

Geography

Teaching with the Stars

Tidewaters



Facilitator's Guide



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Notes to the Facilitator

INTRODUCTION

Geographic literacy is crucial to the future of America. Learning geography creates citizens who are able to understand and make decisions about major issues facing their communities, the United States, and the world, including climate change, water resources, energy dependence, migration, war and regional conflicts, natural and technical hazards, and globalization.

Unfortunately, where geography is taught, many teachers lack sufficient content knowledge and training in geography. For example, a 2002 Roper survey done for National Geographic revealed that 72% of eighth-grade students are taught geography by teachers who do not have a major, minor, or emphasis in geography education in their undergraduate or graduate studies.

In 1985, the National Geographic Society (NGS) began to support a grassroots network of state alliances devoted to improving the quality of geography taught in the schools. The Geography Alliance Network works to improve geography education primarily through summer institutes and other face-to-face professional development initiatives. Because the need is great, and the opportunities for professional development are limited, only a small proportion of those teachers who teach geography are able to participate in Alliance workshops and courses.

Geography: Teaching with the Stars is intended to provide systematic professional development in geography to teachers. It is designed to broaden and complement the impact of the existing National Geographic Society's State Geography Alliance Network. This professional development project emphasizes pedagogical knowledge and skills as well as content knowledge, skills, and applications in geography. Project materials are designed to be accessible via a variety of delivery systems, thus making them available to the widest possible audience of those teaching geography.

PROJECT PURPOSE

The purpose of this project is to contribute substantially to geographic education in middle/junior high and high school. These materials can be used by individual schools and districts, by NGS Alliances, and in pre-service education and training in colleges and universities. Materials can also be adapted for use in alternative certification programs and in educational service centers. The overarching goal is to help prepare geography teachers to achieve the "highly qualified" status as required by No Child Left Behind or other future national education initiatives.

Specifically, this project will:

- Assist teachers in providing effective geographic instruction to their students.
- Help students acquire the knowledge, attitudes, skills, and behaviors related to geography needed to understand and deal with the geographical aspects of important global issues.
- Provide visual reinforcement to learning.

The project is designed to support relevant national geography standards.

PROJECT MATERIALS

Each *Geography: Teaching with the Stars* instructional unit includes the following: video programming, print, and web-based elements that demonstrate how geographic perspectives, concepts, and skills together with relevant instructional and assessment strategies can be used to improve students' ability to understand and deal with the geographical aspect of important issues that affect their daily lives.

In-Class Demonstrations

At the core of every *Geography: Teaching with the Stars* unit are in-class video demonstrations, featuring actual teachers in a real classroom, focusing on content, instructional strategies, and assessment. The tidewaters unit includes two separate high school in-class demonstrations. You can choose to use either or both in your workshop. Materials contained on the project web site extend the in-class demonstrations. For example, a comprehensive teacher guide for each unit is available on the web site. Teachers are encouraged to use these guides in their own classrooms and to share their experiences with other teachers on the web site.

Pedagogy Enhancements

Each unit includes a video enhancement that examines, in detail, the instructional and assessment strategies used in the in-class demonstration videos. These enhancements are hosted by teacher educators and include reflections from the featured teachers. In the tidewaters unit, the pedagogy enhancement video features eight strategies from the in-class demonstrations. Again, you can choose which strategies to use in your workshop. If you choose to use a particular strategy, make sure that you also use the in-class demonstration in which it is used. (Both in-class demonstrations and pedagogy segments are labeled by teacher.) The pedagogy enhancements are supported and extended by materials on the project web site. For example, after viewing a segment dealing with building relationships, teachers can go to the web site to learn more about building relationships.

Content Enhancements

Each unit includes a video enhancement that explores the geographic content dealt with in the in-class demonstration, in a real world situation. Each video features one or more content experts who help frame the content issue under consideration. Teachers can learn more about the content in each unit by going to the project web site.

Each in-class demonstration, pedagogy enhancement, and content enhancement videos is self-contained and may be used independently. The programs can be easily scheduled for flexible use in a variety of settings. They can be delivered effectively as digital video on storage devices installed in local area networks at schools or via the Internet as streaming video, as part of online professional development.

Video programming is particularly well suited for professional development:

- Video creates a common context in which teachers with varying backgrounds and experiences can examine issues in a positive setting.
- Video provides a vehicle for modeling skills and a base of knowledge upon which teachers can build. For example, viewers can first watch teachers and students in classrooms similar to theirs using instructional strategies that have proven effective in classrooms. Then viewers can practice using these strategies themselves.

- Video offers a springboard for discussion and interaction that promotes learning, change, and growth. As a familiar and comfortable medium, video provides a non-threatening vehicle for discussion among people.

Web Site

The web site contains ideas for implementing and extending content and pedagogical strategies highlighted in each unit. It also includes links to student-oriented resources. In addition, the web site links to three forums. One forum enables teachers to share ideas, findings, and promising resources. Another forum encourages teachers to ask experts questions about content and pedagogy. And a third forum supports facilitators in forming online learning communities.

Facilitator Guide

Finally, each unit includes a comprehensive facilitator guide developed to assist teacher educators in using these professional development materials in a variety of learning environments. Since materials can be used in very different settings—by individual schools and districts, by NGS Alliances, and in pre-service education and training in colleges and universities—suggestions for both on-line and face-to-face professional development activities are included for each unit.

Conducting Face-to-Face Workshops

Each face-to-face workshop, covering one thematic unit, is designed to last about three or four hours. There are also on-line follow-up activities associated with each of these workshops. Sessions can be scheduled at intervals over several days, weeks, or months to meet the needs of the facilitator and participants.

The professional development materials you need to conduct this workshop—facilitator’s guide with detailed teaching suggestions, transparency masters, and participant handout masters, as well as the video resources and project web site addresses—are provided with this package. To conduct a successful learning event, please consider the important issues listed below.

Preparation—Please view all of the video programs, explore the web site, create an on-line community (see below), read all materials, and complete all activities yourself *before* leading the workshop.

Videos—Each session includes three or four videos, varying in length from six to twelve minutes. You can show each video program without stopping and then conduct the associated activities. It is recommended, however, that you follow the activities as outlined in the workshop teaching suggestions and stop the video when prompted to by the facilitator guide. After showing each segment of the video program, allow participants time to comment on, express opinions, ask questions about the material seen and complete the activities suggested in the guide. If appropriate, you can replay portions of the videos as participants consider the questions and activities.

Internet Access—You will need to have access to the project web site at www.geoteach.org during the workshop.

On-line Learning Community—You will need to establish an on-line learning community for use with follow-up activities associated with each workshop. Complete directions for creating on-line communities (GeoLearning Communities) appear in the next section of this guide.

Location—The workshop should take place in an area that is large enough for individual, small team, and whole group work.

Equipment—You will need a DVD player(s) and monitor(s). Ideally, you will have one video monitor for every 10-12 participants. You will also need an overhead projector that can be connected to a computer.

Handouts—Masters for all participant handouts are included with this guide. The handouts should be duplicated before the workshop begins and be distributed to participants according to the workshop instructions. Masters for overhead transparencies are also included with this guide. They should be duplicated before the workshop begins.

Additional Equipment—You will also need flip charts, chalkboards, or whiteboards with appropriate writing materials to conduct the workshop.

Refreshments—The agenda for the sessions should include one or more breaks at which beverages are offered. Snacks are optional, but water should be available throughout the workshop.

CREATING ON-LINE COMMUNITIES

When you receive your invitation from the project manager to join the *Geography: Teaching with the Stars* online learning communities (GeoLearning Communities) at <http://geoteachersgroup.ning.com>, accept the invitation. You will be taken to the “Main” page of the group web site.

CREATE YOUR GROUP

Follow these steps to create a Group (Community) for your teachers:

1. Click on “Groups”—the tab is located in the top bar on the community site.
2. You will see a list of the groups that have been created so far. To add your group, click on “+Add a Group” (upper right corner, next to your account box.)
3. Fill in the name of your group. Select a name that represents your school, school district, geographic area, or some other distinctive identifier.
4. Add a short description.
5. Make sure you are OK with the Group Address. This address is automatically generated when you enter a group name. If you prefer a different Group Address (URL) you can change it at this point.
6. You can leave the Website box blank at this time.
7. Identify your Location.

CONFIRM YOUR FEATURES, PRIVACY, AND MESSAGES SETTINGS

Features: Make sure the boxes are checked for Comments, Discussion Forum, and Text Box. You may wish to select the RSS Reader as well if you want your group members to be able to get an RSS feed of activity on your Group site.

Privacy: Click on the radio button “Moderated Membership.” (This selection will enable the teachers you invite to join the group, but will not let others join uninvited. Clicking on “Anyone” will let anyone from the public who happens to find your group join without your permission.)

When you select “Moderated Membership” you will have another choice to make. We suggest that you check both the “Members can invite other people to join” and the “Allow people to request membership.”

Messages: Make sure the box is checked, allowing members to send messages to the entire group.

Click on “Add Group”

INVITE MEMBERS TO YOUR GROUP

Next, you will want to invite the teachers in your group to join.

1. Ignore the “Import from Web Address Book” option at the top of the next screen.

2. Click on the “Enter Email Addresses Manually” arrow, which will expand to present you with “Send To” and “Your Message” boxes.
3. Enter the email addresses of the teachers you wish to invite. (Separate the addresses with commas.)
4. Add a brief message inviting them to join.
5. Click “Send Invitations.”
6. Each teacher you invite will get an email message with your invitation and a link to the group page. When the teacher accesses the page s/he will be asked to create a password and complete a profile with name and birth date. When the teacher submits his/her profile s/he will be taken to a page with a message at the top to “...click here to request access from the Group Creator.” Teachers must click as directed.
7. You will get an email message that the teacher has joined the GeoTeachers online community. You will get another message that the teacher is requesting to join your group. You will need to approve the membership before the teacher shows up in your group list.
8. To do this, go to the “Manage Group Members” page in your Admin Options, click on the “Pending” tab, and approve the member.

If you decide you want to invite more teachers to your group, click on the “Invite More People” link at the top right of your group page.

GETTING STARTED WITH YOUR GROUP

While you wait for teachers to accept their invitations, add some content to your group page.

Text Box: Use this space to add an overview of your group’s purpose, summarize what you will be doing as a group, or other content appropriate to your group.

Discussion Forum: Start your first discussion. Since this is your first communication with the teachers in your group, you may wish to make your first discussion a welcome and introductions discussion. (See “Using Discussions” below for more information about discussion topics and instructions for teachers to use the Discussion Forum feature.) This is your main communication tool for your online community!

Comment Wall: The Comment Wall is a handy place to add an announcement about an upcoming training session, provide a permanent link back to the www.geoteach.org web site, or insert a comment encouraging teachers in your group to add comments themselves.

MANAGING YOUR ONLINE COMMUNITY/GROUP SITE

Because you set up your group, you are the Administrator of your group’s page. You will see a box titled “Admin Options” at the top of the 2nd column on your group page.

Edit Group: Clicking on “Edit Group” opens the page you first completed when you created your group. You can make changes to your group here. Make sure to “Save” any changes – or “Cancel” if you don’t want to make changes at this time.

Manage Group Members: Clicking on this link brings up a list of all your group members. On this page you can see who's in your group, check their email addresses, and see their group roles. You can add another administrator to your group by changing a member's role to Administrator, if you wish. You can also remove someone from the group by clicking in the box next to the person's name and then on the "Suspend from Group" tab.

Send Message to Group: Clicking on this link brings up an email/message box. Enter your message Subject and the Body of your message. Click on Send and your message will go to every member of your group.

USING DISCUSSIONS

The Discussion Forum feature of your group page will be your main means of communicating with your group members. You will use Discussions to:

- Give assignments
- Request feedback
- Notify members of upcoming events
- Keep communication flowing

Give Assignments: To give an assignment to your group members, start a discussion topic by clicking on "Start Discussion" in the Discussion Forum box. Give your topic a title that indicates it is an assignment. Write a brief summary of the assignment in the Post box. Include instructions to respond to questions in the lesson by replying to your discussion topic post. Teachers could enter their responses directly into their response, or you may instead want to have them save their responses in a Word document and upload that document with their reply.

Then upload a copy of the lesson document to your discussion post, using the "Attach File(s)" feature. Also upload any readings that are part of the lesson.

Adding links in discussion posts: You can add hyperlinks to a web site by typing the name of the web site, highlighting the name, and then clicking on the ∞ icon, and entering the web address into the box in the popup window.

Request feedback/Notify of upcoming events: Begin a new discussion topic for each new communication with your group. Be sure to include requests for them to reply to your post (rather than starting a new discussion topic.)

Keep communication flowing: The Discussion Forum is a good way to maintain regular communication with your group members. Between assignments, post new discussions on topics of interest to the group—perhaps suggesting relevant readings, providing links to resources you've discovered, or just asking them how things are going. Encourage teachers in your group to initiate their own discussions as well.

NOTE: Make sure teachers know that they should initiate new discussions by starting a new discussion topic, rather than starting on a new topic in a reply to a different discussion topic thread. This will keep the discussion forum better organized and it will be easier to follow new discussions.

Conducting On-Line Workshops

Each on-line workshop covers one thematic unit and consists of four or five lessons for participants to complete. These lessons can be scheduled at intervals over several days, weeks, or months to meet the needs of the facilitator and participants.

The professional development materials needed by participants for this workshop—worksheets and videos—are provided on the project web site. To conduct a successful learning event, please consider the important issues listed below.

Preparation—Please view all of the video programs, explore the web site, create an on-line group (see below), read all materials, and complete all activities yourself before leading the workshop.

Videos—Each session includes three or four videos, varying in length from six to twelve minutes, which can be accessed from the project web site at www.geoteach.org

On-line Learning Community—You will need to establish an on-line learning community (a group) for use with each workshop. Complete directions for creating on-line communities (GeoLearning Communities) appear in the next section of this guide. You will need to invite all participants in your workshop to join the group, via e-mail. *So having their contact information, before the workshop begins, is essential.*

CREATING ON-LINE GROUPS

When you receive your invitation from the project manager to join the *Geography: Teaching with the Stars* online learning communities (GeoLearning Communities) at <http://geoteachersgroup.ning.com>, accept the invitation. You will be taken to the “Main” page of the group web site.

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Teachers could enter their responses directly into their response, or you may instead want to have them save their responses in a Word document and upload that document with their reply.

Then upload a copy of the lesson document to your discussion post, using the “Attach File(s)” feature. Also upload any readings that are part of the lesson.

Adding links in discussion posts: You can add hyperlinks to a web site by typing the name of the web site, highlighting the name, and then clicking on the ∞ icon, and entering the web address into the box in the popup window.

Request feedback/Notify of upcoming events: Begin a new discussion topic for each new communication with your group. Be sure to include requests for them to reply to your post (rather than starting a new discussion topic.)

Keep communication flowing: The Discussion Forum is a good way to maintain regular communication with your group members. Between assignments, post new discussions on topics of interest to the group—perhaps suggesting relevant readings, providing links to resources you’ve discovered, or just asking them how things are going. Encourage teachers in your group to initiate their own discussions as well.

NOTE: Make sure teachers know that they should initiate new discussions by starting a new discussion topic, rather than starting on a new topic in a reply to a different discussion topic thread. This will keep the discussion forum better organized and it will be easier to follow new discussions.

Face-to-Face Workshop: Tidewaters

STATEMENT OF PURPOSE

The purpose of this session is to introduce educators to content, instructional strategies, and resources that can be used in teaching about tidewaters-the region at or near the ocean's coast. Special attention is given to strategies for actively engaging students in geographic learning.

LEARNING OBJECTIVES

After viewing the videos and participating in the activities for the workshop, participants will be able to:

- List some of the characteristics of the Texas gulf coast region
- Describe the role played by estuaries, oysters, and wetlands in the tidewaters area.
- Analyze interactions between humans and the natural environment in tidewater regions
- Identify instructional strategies and resources for teaching about tidewaters.
- Use strategies and materials for teaching about tidewaters.

VIDEO OVERVIEW

Four video programs are used in the workshop. Two are in-class video demonstrations, featuring actual teachers in real classrooms. (Both of these programs focus on high school classrooms. One focuses on estuaries and the Gulf of Mexico. The other explores the topic of oysters and estuaries. You can choose to use either or both of these videos depending on the audience for the workshop.) Both focus on content and instructional strategies related to tidewaters. Another video examines in detail the instructional strategies used in the in-class demonstrations, while the fourth explores the geographic content dealt with in the in-class demonstrations, focusing on the Texas Gulf Coast.

MATERIALS

- Four Videos
 1. The Texas Gulf Coast
 2. Estuaries and the Gulf of Mexico (Sharlene Walker, Foy H. Moody High School, Corpus Christi, Texas)
 3. Oysters and Estuaries (J.R. Jones, Richard King High School, Corpus Christi, Texas)
 4. Strategies for Teaching about Tidewaters
- Transparency Masters
 - Concept web
- Handout Masters
 - KWL chart.

- Profiles of Sharlene Walker and J.R. Jones
- PMI Chart
- Flip charts, chalkboards, or whiteboards with appropriate writing materials

ACTIVITIES

Welcome and Opening

1. Welcome participants to the workshop and introduce yourself and anyone else serving as a workshop host, co-leader, or organizer.
2. Gather names, e-mail addresses, and other contact information from participants. Indicate that this information will be used for networking following the face-to-face workshop.
3. Indicate that this session will focus on tidewaters and on interactive teaching strategies that can be used to enhance student learning about tidewaters.
4. If participants do not know one another well, conduct a “get to know you” activity. Ask participants to form pairs and interview each other for about five minutes. Then ask the pairs to introduce each other to the group, stating the person’s name, something interesting or different about the person, and what the person hopes to gain from the workshop. (If there are more than 20 people in the group, have each pair join another pair and only make introductions within each group of four.)

THE TEXAS GULF COAST

Introduction

1. Distribute a copy of the KWL Chart to each participant. Indicate that a KWL chart helps the user identify prior knowledge and experience as a bridge to a new concept, lesson, or unit. Ask participants to work in pairs to list what they already know about estuaries, oysters, and tidewater areas in the K (Know) column. Then ask the pairs to list what they would like to learn about estuaries, oysters, and tidewater areas in the W (Want to learn) column.
2. Indicate to participants that they are about to see a video about estuaries, oysters, and tidewater areas that focuses on the Texas Gulf Coast.
- 3 Next, play the video.
- 4 After showing the video, give participants an opportunity to comment on what they have just seen. “Tell me what you heard and saw” is a good starting point for the discussion. Then continue, using the following questions as a guide. Participants may ask you to repeat portions of the video.
 - What are some characteristics of the Texas Gulf Coast?
 - What role do oysters play in the Texas Gulf region?
 - How have human and environmental changes affected the Texas Gulf region?
 - What forces are at work in the loss of Oyster reefs in the Texas Gulf region?

- What can be done to restore or protect the Texas Gulf region?
5. Have participants record what they learned about estuaries, oysters, and tidewaters areas from the video in the L (Learned) column of the KWL chart.
 - 6 Ask for volunteers to share what they learned about estuaries, oysters, and tidewaters areas with the group.

Tidewaters: Putting the Pieces Together

1. Project the **Concept Web** on the overhead. Indicate to participants that they are going to use the web to summarize what they have learned about estuaries, oysters, and tidewaters areas. In the center of the web is the word tidewaters. Instruct participants to think of all the terms and phrases from the KWL activity, the video, and their own experience which they could use to describe tidewaters. Record the words and phrases the participants supply on the “legs” of the web. Display the final product in the workshop room either on an overhead or on the board.
2. Indicate to participants that the project maintains a web site. Quickly go through the various links related to the subject of tidewaters that appear on the web site. These links appear under Teacher Resources/Content Enhancements.

ESTUARIES AND THE GULF OF MEXICO (SHARLENE WALKER)

Indicate to participants that in this section of the workshop they will get a chance to view a high school teacher in Corpus Christi, Texas, Sharlene Walker, as she teaches two lessons about tidewaters. State that the strategies she uses can be used in any context. Distribute a copy of the **Sharlene Walker Profile** to each participant. Ask them to examine the profile to learn some background information about Sharlene

Overview

Begin by showing the video **Estuaries and the Gulf of Mexico** all the way through. After showing the video, give participants an opportunity to comment on what they have just seen. Then work through the video, lesson by lesson.

Lesson One: Estuaries

1. Indicate to participants that they are going to view Sharlene’s first lesson again, which focuses on having students explore the characteristics of estuaries, using short videos. Ask participants to watch for the strategies she uses, as they view the lesson.
2. Show the first segment of **Estuaries and the Gulf of Mexico**. It begins with the title sequence and ends when the words “Lesson Two: The Gulf of Mexico” appears on the screen.
3. After they have viewed the segment, ask participants questions like the following:
 - Do you think that the use of cooperative learning was effective in this lesson? Why or why not?
 - Do you agree with Sharlene that some times students can teach each other better than teachers? Why or why not?
 - What was the advantage of using videos in this lesson?

- Do you think that having students create posters was effective in this lesson? Why or why not?
- What is the teacher's role in this type of lesson?
- Did you see any strategies that you currently use in your own classrooms? Which ones?
- How would you have handled the presentation of posters by students, in your classroom?
- What other strategies could you use to introduce the characteristics of estuaries?

Record their responses on the board or flip chart

NOTE: Indicate that they will be exploring specific strategies that Sharlene used in the next section of the workshop.

Lesson Two: The Gulf of Mexico

1. Indicate to participants that they are going to view Sharlene's second lesson again, which involves students exploring different aspects of the Gulf of Mexico. Ask participants to watch for the strategies she uses, as they view the segment.
2. Show the second segment of **Estuaries and the Gulf of Mexico**. It begins when the words "Lesson Two: The Gulf of Mexico" appear on the screen and ends when the credits appear.
3. After they have viewed the segment, ask participants questions like the following:
 - Do you think that the use of cooperative learning (jig saw) was effective in this lesson? Why or why not?
 - Do you think that when students are working in groups, a graphic organizer, such as 5W, is helpful? Why or why not?
 - What do you think the creation of newspapers added to this lesson?
 - Would you consider integrating a newspaper activity into one of your lessons? Why or why not?
 - How would you judge the overall effectiveness of this lesson? Why?

Record their responses on the board or flip chart

4. Indicate to participants that there are resources on the project web site related specifically to this in-class demonstration. Quickly show the links to the complete teacher guide used for the lessons shown in this in-class demonstration. They appear on the Teacher Resources page, under Lesson Plans.

OYSTERS AND ESTUARIES (J.R. JONES)

Indicate to participants that in this section of the workshop they will get a chance to view a high school teacher in Corpus Christi, Texas, J.R. Jones, as he teaches six lessons about tidewaters. State that the strategies he uses can be used in any context. Distribute a copy of the **J.R. Jones Profile** to each participant. Ask them to examine the profile to learn some background information about J.R.

Overview

Begin by showing the video **Oysters and Estuaries** all the way through. After showing the video, give participants an opportunity to comment on what they have just seen. Then work through the video, lesson by lesson.

Lesson One: The Best Laid Plans

1. Indicate to participants that they are going to view J.R.'s first lesson again, in which he deals with a lab that has gone terribly wrong. Ask participants to watch for the strategies he uses, as they view the segment.
2. Show the first segment of **Oysters and Estuaries**. It begins with the title sequence and ends when the words "Lesson Two: Turbidity Lab" appear on the screen.
3. After they have viewed the segment, ask participants questions like the following:
 - What advantages do you see in sharing with students what went wrong in the preparation for a lesson?
 - What procedures do you use when things go wrong?
 - What are the instructional advantages of having students speculate about what went wrong?
 - What was the advantage of having students restructure the lab?
 - What did you like most and least about how J.R. handled this situation? Why?

Record their responses on the board or flip chart.

NOTE: Indicate that they will be exploring specific strategies that J.R. used in the next section of the workshop.

Lesson Two: Turbidity Lab

1. Indicate to participants that they are going to view J.R.'s second lesson again, in which student observe oysters, as filter feeders, reducing the turbidity of water in estuaries. Ask participants to watch for the strategies he uses, as they view the segment.
2. Show the second segment of **Oysters and Estuaries**. It begins when the words "Lesson Two: Turbidity Lab" appear on the screen and ends when the words "Lesson Three: Oyster Anatomy" appear on the screen.
3. After they have watched the segment, ask participants questions like the following:
 - In this lesson, J.R. assigns each student to a specific role. Do you think this is an effective strategy for maintaining student involvement? Why or why not?
 - What are some other strategies that can be used to maintain student involvement during a lab activity?
 - What is the role of the teacher in an activity like this?
 - How would you judge the overall effectiveness of this lesson? Why?

Record their responses on the board or flip chart.

Lesson Three: Oyster Anatomy

1. Indicate to participants that they are going to view J.R.'s third lesson again, in which students determine how oysters filter water. Ask participants to watch for the strategies he uses, as they view the segment.
2. Show the third segment of **Oysters and Estuaries**. It begins when the words "Lesson Three: Oyster Anatomy" appear on the screen and ends when the words "Lesson Four: Wetlands" appear on the screen.
3. After they have watched the segment, ask participants to answer questions like the following:
 - What do you see as the teacher's role in this type of a lesson?
 - What are some strategies that J.R. could have used to help students synthesize what they learned in this lesson?
 - How would you judge the overall effectiveness of this lesson? Why?

Lesson Four: Wetlands

1. Indicate to participants that they are going to view J.R.'s fourth lesson again, in which students examine how wetlands filter and purify water that runs off the land and help prevent flooding by functioning as an absorbent area between dry land and a body of water. Ask participants to watch for the strategies he uses, as they view the segment.
2. Show the fourth segment of **Oysters and Estuaries**. It begins when the words "Lesson Four: Wetlands" appear on the screen and ends when the words "Lesson Five: Field Trip" appear on the screen.
3. After they have watched the segment, ask participants to answer questions like the following:
 - How have you used lab models of environmental features in your own teaching? How did they work for you?
 - What do you see as the teacher's role in this type of a lesson?
 - What are some strategies that J.R. could have used to help students synthesize what they learned in this lesson?
 - How would you judge the overall effectiveness of this lesson? Why?

Lesson Five: Field Trip

1. Indicate to participants that they are going to view J.R.'s fifth lesson again, in which students go a field trip where they get involved in oyster shell recycling. Ask participants to watch for the strategies he uses, as they view the segment.
2. Show the fifth segment of **Oysters and Estuaries**. It begins when the words "Lesson Five: Field Trip" appear on the screen and ends when the words "Lesson Six: Wrap Up" appear on the screen.
3. After they have watched the segment, ask participants to answer questions like the following:

- Why was it important for J.R. to get involved in the recycling activities?
- What did you find interesting about how the field trip developed?
- What else would you have done had you been charged with organizing this field trip?

Lesson Six: Wrap Up

1. Indicate to participants that they are going to view J.R.'s sixth lesson again, which consists of a debriefing focusing on what students learned in the unit. Ask participants to watch for the strategies he uses, as they view the segment.
2. Show the sixth segment of **Oysters and Estuaries**. It begins when the words "Lesson Six: Wrap Up" appear on the screen and ends when the credits appear.
3. After they have watched the segment, ask participants to answer questions like the following:
 - Why is it important to have a debriefing after a field trip and at the end of a unit of instruction?
 - What do you like or dislike about what J.R. did in this lesson?
 - Would you handle the debriefing differently? Why or why not?
4. Indicate to participants that there are resources on the project web site related specifically to this in-class demonstration. Quickly show the links to the complete teacher guide used for the lessons shown in the in-class demonstration. They appear on the Teacher Resources page, under Lesson Plans.

STRATEGIES FOR TEACHING ABOUT TIDEWATERS

Indicate to participants that the next section of the workshop will focus in more detail on instructional strategies used in Sharlene Walker's classroom: cooperative learning/posters and cooperative learning/jig saw/newspapers. It also focuses on some of the instructional strategies used in J.R. Jones's classroom: when things go wrong, cooperative learning/assigned roles, building relationships, preparation, field trip, and debriefing.

NOTE: You can choose which strategies you wish to explore with workshop participants.

Distribute a copy of **PMI Chart** to each participant. Indicate that a PMI Chart can be used to help them evaluate each of the strategies explored in this section of the workshop.

Cooperative Learning/Posters

1. Begin by asking participants questions like the following:
 - In your opinion, what function does cooperative learning play in instruction?

Record their responses on the board or flip chart.
2. Play the **Cooperative Learning/Posters** segment of the **Strategies for Teaching about Tidewaters** video. Ask participants to look for additional answers to the question posed above, as they watch the video. After they have viewed the segment, ask participants to respond to questions like the following. Ask volunteers to share their answers with the class.

- What instructional advantages are there to using cooperative learning when students are watching videos?
 - Does creating posters in the classroom enhance learning? Why or why not?
3. Show the links to using cooperative learning/posters. They can be found under Teaching Resources/Pedagogy Enhancement on the web site.

Cooperative Learning/Jigsaw/Newspapers

1. Begin by asking participants to answer questions like the following:
- What are the instructional advantages of using the jigsaw approach to cooperative learning?
- Record their responses on the board or flip chart.
2. Play the **Cooperative Learning/Jigsaw/Newspapers** segment of the **Strategies for Teaching about Tidewaters** video. Ask participants to look for additional answers to the question posed above, as they watch the video. After they have viewed the segment, ask participants to respond to questions like the following. Ask volunteers to share their answers with the class.
- What did you learn from the segment that adds to your understanding of the use of the jigsaw approach to cooperative learning in the classroom?
 - Does creating a newspaper enhance learning in the classroom? Why or why not?
3. Show the links to using cooperative learning/jigsaw/newspapers. They can be found under Teaching Resources/Pedagogy Enhancement on the web site.

When Things Don't Go as Planned

1. Begin by asking participants to answer questions like the following:
- What do you do when things don't go as planned in your classroom?
- Record their responses on the board or flip chart.
2. Play the **When Things Don't Go as Planned** segment of the **Strategies for Teaching about Tidewaters** video. After they have viewed the segment, ask participants to respond to questions like the following. Ask volunteers to share their answers with the class.
- What did you learn from the segment that adds to your understanding of what can be done when things don't go as planned in the classroom?
 - What advice would you give to other teachers about preparing for the unexpected?

Cooperative Learning/Assigned Roles

1. Begin by asking participants to respond to questions like the following:
- Have you assigned specific roles to students in a lab activity? How did it work?
- Record their responses on the board or flip chart.

2. Play the **Cooperative Learning/Assigned Roles** segment of the **Strategies for Teaching about Tidewaters** video. After they have viewed the segment, ask participants to respond to questions like the following. Ask volunteers to share their answers with the class.
 - What are some instructional advantages of assigning roles to students in lab activities?
 - What would be gained from having students switch the roles they play in a lab activity, on a regular basis?
3. Show the links to using cooperative learning/assigned roles. They can be found under Teaching Resources/Pedagogy Enhancement on the web site.

Building Relationships

1. Begin by asking participants to respond to questions like the following:
 - How do student-teacher relationships contribute to student learning?Record their responses on the board or flip chart.
2. Play the **Building Relationships** segment of the **Strategies for Teaching about Tidewaters** video. After they have viewed the segment, ask participants to respond to questions like the following. Ask volunteers to share their answers with the class.
 - What are some of the strategies that J.R. uses to develop relations with students? Would they work for you? Why or why not?
 - Do you focus on systematically developing relationships with students in your classroom? How do you develop those relationships?
3. Show the links to building relationships. They can be found under Teaching Resources/Pedagogy Enhancement on the web site.

Preparation

1. Begin by asking participants to respond to questions like the following:
 - What do you do to prepare for a lab activity in your classroom ?Record their responses on the board or flip chart.
2. Play the **Preparation** segment of the **Strategies for Teaching about Tidewaters** video. After they have viewed the segment, ask participants to respond to questions like the following. Ask volunteers to share their answers with the class.
 - What did you learn from the segment that adds to your understanding of preparation as a critical element in lab work?
 - Do you agree with Connie Ables that labs could be disastrous if all the materials are not there? Why or why not?

Field Trip

1. Begin by asking participants to respond to questions like the following:
 - What are the instructional advantages of getting students out into the community?Record their responses on the board or flip chart.

2. Play the **Field Trip** segment of the **Strategies for Teaching about Tidewaters** video. After they have viewed the segment, ask participants to respond to questions like the following. Ask volunteers to share their answers with the class.
 - Are there any strategies that you saw in this segment that you would want to adopt or adapt for use in your field trips? Why?
 - What role did J.R. play on the field trip?
 - What else could a teacher do to assure the success of a field trip?
3. Show the links to using field trips. They can be found under Teaching Resources/Pedagogy Enhancement on the web site.

Debriefing

1. Begin by asking participants to respond to questions like the following:
 - What are the instructional advantages to debriefing a unit of study?
 - Record their responses on the board or flip chart.
2. Play the **Debriefing** segment of the **Strategies for Teaching about Tidewaters** video. After they have viewed the segment, ask participants to respond to questions like the following. Ask volunteers to share their answers with the class.
 - Why is it important to have students reflect on what they learned at the end of each unit of instruction?
 - What strategies would you use to debrief a unit of study?
3. Show the links to using debriefing. They can be found under Teaching Resources/Pedagogy Enhancement on the web site.

FOLLOW-UP

1. Tell participants that they are expected to teach at least one lesson on tidewaters in their own classrooms, as part of the requirements for this unit.
 - They can work with another workshop member or on their own.
 - They must use or adapt all or part of a lesson plan from the in-class demonstrations they saw in this unit. Lesson plans can be downloaded from the project web site.
2. Alert participants that you are going to invite them to join an on-line learning community for members of this workshop. (Give them a specific date on which invitations will be sent.) They will need to accept the invitation to complete the unit requirements.
3. Ask participants to use the on-line community (group) to share their experiences and get feedback from you and other workshop participants, as they prepare, teach, and reflect on teaching their lessons.
4. Tell them that they should also use the on-line group to share all materials generated as part of this exercise, for example: customized lesson plans, readings and resources on tidewaters, interesting teaching strategies, assessment strategies, and so on.

5. Finally, encourage participants to use the two general forums (no invitation required) on the project web site: GeoForum allows teachers to share ideas, questions, and concerns about teaching geography and to identify and exchange ideas, findings, and promising resources with others and the Ask Primo Meridian Forum to ask questions of project personnel and content/pedagogical area experts.

Note: You should repeat the above directions in your first communication with the participants when they join your group. Use the Discussion Forum and begin a new discussion topic for this post. Here is a sample post:

Instructions:

Your facilitator has initiated a group discussion post on our group page about the lesson you are going to teach. In this discussion you will respond in writing to questions or comments from me or other participants. Write your responses in Word documents and submit them by attaching the documents with a reply to this post.

You are expected to teach at least one lesson on tidewaters in your own classroom as part of the requirements for this unit.

- *You can work with another workshop member or on your own.*
- *You must use or adapt all or part of a lesson plan for the in-class demonstrations you saw in this unit. It can be downloaded from the project web site.*

Share your experiences and get feedback from your facilitator and other workshop participants, as you prepare, teach, and reflect on teaching your lessons.

Also share all materials generated as part of this exercise, for example: customized lesson plans, readings on tidewaters, interesting teaching strategies, assessment strategies, and so on.

*Finally, you are encouraged to use the two general forums (no invitation required) on the project web site: **GeoForum** allows teachers to share ideas, questions, and concerns about teaching geography and to identify and exchange ideas, findings, and promising resources with others and the **Ask PrimoMeridian Forum** to ask questions of project personnel and content/pedagogical area experts. Both forums can be found at <http://geoteach.org/forums/index.php>.*

CLOSING

1. Ask participants to develop a series of short statements about tidewaters and teaching about these topics, based on their own experiences, on all that they have seen in the videos, and on information they have learned in their discussions. Ask for volunteers to share their statements with the group.
2. Thank participants for engaging in the session. Remind them of the time, date, location, and focus of the next workshop.

On-Line Workshop: Tidewaters

STATEMENT OF PURPOSE

The purpose of this session is to introduce educators to content, instructional strategies, and resources that can be used in teaching about tidewaters-the region at or near the ocean's coast. Special attention is given to strategies for actively engaging students in geographic learning.

LEARNING OBJECTIVES

After viewing the videos and participating in the activities for the workshop, participants will be able to:

- List some of the characteristics of the Texas gulf coast region
- Describe the role played by estuaries, oysters, and wetlands in the tidewaters area.
- Analyze interactions between humans and the natural environment in tidewater regions
- Identify instructional strategies and resources for teaching about tidewaters.
- Use strategies and materials for teaching about tidewaters.

VIDEO OVERVIEW

Four video programs are used in the workshop. Two are in-class video demonstrations, featuring actual teachers in real classrooms. (Both of these programs focus on high school classrooms. One focuses on estuaries and the Gulf of Mexico. The other explores the topic of oysters and estuaries. You can choose to use either or both of these videos depending on the audience for the workshop.) Both focus on content and instructional strategies related to tidewaters. Another video examines in detail the instructional strategies used in the in-class demonstrations, while the fourth explores the geographic content dealt with in the in-class demonstrations, focusing on the Texas Gulf Coast.

ACTIVITIES

Each of the following lessons is available as a PDF file, with all links included, on the Facilitator's Guide opening page for this unit, on this web site. Upload a copy of each of the lessons to your discussion post, using the "Attach File(s)" feature, following the schedule you developed for the workshop.

Lesson One:

The Texas Gulf Coast

Instructions:

Your facilitator has initiated this lesson through a discussion topic (post) on the group page. In this lesson you will respond in writing to several prompts (questions.) Write your responses in a Word document and submit this document by attaching it with a reply to the facilitator's post.

INTRODUCTION

- Begin by clicking on [KWL](#). A KWL chart helps the user identify prior knowledge and experience as a bridge to a new concept, lesson, or unit. List what you already know about estuaries, oysters, and tidewaters areas in the K (Knowledge) column. Then list what you would like to learn about estuaries, oysters, and tidewaters areas in the W (Want to know) column.
- You are about to see a video about estuaries, oysters, and tidewaters areas that focuses on the Texas Gulf Coast.
- Click on [The Texas Gulf Coast](#) to start the video.
- When you have seen the video, submit your responses to the prompts below to your facilitator.
 - What are some characteristics of the Texas Gulf Coast?
 - What role do oysters play in the Texas Gulf region?
 - How have human and environmental changes affected the Texas Gulf region?
 - What forces are at work in the loss of Oyster reefs in the Texas Gulf region?
 - What can be done to restore or protect the Texas Gulf region?
- Record what you learned about estuaries, oysters, and tidewater areas from the video in the L (learned) column of the chart.
- Share the information contained in your completed KWL chart with the group by replying to your facilitator about this lesson. Also, provide each group member with some feedback on his or her KWL charts.

TIDEWATERS: PUTTING THE PIECES TOGETHER

- Click on the [Concept Web](#). You can use the web to summarize what you learned about tidewaters. The word “tidewaters” is written in the center of the web. Think of all the terms and phrases from the KWL activity, the video, and your own experience that can be used to describe tidewaters. Record these words and phrases on the “legs” of the web.
- Share the information contained in your completed concept web with the group. Also, provide each of your group members with some feedback on their concept webs.

Additional Resources on Tidewaters

You can learn more about resources on tidewaters by visiting the project web site at www.geoteach.org. Go through the various links related to the subject of tidewaters that appear on the web site. These links can be found under Teacher Resources, Content Enhancements.

Lesson Two:

In-Class Demonstrations

Instructions:

Your facilitator has initiated this lesson through a discussion topic (post) on the group page. In this lesson you will respond in writing to several prompts (questions). Write your responses in a Word document and submit the document by attaching it with a reply to the facilitator's post.

ESTUARIES AND THE GULF OF MEXICO, SHARLENE WALKER, FOY H. MOODY HIGH SCHOOL, CORPUS CHRISTI, TEXAS

In this portion of the lesson you will get a chance to view Sharlene Walker as she teaches two lessons about tidewaters. The strategies she uses can be used in any context. Click on the [Sharlene Walker Profile](#) to learn more about her.

OVERVIEW

- Click on the video [Estuaries and the Gulf of Mexico](#). Begin by viewing the video all the way through. After you have viewed the video, submit your response to the following prompt to your facilitator.
 - What did you hear and see as you watched the video?

LESSON ONE: ESTUARIES

- Next, work your way through the [Estuaries and the Gulf of Mexico](#) video, lesson by lesson. Watch Sharlene's first lesson, which focuses on having students explore the characteristics of estuaries, using short videos. It begins with the title sequence and ends when the words "Lesson Two: The Gulf of Mexico" appears on the screen. As you view the segment, watch for the strategies that she uses in the lesson.
- After you have viewed the segment, submit your responses to the following prompts to your facilitator.
 - Do you think that the use of cooperative learning was effective in this lesson? Why or why not?
 - Do you agree with Sharlene that some times students can teach each other better than teachers? Why or why not?
 - What was the advantage of using videos in this lesson?
 - Do you think that having students create posters was effective in this lesson? Why or why not?
 - What is the teacher's role in this type of lesson?
 - Did you see any strategies that you currently use in your own classrooms? Which ones?

- How would you have handled the presentation of posters by students, in your classroom?
- What other strategies could you use to introduce the characteristics of estuaries?

LESSON TWO: THE GULF OF MEXICO

- Now watch the second lesson in the [Estuaries and the Gulf of Mexico](#) video, which involves students exploring different aspects of the Gulf of Mexico. Watch for the teaching strategies that are part of this lesson. It begins when the words “Lesson Two: The Gulf of Mexico” appear on the screen and ends when the credits appear on the screen. As you view the segment, watch for the strategies that she uses in the lesson.
- After you have viewed the segment, submit your responses to the following prompts to your facilitator.
 - Do you think that the use of cooperative learning (jig saw) was effective in this lesson? Why or why not?
 - Do you think that when students are working in groups, a graphic organizer, such as 5W, is helpful? Why or why not?
 - What do you think the creation of newspapers added to this lesson?
 - Would you consider integrating a newspaper activity into one of your lessons? Why or why not?
 - How would you judge the overall effectiveness of this lesson? Why?

You can learn more about teaching about tidewaters by visiting the project web site at http://geoteach.org/teacher_resources/index.php. The complete teacher guide for Sharlene’s lessons appears on the project web site at http://geoteach.org/teacher_resources/index.php.

OYSTERS AND ESTUARIES, J.R. JONES, RICHARD KING HIGH SCHOOL, CORPUS CHRISTI, TEXAS

In this portion of the lesson, you will get a chance to view J.R. Jones as he teaches six lessons about tidewaters. The strategies he uses can be used in any context. Click on the [J.R. Jones Profile](#) to learn more about him.

OVERVIEW

- Click on the video [Oysters and Estuaries](#). Begin by viewing the video all the way through. After you have viewed the video, submit your responses to the following prompt to your facilitator.
 - What did you hear and see as you watched the video?

LESSON ONE: THE BEST LAID PLANS

- Next, work your way through the [Oysters and Estuaries](#) video, lesson by lesson. Watch J.R.'s first lesson in which he deals with a lab that has gone terribly wrong. It begins with the title sequence and ends when the words "Day Two: Turbidity Lab" appears on the screen. As you view the segment, watch for the strategies that he uses in the lesson.
- After you have viewed the segment, submit your responses to the following prompts to your facilitator.
 - What advantages do you see in sharing with students what went wrong in the preparation for a lesson?
 - What procedures do you use when things go wrong?
 - What are the instructional advantages of having students speculate about what went wrong?
 - What was the advantage of having students restructure the lab?
 - What did you like most and least about how J.R. handled this situation? Why?

LESSON TWO: TURBIDITY LAB

- Now watch the second lesson of the [Oysters and Estuaries](#) video in which student observe oysters, as filter feeders, reducing the turbidity of water in estuaries. It begins when the words "Lesson Two: Turbidity Lab" appear on the screen and ends when the words "Lesson Three: Oyster Anatomy" appear on the screen. As you view the segment, watch for the strategies that J.R. uses.
- After you have viewed the segment, submit your responses to the following prompts to your facilitator.
 - In this lesson, J.R. assigns each student to a specific role. Do you think this is an effective strategy for maintaining student involvement? Why or why not?
 - What are some other strategies that can be used to maintain student involvement during a lab activity?

- What is the role of the teacher in an activity like this?
- How would you judge the overall effectiveness of this lesson? Why?

LESSON THREE: OYSTER ANATOMY

- Now watch the third lesson in the [Oysters and Estuaries](#) video in which students determine how oysters filter water. It begins when the words “Lesson Three: Oyster Anatomy” appear on the screen and ends when the words “Lesson Four: Wetlands” appear on the screen. As you view the segment, watch for the strategies that J.R. uses.
- After you have viewed the lesson, submit your responses to the following prompts to your facilitator.
 - What do you see as the teacher’s role in this type of a lesson?
 - What are some strategies that J.R. could have used to help students synthesize what they learned in this lesson?
 - How would you judge the overall effectiveness of this lesson? Why?

LESSON FOUR: WETLANDS

- Now watch the fourth lesson of the [Oysters and Estuaries](#) video, in which students examine how wetlands filter and purify water that runs off the land and help prevent flooding by functioning as an absorbent area between dry land and a body of water. It begins when the words “Lesson Four: Wetlands” appear on the screen and ends when and ends when the words “Lesson Five: Field Trip” appear on the screen. As you view the segment, watch for the strategies that J.R. uses.
- After you have viewed the segment, submit your responses to the following prompts to your facilitator.
 - How have you used lab models of environmental features in your own teaching? How did they work for you?
 - What do you see as the teacher’s role in this type of a lesson?
 - What are some strategies that J.R. could have used to help students synthesize what they learned in this lesson?
 - How would you judge the overall effectiveness of this lesson? Why?

LESSON FIVE: FIELD TRIP

- Now watch the fifth lesson of the [Oysters and Estuaries](#) video, in which students go on a field trip where they get involved in oyster recycling. It begins when the words “Lesson Five: Field Trip” appear on the screen and ends when the words “Lesson Six: Wrap Up” appears on the screen. .As you view the segment, watch for the strategies that J.R. uses.
- After you have viewed the segment, submit your responses to the following prompts to your facilitator.
 - Why was it important for J.R. to get involved in the recycling activities?

- What did you find interesting about how the field trip developed?
- What else would you have done had you been charged with organizing this field trip?

LESSON SIX: WRAP UP

- Now watch the sixth lesson of the [Oysters and Estuaries](#) video, which consists of a debriefing focusing on what students learned in the unit. It begins when the words “Lesson Six: Wrap Up” appear on the screen and ends when the credits appear. As you view the segment, watch for the strategies that J.R. uses.
- After you have viewed the segment, submit your responses to the following prompts to your facilitator.
 - Why is it important to have a debriefing after a field trip and at the end of a unit of instruction?
 - What do you like or dislike about what J.R. did in this lesson?
 - Would you handle the debriefing differently? Why or why not?

You can learn more about teaching about tidewaters by visiting the project web site at http://geoteach.org/teacher_resources/index.php. The complete teacher guide for J.R.’s lessons appears on the project web site at http://geoteach.org/teacher_resources/index.php.

Lesson Three:

Strategies for Teaching about Tidewaters

Instructions:

Your facilitator has initiated this lesson through a discussion topic (post) on the group page. In this lesson you will respond in writing to several prompts (questions.) Write your responses in a Word document and submit this document by attaching it with a reply to the facilitator's post.

This activity focuses in more detail on instructional strategies used in Sharlene Walker's classroom: cooperative learning/posters and cooperative learning/jig saw/newspapers. It also focuses on some of the instructional strategies used in J.R. Jones's classroom: when things go wrong, cooperative learning/assigned roles, building relationships, preparation, field trip, and debriefing. You can choose which strategies you wish to explore. Click on the [PMI Chart](#). Use the chart to help you evaluate each of the strategies that you explore in this lesson.

COOPERATIVE LEARNING/POSTERS

- Begin this lesson by submit your responses to the following prompt to your facilitator.
 - In your opinion, what function does cooperative learning play in instruction?
- Play the [Cooperative Learning/Posters](#) segment of the **Strategies for Teaching about Tidewaters** video. Look for additional answers to the question just posed, as you watch the video.
- After you have viewed the segment, submit your responses to the following prompts to your facilitator.
 - What instructional advantages are there to using cooperative learning when students are watching videos?
 - Does creating posters in the classroom enhance learning? Why or why not?

You can learn more about using cooperative learning/posters by visiting the project web site at http://geoteach.org/teacher_resources/index.php

COOPERATIVE LEARNING/JIGSAW/NEWSPAPERS

- Begin this segment by submitting your responses to the following prompt to your facilitator.
 - What are the instructional advantages of using the jigsaw approach to cooperative learning?

- Play the [Cooperative Learning/Jigsaw/Newspapers](#) segment of the **Strategies for Teaching about Tidewaters** video. Look for additional answers to the question just posed, as you watch the video.
- After you have viewed the segment, submit your responses to the following prompts to your facilitator.
 - What did you learn from the segment that adds to your understanding of the use of the jig saw approach to cooperative learning in the classroom?
 - Does creating a newspaper enhance learning in the classroom? Why or why not?

You can learn more about using cooperative learning/jigsaw/newspapers by visiting the project web site at http://geoteach.org/teacher_resources/index.php.

WHEN THINGS DON'T GO AS PLANNED

- Begin this section by submitting your responses to the following prompt to your facilitator.
 - What do you do when things don't go as planned in your classroom?
- Play the [When Things Don't Go as Planned](#) segment of the **Strategies for Teaching about Tidewaters** video. Look for additional answers to the question just posed, as you watch the video.
- After you have viewed the segment, submit your responses to the following prompts to your facilitator.
 - What did you learn from the segment that adds to your understanding of what can be done when things don't go as planned in the classroom?
 - What advice would you give to other teachers about preparing for the unexpected?

COOPERATIVE LEARNING/ASSIGNED ROLES

- Begin by submitting your responses to the following prompt to your facilitator.
 - Have you assigned specific roles to students in a lab activity? How did it work?
- Click on the [Cooperative Learning/Assigned Roles](#) segment of the **Strategies for Teaching about Tidewaters** video. Look for additional answers to the question just posed, as you watch the video. .
- After you have viewed the segment, submit your responses to the following prompts to your facilitator.
 - What are some instructional advantages of assigning roles to students in lab activities?
 - What would be gained from having students switch the roles they play in a lab activity, on a regular basis?

You can learn more about using cooperative learning/assigned roles in the classroom by visiting the project web site at http://geoteach.org/teacher_resources/index.php.

BUILDING RELATIONSHIPS

- Begin by submitting your responses to the following prompt to your facilitator.
 - How do student-teacher relationships contribute to student learning?
- Play the [Building Relationships](#) segment of the **Strategies for Teaching about Tidewaters** video. Look for additional answers to the question just posed, as you watch the video.
- After you have viewed the segment, submit your responses to the following prompts to your facilitator.
 - What are some of the strategies that J.R. uses to develop relations with students? Would they work for you? Why or why not?
 - Do you focus on systematically developing relationships with students in your classroom? How do you develop those relationships?

You can learn more about building relationships by visiting the project web site at http://geoteach.org/teacher_resources/index.php.

PREPARATION

- Begin by submitting your responses to the following prompt to your facilitator.
 - What do you do to prepare for a lab activity in your classroom ?
- Play the [Preparation](#) segment of the **Strategies for Teaching about Tidewaters** video. Look for additional answers to the question just posed, as you watch the video.
- After you have viewed the segment, submit your responses to the following prompts to your facilitator.
 - What did you learn from the segment that adds to your understanding of preparation as a critical element in lab work?
 - Do you agree with Connie Ables that labs could be disastrous if all the materials are not there? Why or why not?

FIELD TRIP

- Begin by submitting your responses to the following prompt to your facilitator.
 - What are the instructional advantages of getting students out into the community?
- Play the [Field Trip](#) segment of the **Strategies for Teaching about Tidewaters** video. Look for additional answers to the question just posed, as you watch the video.
- After you have viewed the segment, submit your responses to the following prompts to your facilitator.
 - Are there any strategies that you saw in this segment that you would want to adopt or adapt for use in your field trips? Why?
 - What role did J.R. play on the field trip?

- What else could a teacher do to assure the success of a field trip?

You can learn more about field trips by visiting the project web site at http://geoteach.org/teacher_resources/index.php.

DEBRIEFING

- Begin by submitting your responses to the following prompt to your facilitator.
 - What are the instructional advantages of debriefing a unit of study?
- Play the [Debriefing](#) segment of the **Strategies for Teaching about Tidewaters** video. . Look for additional answers to the question just posed, as you watch the video.
- After you have viewed the segment, submit your responses to the following prompts to your facilitator.
 - Why is it important to have students reflect on what they learned at the end of each unit of instruction?
 - What strategies would you use to debrief a unit of study?

You can learn more about debriefing by visiting the project web site at http://geoteach.org/teacher_resources/index.php.

Lesson Four:

Follow-Up

Instructions:

Your facilitator has initiated this lesson through a discussion topic (post) on the group page. In this lesson you will respond in writing to several prompts (questions.) Write your responses in Word documents and submit them by attaching the documents with a reply to the facilitator's post.

You are expected to teach at least one lesson on tidewaters in your own classroom, as part of the requirements for this unit.

- You can work with another workshop member or on your own.
- You must use or adapt all or part of a lesson plan from the in-class demonstrations you saw in this unit. Lesson plans can be downloaded from the project web site.

Share your experiences and get feedback from your facilitator and other workshop participants, as you prepare, teach, and reflect on teaching your lesson on tidewaters.

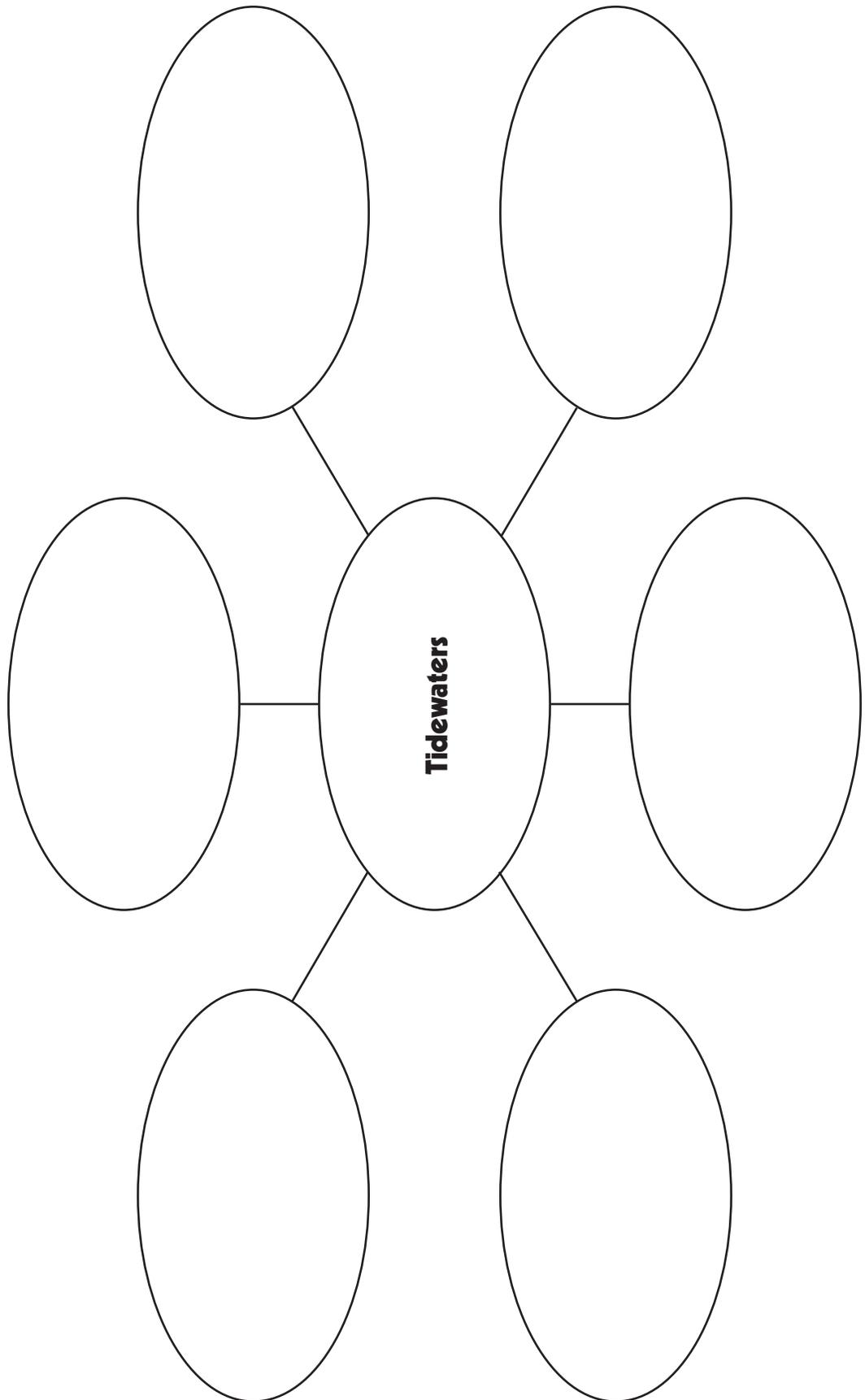
Also share all materials generated as part of this exercise, for example: customized lesson plans, readings and resources on tidewaters, interesting teaching strategies, assessment strategies, and so on.

Finally, you are encouraged to use the two general forums (no invitation required) on the project web site: [GeoForum](#) allows teachers to share ideas, questions, and concerns about teaching geography and to identify and exchange ideas, findings, and promising resources with others and the [Ask Primo Meridian Forum](#) to ask questions of project personnel and content/pedagogical area experts. Both forums can be found at <http://geoteach.org/forums/index.php>

KWL Chart

K What I Know	W What I Want to Know	L What I Learned

Concept Web: Tidewaters



Profile—Sharlene Walker

SHARLENE WALKER

Sharlene Walker earned a B.A. Degree in History, an Associate Degree in Criminal Justice and is working on a Master's Degree in Geographic Information Systems. She was in the U.S. Navy for over twelve years, serving mainly in the Pacific — the Philippines, Japan, and Thailand.

When she got out of the military, Sharlene's plan was to become a police or probation officer. One of her college instructors suggested that she was better suited to teaching, an area she had not even considered, even though her grandmother was a teacher. The rest is history (and geography).

Sharlene teaches 9th grade in the Innovation Academy at Foy H. Moody High School in Corpus Christi, Texas. The Innovation Academy is a magnet program for students from all over the district, interested in engineering, math, and environmental science. She has been at Moody High for eight years and teaches world geography and AP human geography.

Sharlene uses the principle that “form follows function” when designing lessons. “When I design a lesson, I don't first think about okay I'm going to put them in groups or I'm going to use a particular computer program.” She begins by identifying what the content and learning objectives will be for the lesson. Only then does she consider the teaching strategies that she will use.

Sharlene is involved in a variety of professional development activities, especially those related to GIS. She finds that her interaction with these organizations helps “influence how I visualize the world.”

What Sharlene likes most about teaching is seeing students make connections to the world. “It's not all about turn to page 37 and do the questions. It's about making students into well rounded individuals, and I see myself as a part of that. I don't want students to leave my classroom thinking ‘well I'm done with that.’ I want them to always ask questions about the world and about the environment.”

Profile—J.R. Jones

J.R. JONES

James R. (J.R.) Jones completed his undergraduate degree in earth science and biology. He also holds a Master's Degree in Earth Science and Biology. He served in the U.S. Navy between undergraduate and graduate schools.

J.R. began teaching when he was 19 years old—as a flight instructor in Dallas, Texas. He then taught labs in graduate school, taught at a junior college, and went into business as an environmental geologist. It was at that point that he took a temporary assignment with the Corpus Christi Independent School District as a math and then a science teacher. He viewed that teaching position as temporary, and worked part-time in the oil and gas industry. But, he never left the public schools and soon realized that what he liked most was being a teacher.

His most influential professor was Ted Sheryl, who taught science at Eastfield College in Dallas. J.R. remembers going on field trips, where, “the professor had fun, we had fun, we got dirty, we chased frogs, and identified fish.”

When he first started teaching in Corpus Christi, he was assigned to middle schools, and eventually moved on to King High School, where he teaches aquatic science, that includes marine geology and marine life as well as fresh water biology.

J.R. spent a great deal of time involved with professional development activities that enhanced his teaching. He attends marine educator's association conventions. He taught about wetlands for the Texas Education Agency and was the lead teacher for several wetlands courses that took place onboard a boat that teachers lived on for five days. Before that, he was involved with the Gulf of Mexico Foundation and went to their teacher workshops held about a hundred miles out in the Gulf of Mexico.

J.R. retired at the end of the 2011-2012 school year.

His advice to teachers is, “you're there to help the kids learn and to do that you've got to be patient. If you lose your patience in class, sometimes you lose your best kids too because they'll think you treated another child unfairly and they don't want to see that. You want to be patient with the quality of students' work. Growth does not occur overnight. The first few years I taught I wasn't patient enough. I wanted things to happen right now and I wanted students to behave right now and I didn't understand that it is a process they go through, especially when a student doesn't have the guidance at home that they should have.”

He uses an example of one of his students to illustrate the impact that patience can have. “I've got a young man in one of my classes and probably the first nine weeks he had his head down every period, every day that I saw him. His mother would e-mail me and want to know what his grade was and I couldn't give her very much hope at first. But, I was patient with him. Slowly he has become one of my better students. He never puts his head down, he always wants to help in class, he's always ready to learn something new, and he really likes science now. So that's t been a pretty neat thing to see.”

J.R. sees teaching as, “kind of like baseball—you’re not going to hit the ball every time you get up to the plate. If, in baseball, you have an average of 400 as a hitter you’re awesome, but that means that 60 percent of the time you’ve made an out or walked or something. So you’re not going to create a great lesson every time, but you need to learn from your strike outs.”

PMI Chart

	P luses (Benefits)	M inuses (Drawbacks)	I nteresting Questions/Implications
Cooperative Learning/ Posters			
Cooperative Learning/ Jig Saw/Newspapers			
When Things Don't Go as Planned			
Cooperative Learning/ Assigned Roles			
Building Relationships			
Preparation			
Field Trip			
Debriefing			