly matched.
3. Administer the post-lesson questionnaire to your students the day after (or as close to the day after as possible) you complete the NOAA related lesson or activity.
4. Complete the teacher follow-up questionnaire following the use of the NOAA-related lesson/activity in your classroom.
5. Return the completed student questionnaires and your completed follow-up questionnaire in the postage-paid mailer as soon as you can.
6. Provide the address to which your stipend should be mailed. The stipend will be mailed upon receipt of your completed questionnaires.

Thank you again for your input. If you have any questions or require any assistance, contact Liz Danter by phone or email.

Sincerely,

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