

I teach the Life Skills class at the High School (grades 7-12th). My student's have different degrees of mental retardation, so my lessons are geared to a lower instructional level.

Patty Sheehan's

Lesson Plan for COSEE-West **Marine Protection Areas**

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Background: I teach the Life Skills class for six 9-12 grade students with various degrees of mental retardation. They read between kindergarten and 5th grade level. This is why, although I am a secondary teacher, I must adapt the lesson to their cognitive abilities. Their cognitive abilities are much lower than their high school peers but they have the same feelings, wants and needs as any typical high school teenager. They do not like to be "talked down" to. I keep this in mind when I adapt a lesson to their functional reading ability. My students are capable of learning a great deal but it has to be broken down into very, very small steps.

My students already have 3 successfully running aquariums with their own fish in them. We previously did a lesson from COSEE using the basic set of questions answered by journalists when relaying the news-- who, what, where, when, why and how. They are already familiar with those procedures. By using the "W" questions while reading gives them a purpose for reading and also a strategy for increasing their reading comprehension.

Content Standards: Content Standards:

U.S. Science Standards (National)

<http://www.education-world.com/standards/national/science/index.shtml>

Science as Inquiry

Life Science

Science and Technology

Personal and Social Perspective

Ocean Literacy

http://www.coexploration.org/oceanliteracy/documents/OceanLitConcepts_10.11.05.pdf

5. The ocean supports a great diversity of life and ecosystems.

6. The ocean and humans are inextricably interconnected.

7. The ocean is largely unexplored.

Lesson Plan Objectives: What is an MPA? (Marine Protected Area)

Students will:

1. as a class discover the answers to the basic set of questions answered by journalists when relaying the news-- who, what, where, when, why and how.
2. as a class, learn about MPAs by reading, game playing, internet search, raising fish and discussion.
3. learn to look for answers to "W" questions when reading, game playing, internet searching, raising fish and discussion.
4. individually, write answers to "W" question on student's handout or answer orally to teacher.

Relevant Vocabulary:

marine, MPA, protection, Ocean, internet, "W" questions, young (babies), mass

Materials/Resources:

World map showing the oceans,

Map of MPA's in California

3 fish aquarium

gold fish for each student

MPA info on the web <http://www.dfg.ca.gov/mlpa>

Procedures/ Activities:

1. Introduction: "We are going to learn about MPAs; Marine Protection Areas." Write it on the board, underline MPA. Pass out the worksheet with the "W" questions. Remind them of the basic questions journalists use when relaying the news-- who, what, where, when, why and how. Explain that we will discover the answers together as a class. This worksheet will be used and added to with each of the following activities:

2. Discussion:

Have any of you ever seen the Ocean?

What bodies of water have you seen?

Have any of you been boating?

Do any of you fish? Where? What fish have you caught? How big were they?

3. Write Marine, protection on the board. Explain what they mean. Explain MPA.

4. Show world map of Oceans and map of U.S. highlighting PA and CA and any other water place the students have visited.

Explain/discuss how our classroom's 3 aquariums are similar to MPA's.

5. Discussion: State, "It is important to let fish grow big in the ocean." Why do you think so? Show picture from Dr. Airame's presentation; page 14. (Bigger fish have more "babies" and those "babies" are bigger) Write the word young on the board. Explain scientists don't call little fish "babies" but young.

6. Play "Tragedy of the Commons: Fish stock" interactive game

7. Play "MPA Simulation" game

8. Review Maps; world map of Oceans and map of U.S. showing PA and CA.

Put up on board new Marine Protected area Poster of CA and pass out the activity sheet. Complete the activity together as a class.

9. Internet research: Start at the homepage of the Marine Life Protection Act Initiative (MLPAI): <http://www.dfg.ca.gov/mlpa> Use Gwen K. Noda's MLPAI website tour from the resource room.

10. Internet search: Find out if there are any MPA's in Lake Erie (closest large body of water to us) or any of the Great Lakes

11. The students should be adding to the "W" questions worksheet with each activity. Go over the "W" questions worksheet together as a class.

Assessment /Evaluation:

Students will be evaluated based on appropriate participation in class discussions, completion of Marine Protected Area Poster's activity sheet, teacher observation of appropriate participation of playing the two interactive games, the proper care of fish and aquariums, the written/oral responses to the "W" questions on the student handout, correct procedures and etiquette when using the World Wide Web.

Graphs/charts/students handouts:

- o Dr. Airame's slide picture #
- o Marine Protected Area Poster & Activity Sheet
- o Tragedy of the Commons: Fish Stock as an Example interactive game from Gwen K. Noda
- o MPA Simulation interactive game from USC-Wrigley Center for Environmental Studies-K. Mulvaney and J. Grimm
- o Student handout of "W" questions, the basic set of questions answered by journalists when relaying the news-- who, what, where, when, why and how.

Possible Extension Activities: spill over; marine navigation, fishing laws, fishing license requirements in PA, marine navigation, map reading, political process, law enforcement, Google Ocean

Suggested Time Allowance: No more than half an hour for each time period. Each one of the numbered procedures/activities would be a different day. This is more like a thematic unit than one lesson. It would probably take several months to complete. Ideally it would never be completed because we would just keep exploring more areas of interest.