



Who's Swimming in Our Gulf?

A Structured Approach to GIS Education

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Structured Approach to GIS Education

■ *Develop Background*

□ **Background**

- Marine policy (MMPA, ESA)
- Threats to whales
- Atlantic Take Reduction Team with current options
- Refuge criteria

□ **Stakeholder Profiles**

- Title, Employer, Motivation, Expertise, Main Interests, Long- and Short-Term Goals, Resources, Websites, Books/Movies, GIS-, Oceanography-, and Whales in the Job

□ **Logbook**

- General and stakeholder specific questions for each lesson
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Structured Approach to GIS Education

- Provide Information in *Manageable Pieces*

- Lesson Plans from 3-10 days

- **Exploratory** Lesson Plans

- The Gulf of Maine
- Plants and Animals of the Gulf
- Learn About Data Collection
- Delve Into GIS

Complex ideas
Multi-faceted
Many issues
Various stakeholders
One concept at a time

- **Applied** Lesson Plans

- Beneath the Gulf
- What's Your Solution?

Integrate ideas
Value different opinions

- **Reflection** and **Wrap-Up**

Structured Approach to GIS Education

- ***Organization is Key***

- **Logical Flow**

- Each step builds on previously-learned knowledge

- **Supporting Documents**

- Marine Policy Guides
 - Available Data
 - Lost at Sea with focused questions for sanctuary design

- **Field Notebook**

- Has leading and open-ended questions that allow self-discovery
 - No “right” answer

- **Pre-Selected GIS Layers**

- Students have a base to work from
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Structured Approach to GIS Education

■ *Make it Fun!*

□ **Web-Based**

- Familiar for students
- Easy to navigate
- Interactive

□ **Engaging Graphics**

- Fun to look at
- 3-D GIS perspectives of the Gulf of Maine

□ **Real-Life Scenario**

- Out of the book and into the real world
 - Learn how to work as a team
 - Learn to respect other opinions and values
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Necessary Components for Teachers

- Teacher Guide to Curriculum
 - Password-Protected Answer Guides
 - Mediator Role Guide
 - Lost at Sea
 - Focus questions for sanctuary design
 - Objectives and Standards
 - National and state standards
 - Assessment Rubric
 - Resources
 - MMPA and ESA guides, Glossary, Available Data, Perspectives,
 - Useful Websites, Education and Activity Book Reviews
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