

# Best Practices of Technology Integration

**Title:** Traverse City Trouble Makers

**Submitted by:**

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**Subject Areas:** English Language Arts, Science, and Social Studies

**Intended Grade Levels:** Upper Elementary and Middle School

**Description:** This lesson is a living and integrated science, language arts, and social studies activity that promotes skills for responsible citizenship through advocacy. It encourages students to use language arts, science, and technology to solve community problems.

**Narrative:** “Traverse City Troublemakers” is built around the concept of Advocacy in connection with a real environmental issue within our community (the zebra mussel invasion of the Great Lakes). Much of our focus is based on a constructivist classroom approach. which

connects local curriculum, state standards, and community issues

uses technology as a tool to connect the classroom with current information and the experts in the field

supports deep knowledge paired with higher level reasoning including application, analysis, synthesis, and evaluation

helps students develop their own theories about the world around them and values their questioning

celebrates multiple intelligences

engages students in authentic activities that have value outside the classroom.

prepares students to become effective adult citizens by contributing to the welfare of the community.

**Curriculum Benchmarks:** This unit covers many benchmarks in English Language Arts, Social Studies, and Science. They are best reflected in the following:

**MI.ELA.10.MS.3** Use oral, written, and visual texts to identify and research issues of importance that confront adolescents, their community, their nation, and the world. Examples include using research findings to organize and create texts to persuade others to take a particular position or to alter their course of action with regard to a particular school/ community issue or problem.

**MI.SCI.I.1.MS.5** Use sources of information to help solve problems. (Tools: Forms for presenting scientific information, such as figures, tables, graphs. Real-world contexts: Libraries, projects where research is needed.)

**Total Amount of Time for Lesson:** Plan for a quarter of the year, depending upon how many of the prerequisite skills your students possess. This was a good time frame for integrating state curriculum frameworks and skills from our district's "Micro Worlds" science curriculum. Of course, the concept of advocacy has implications that reach far beyond the classroom and our initial timeframe. The intensity and passion young advocates can experience may take years to evolve.

**Materials/Hardware/Software:** Word processing programs and multi-media software of your choice and e-mail (allows students to organize and plan "professional" presentations as they "take action" in their community. A digital camera is optional for recording evidence of their advocacy endeavors. Copies of the graphic organizers we developed for internet research and guest speaker notation are attached. Each student selects approximately 5 focus questions with which to direct their internet exploration / investigations. They can record web sites that were useful, take notes as they search various locations, and document key points to remember related to their focus question. They will also have the opportunity for reflection.

**Teacher Preparation:** Throughout the advocate journey, teachers and students will need to pause along the way in order to incorporate specific skills they will need to make the experiences as rich as possible. In our case, students needed to learn the processes of making quality observations (from our microscopic studies science kit) and then apply these skills to our zebra mussel observations. Planned discussions about the internet, web site specifics, and quality searches help students understand the purpose for using it as a research tool (you may be more comfortable inviting technology teachers into your classroom to help facilitate these discussions). Training with multi-media software is also essential. Establish your own community connections for possible future references. Teachers should investigate, ahead of time, ways in which students can "behave as much like the professionals in the field" as possible.

**Prerequisite Student Skills:** Students should be aware of your school system's computer use ethics policy. Our students began with few technology skills, so we integrated these as they needed them to further their study (analyzing web sites, learning efficient search techniques, "bookmarking" favorites, and learning appropriate questioning strategies for guest speakers or preparing for an interview).

### **Student Activities/Procedures:**

This lesson/unit is a comprehensive process that incorporates science, social studies, and language arts activities by engaging students in the following phases of advocacy:

1) Inform yourself:

Read articles, pamphlets, and other literature about the issue (zebra mussels)

Arrange for local experts to share their knowledge

Take fieldtrips in small groups (form research teams) to relevant sites pertaining to the issue, videotaping/gathering information to be shared with classmates.

Access relevant internet web sites and conduct productive searches.

Correspond with experts in the field via internet and e-mail.

2) Join with Others:

Contact research organizations

Connect with groups involved in local projects/volunteer efforts

Communicate with people around your school, in your neighborhood, and family and friends to find others who share your interests.

3) Review Your Lifestyle:

Improving something in your life related to the issue (making personal/family changes).

4) Contact Elected Officials (influential people):

Call, write, and make appointments with people who influence policy making in your community and the surrounding area.

5) Publicize Your Views:

Students decide the most appropriate medium in which to share their views:

Editorial, newsletter, petition, flyer, proposal, speech, public service announcement, etc.

6) Educate Others:

Students plan the most effective strategy for educating their intended

Audience: Brochure, display, experiment, contest, classroom lesson, service project, mural, produce a play that could be performed by someone else, create a workshop, start a club, etc.

**Assessment / Evaluation:** We used checklists for specific curriculum skills incorporated into the advocacy unit, but used a rubric when evaluating their final plans/projects to “educate others”. Another suggestion would be for the young advocates keep a diary/log to demonstrate their thinking as they travel through the advocate process (how they “hatched” their ideas, things they learned, feelings, changes they want to make, examples of how each person worked on each of the steps, summaries of daily work, accomplishments, major insights, problems they face, and even creative additions such as poetry, stories, sketches, comics, etc...)

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