Signalizing and Non-Verbal Communications

Familiar with Portland Harbor and Casco Bay, Captain Moody knew of the ledgey approach into the sheltered harbor and of the impossibility of communication between vessel and waterfront. So sheltered is Portland Harbor that a merchant on the wharves could not see his vessel coming into port and therefore had virtually no time to prepare a berth or gather stevedores to unload cargo making business in Portland a very expensive proposition.

Moody's solution was to construct a signal tower to communicate to merchants, families and company owners information about the class of vessel, who the vessel belonged to and the expected arrival time of the vessel at the wharves. An early version of traffic control allowing for wharves and stevedores to be readied and preparations made for a return cargo all before the vessel was docked in port. This information communicated through the Observatory became crucial to improving the efficiency of Portland harbor thereby allowing Portland to better compete with Boston harbor to the south.

In 1807, Captain Moody founded the Portland Monument Ground (later changed to Portland Observatory) with other prominent Portland merchants and gentlemen. The purpose was to build an Observatory with a telescope stationed at the top with which they could view vessels coming into the harbor and then signal the waterfront of the arrival of said vessels. The funds necessary to build such a structure were raised by selling shares, one hundred shares were available at $50 each, the cost to build the Observatory and furnish it with a telescope being barely over $5000. Eventually, Moody would buy all of the shares from the other investors and become the sole proprietor by 1844.

Moody's system of signalizing as he called it was unique. Flags for the class of vessel entering the harbor would be raised on one of the two (and later three) flag poles. But Moody did not stop there, he also sold subscriptions to his service, for five dollars a year a vessel's owner could subscribe to have Moody raise the company's flag upon identification of the vessel. One need not be a mariner to read Moody's signals at the Observatory. Each year Moody published his flag system in the Portland City directory thereby allowing anyone in town to read the flags at the Observatory and therefore know what was happening in the harbor.

Activity: Create a Signal Flag

Targeted Learning Results
Objectives
Elementary Grades 3-4 Students will demonstrate an understanding of how words and images communicate.

Standards: English Language Arts, Language and Images #4

Materials: Construction paper
Scissors
Colored markers or crayons
Glue
Maine Memory Network Signals Slide Show:
http://www.mainememory.net/ss.shtml?f=lb&user=Lemuel&lb=Signals

Non-verbal communication happens all around each of us everyday. A traffic light: red for stop, yellow for proceed with caution and green for go conveys meaning without using words. The Nike swoosh conveys the brand name without ever using the brand name. Moody would have classified the traffic light as a general signal and the Nike swoosh as a private signal. Both types of signals convey meaning, one is more specific than the other. Have students come up with other examples of general and private signals and discuss how and why these signals are used today.

Create a Signal Flag
Have students create signal flags to communicate with the class or with the school. Students can work in small groups or pairs to brainstorm ideas for what they would like to communicate to the class. Then have students create their signal flags - students should test their flags within the small groups before presenting them to the class. Testing should consist at least these three checks: Can the flag be seen clearly over a distance? Is the image simple and easy to understand? Does the flag convey the desired meaning? Students can use construction paper and markers to design their signal flags.

Create a Journal
Use the primary sources at Maine Memory Network (www.mainememory.net) to review Moody's signal flags and his notes on the various private signals flown at the Portland Observatory. Have students create a journal to describe the various flags created by the class. Model the journal after Moody's system, which created a central reference to check what each flag represents and for whom (or by whom) the flag was created.

Activity: To See Or Not To See: Harbor Communications

Targeted Learning Results
Objectives
Elementary Grades 3-8 Students will understand and analyze the relationships among people and their physical environment.

Standards: Social Studies, Geography, Human Interaction with Environments, # 3

Materials: Artist Clay *or*
Sheets of Styrofoam or foamcore *or*
Construction paper
Graph paper
Scissors
Straight pins
Box cutter or Exacto blade (only if using Styrofoam or foamcore)
Pencil
Ruler
Chart of Casco Bay
Observatory map slide show on Maine Memory Network:
http://www.mainememory.net/ss.shtml?f=lb&user=Lemuel&lb=Maps

Portland harbor is often referred to as a "sheltered harbor" because of its long and deep channel sided by South Portland, Portland and the islands of Casco Bay. The harbor is a great spot for vessels to moor in a storm or for a flotilla to wait in anticipation of approaching enemy vessels. Only by looking at the topography of the area does one get a full appreciation for the need of the Portland Observatory in spotting incoming vessels.

Create a Contour Map

Have students work in groups or as a class to create a combination map and chart of the Portland peninsula and Portland harbor (be sure to include South Portland and some islands to create a realistic model). Students can map out the peninsula and harbor, including elevations of land and the depth of the water on graph paper before making the model. Students will need to create a key for their map/chart and include a scale for elevation and distance. Students should use topographical maps and NOAA charts of the area to create an accurate model.

Styrofoam is perhaps the easiest medium for creating these models. Work with students to help them trim pieces of Styrofoam to the contour lines on the topographical maps they are using as guides. Have students paint the "land" pieces in various shades of greens and browns to illustrate the increasing elevation of the land. Then stack the "land" pieces of Styrofoam to create a topographical map of the land. Students can glue the "land" pieces together or hold them in place with straight pins.

In the same manner students should work with a NOAA chart of Casco Bay to chart the depth of the harbor. Again work with students to trim the pieces of Styrofoam to the contour lines/depth of the harbor. Please note that because the "water" pieces will be your base you should leave enough Styrofoam along the edges to support the "land" pieces. And students should label the pieces so that they know where the pieces fit into the overall map. Have students paint the "water" pieces in various shades of blues (and purples) all the way to white, to illustrate the various depths of the harbor. Then stack the "water" pieces of Styrofoam to create a chart of the harbor. Students can glue the "water" pieces together or hold them in place with straight pins.

Now you are ready to stack the "land" pieces on top of the "water" pieces and have a complete look at the topography of Portland harbor. Students are now able to understand the concept of a sheltered harbor and its importance in the economy of Greater Portland through out history. Students can now see first hand what it must have been like to stand on the wharves in Portland harbor and wait for a ship to round Spring Point. Use the web-site www.sailbaltimore.org/shiptypes.htm to find out about typical sized sailing vessels during Moody's era and place them in context with the students' map. Students can also do their own search on Maine Memory Network for typical sailing vessels of the 19th century. Compare what you find at the two web-sites.

Have students compare their map to the maps on the Observatory's Maine Memory Network map slide show. Students should answer the questions of how the land has changed, why it has changed, and why and how did Moody's Observatory play a role in the changing economic climate.