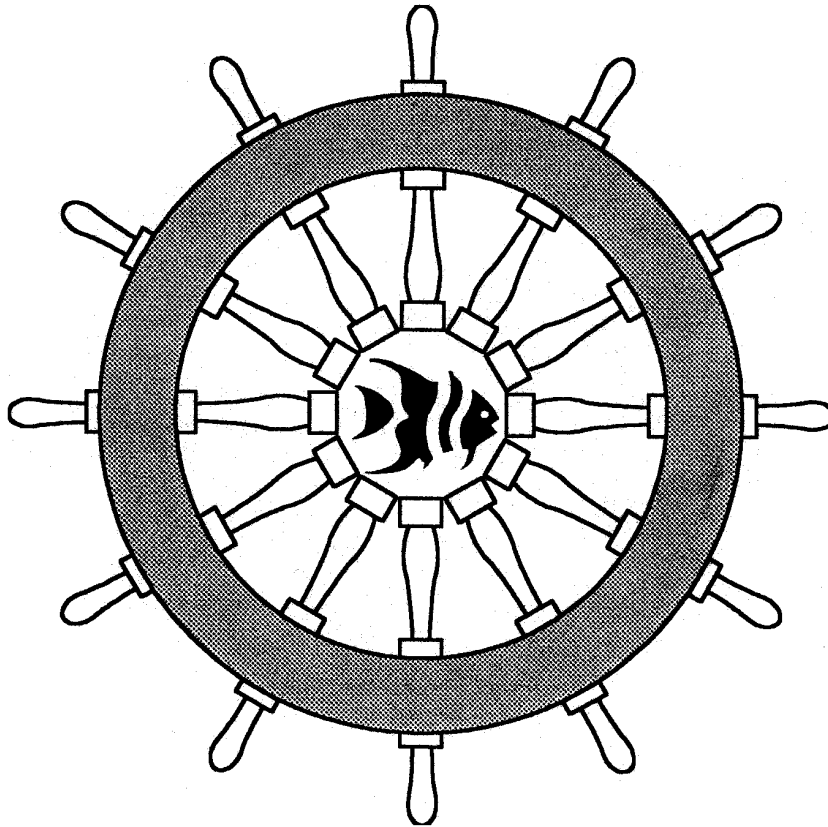


International Paper
Program Grant

"HARBOR TO HARVEST"

Dauphin Island Sea Lab
Marine Education Center



August, 1995

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Written By: Charlene Dindo

Edited By: Lynn Bryant

Consultant: Robert Dixon

Special Thanks: Randy Schlude and Alma Wagner

August, 1995

Level Pre-K through Sixth Grade

PROGRAM AREAS

The “Harbor to Harvest” program will serve to educate and familiarize students at the K-5 level with the local fishing industry, boating safety, marine debris, vocabulary and coastal maps through a hands-on visit of the vessel “Miss MayMay” located at the Estuarium, Dauphin Island Sea Lab. Students will “experience” these concepts by role-playing on site activities with follow-up materials for the classroom teacher.

- A. Fishing Industry
- B. Boat Safety
- C. Marine Debris (trash)
- D. Boat Terms/Vocabulary
- E. Coastal Map



Supplemental Materials

**Program Areas and Objectives
Dauphin Island Sea Lab Boat Activities
Classroom Activities
Vocabulary**

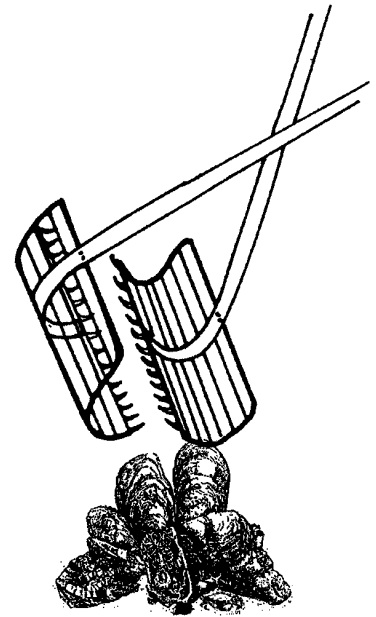
PROGRAM AREAS AND OBJECTIVES

1. Fishing Industry

Students will become familiar with obtaining oysters, shrimp and crabs. They will role play these jobs with props on the vessel to demonstrate collecting each type of seafood.

Example Activity

a. Identify and work the oyster tong to pick up oysters and load them in the boat. Measure to determine size and return smaller ones.

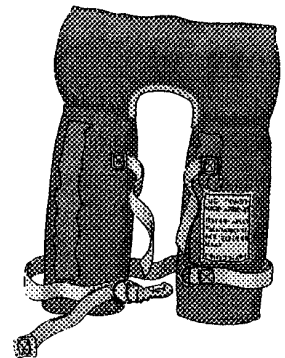


2. Boat Safety

Students will learn, practice and demonstrate 4 safety rules regarding safe boating. They will become familiar with the boaters promise and receive a certificate. They will utilize a safety checklist for on board use.

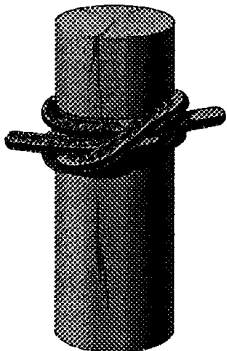
Example Activity:

1. Wear a life jacket
2. Carry a working radio
3. Know where the fire extinguisher is located
4. Hands out of lines and ropes.



3. Marine Debris (trash)

Students will learn safe ways of disposing specific trash, litter and waste while on the boat and give predictions on determining the length of time for breakdown.



Example Activity:

- a. Make predictions on breakdown time of specific types of trash.

4. Boat Vocabulary

Students will identify and locate specific areas of the boat.

Example Activity:

- a. Bow
- b. Stern
- c. Starboard
- d. Port

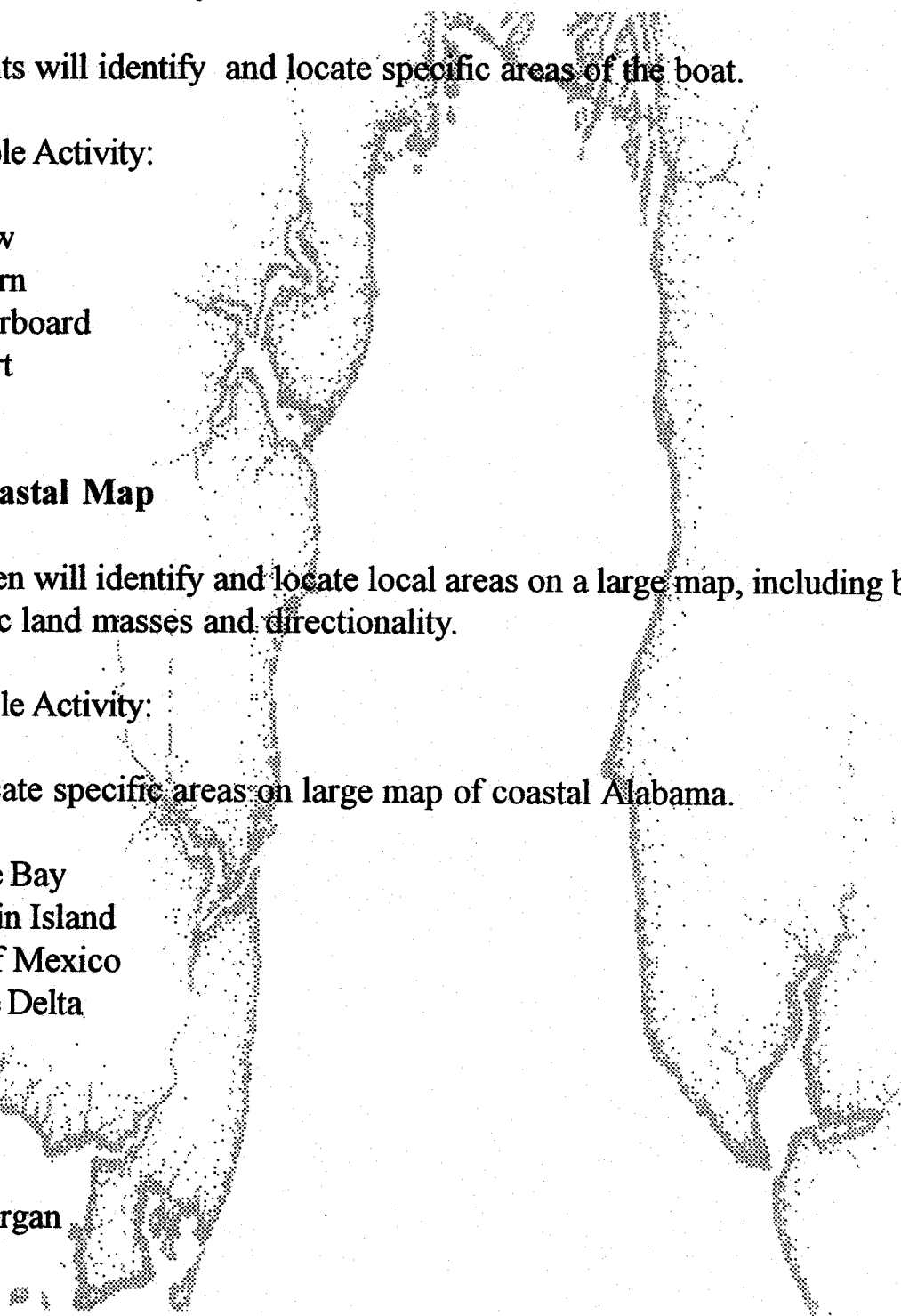
5. Coastal Map

Children will identify and locate local areas on a large map, including bodies of water, specific land masses and directionality.

Example Activity:

- a. Locate specific areas on large map of coastal Alabama.

- Mobile Bay
- Dauphin Island
- Gulf of Mexico
- Mobile Delta
- East
- West
- North
- South
- Ft. Morgan



DAUPHIN ISLAND SEA LAB

BOAT ACTIVITIES

A. FISHING INDUSTRY

Oystering

Concept: To “experience” gathering oysters from an oyster bed.

Materials: Tongs, oysters, ruler

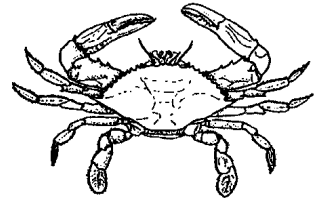
Procedure: Use tongs over the side of the boat to pick up oysters, deposit on board and measure.

Crabbing

Concept: To “experience” setting out crab pots and bring them back on board.

Materials: Crab pot, float, crabs, line, baskets.

Procedure: Pull crab pot in, count crabs and place back.



Shrimping

Concept: To “experience” a shrimp net and turtle excluder device (T.E.D.).

Materials: Otter-trawl (shrimp net) shrimp, baskets, T.E.D.

Procedure: Observe display on T.E.D., climb on shrimp net and investigate the T.E.D.



B. BOAT SAFETY

Concept: To “experience” preparing to leave the dock in a boat by following safety rules and using a check list.

Materials: Life jacket, radio, fire extinguisher, fuel gauge, rope, lights, check off safety list.

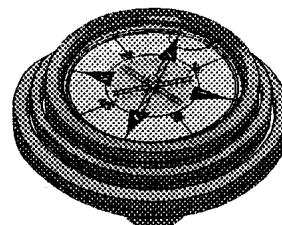
Procedure: Check safety list for fuel, radio and fire extinguisher. Put on life jacket and cast off.

C. MARINE DEBRIS (TRASH)

Concept: To make a prediction on how long it takes certain types of trash to decompose and then check for correct answer.

Materials: Plastic bag, styrofoam cup, 6 pack rings, plastic bottle, coke can, fishing line, rope, paper.

Procedure: Choose a piece of trash from the flipchart, make a prediction on time, flip over to check for correct answer.



D. BOAT VOCABULARY

Concept: To identify and learn the specific areas of the boat and certain equipment.

Materials: Laminated sheets labeling port, starboard, bow, stern, compass, and radio.

Procedure: Touch specific areas and try to name them, check for correct answer.

E. COASTAL MAP

Concept: To “experience” identifying local areas on a map, including the longitude and latitude of Dauphin Island and show directional terms.

Materials: Laminated map of Mobile Bay, compass.

Procedure: Identify areas listed on the map, name the longitude and latitude of Dauphin Island, show north, south, east and west, Mobile Bay, ship channel, buoys, light house, current direction from the mouth of the bay and the Gulf of Mexico.

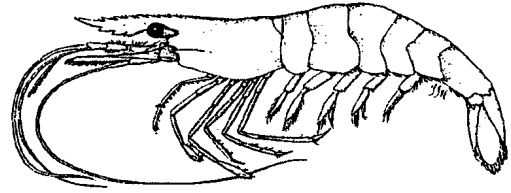


VOCABULARY

Bay-a body of water which goes inland.

Bow-the front of the boat.

Buoy/channel marker-a floating object anchored in a body of water which marks the ship channel.



Compass-a round instrument with a needle which shows the points of direction, north, south, east and west.

Crab-a shellfish which is edible and has a wide flat shell. The crab has five pair of legs of which the front two are pincers.

Crab pot-a square box made from wire, a rope is attached with a round styrofoam float at one end.



Latitude-a distance north or south of the equator, which is measured in degrees.

Longitude-a distance measured in degrees east or west of 0 degrees.

Navigate-to direct or steer the course of a ship.

Ocean-the salt water that covers most of the earth's surface.

Oyster-a shellfish which is a filterfeeder and has two halves of a shell.

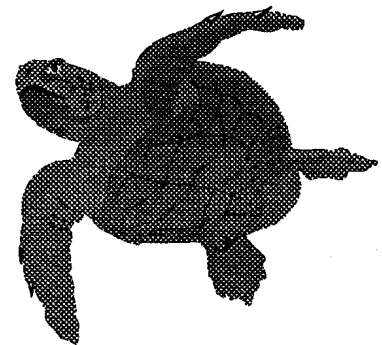
Oyster tongs-a long rake with tongs on the end which is used to collect oysters.

Port-the left side of a boat.

Ship channel-a dredged water course to allow ships to enter a harbor.

Shrimp-an edible shellfish with a long tail.

Shrimp Net--a large trawl net which spreads out and is dragged under the water to capture shrimp.



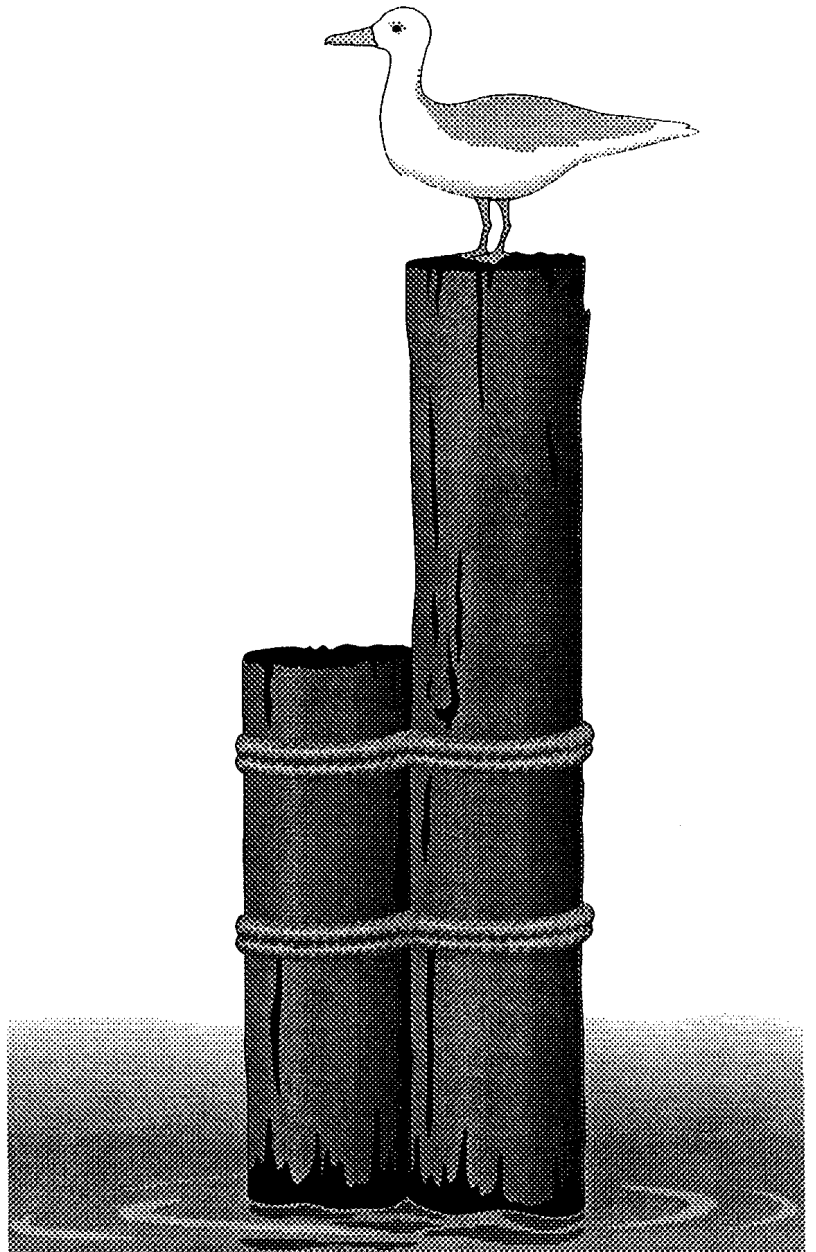
Starboard-the right side of a boat.

Stern-the back of the boat.

TED (Turtle Excluder Device)-a large net with a hinged door at the end to allow trapped turtles to escape.

CLASSROOM ACTIVITIES

1. Map Out Mobile Bay!
2. Coastal Concentration
3. Word Search
4. Clean-up Data Card
5. Marine Debris Time Line
6. Boater's Pledge



MAP OUT MOBILE BAY!

Concept: To label correctly the areas in and around Mobile bay and give directionality.

Materials: Map, colored pencils, list of places to label.

Procedure: Use colored pencils to label and color in the map of Mobile Bay using the list below.

LIST

Dauphin Island (green)

Mobile Bay (blue)

Ship Channel

South

East

West

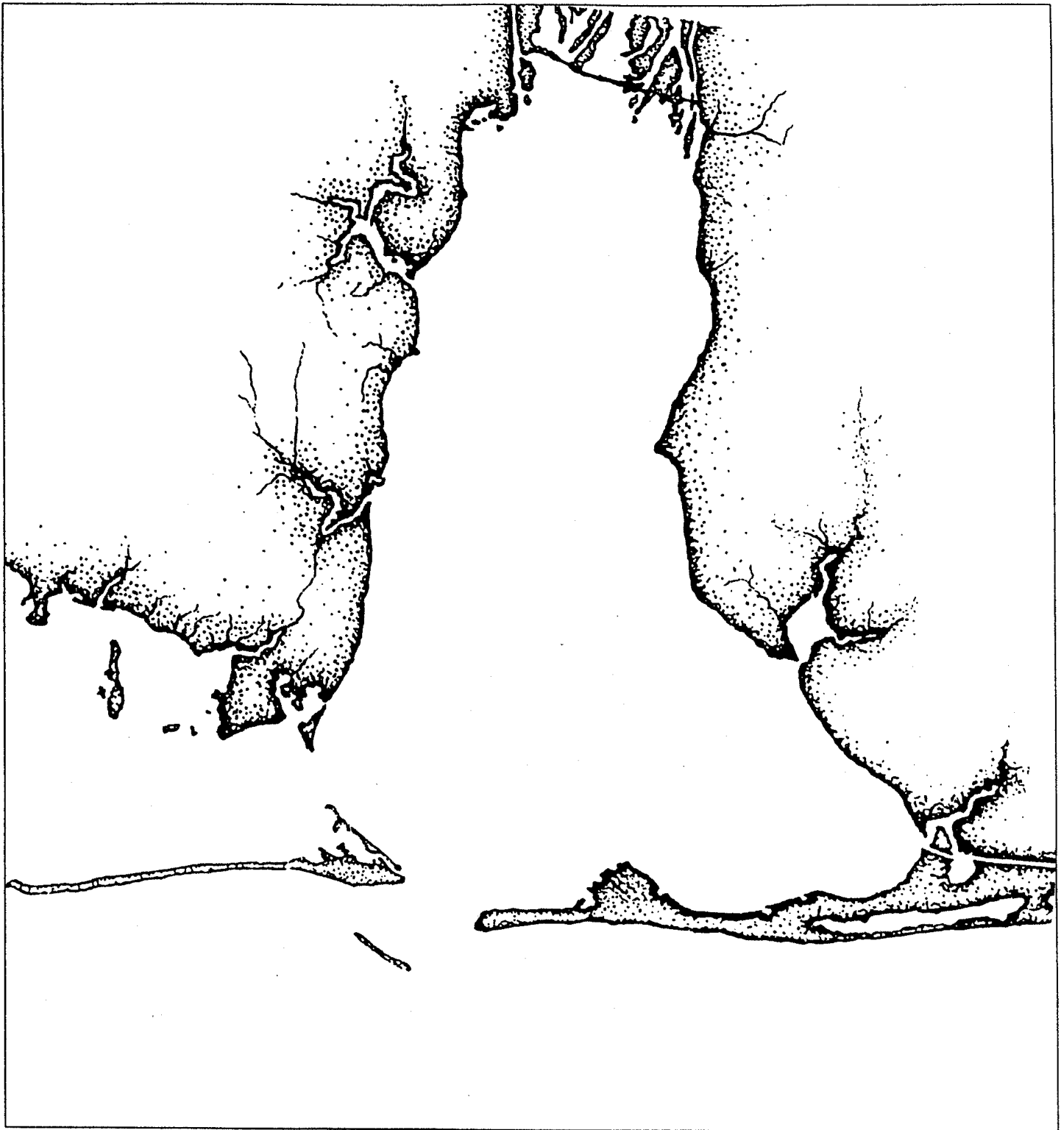
North

Gulf of Mexico (blue)

Mobile Delta (brown)

Mobile (draw a star)

Fort Morgan Peninsula (green)



Map Out Mobile Bay!

Correctly label these areas around Mobile Bay. Use colored pencils to fill in land and water.

Dauphin Island
Mobile Bay
Ship Channel
North

South
East
West
Fort Morgan

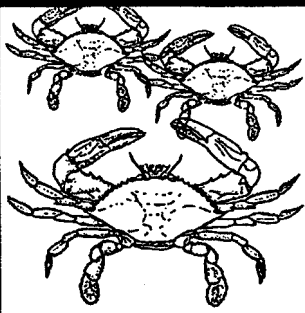
Gulf of Mexico
Mobile Delta
Mobile

COASTAL CONCENTRATION

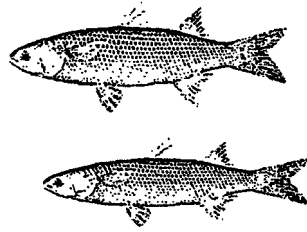
Concept: Students will become familiar with boats, marine life and debris while increasing matching and memory skills.

Materials: Coastal Concentration Game sheet (2 copies)

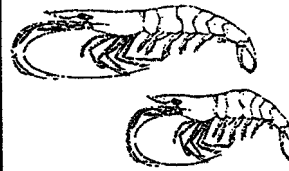
Procedure: Make 2 copies of the picture page. Color (optional) pictures, laminate and cut. Shuffle cards and lay them face down. Students flip two cards over at a time taking turns until they select a matched pair. Whoever has the most sets at the end wins.



Blue Crabs



Mullet



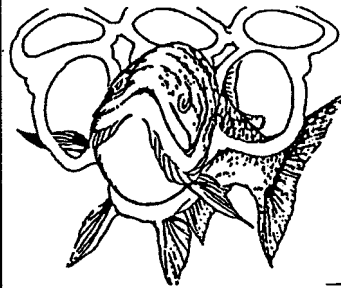
Shrimp



Mobile Bay



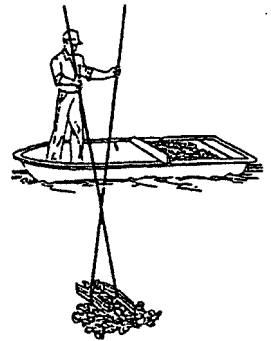
Oysters



Fish caught in plastic



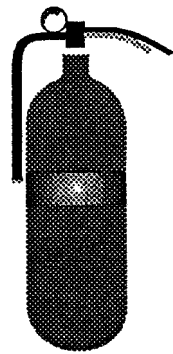
Life Jacket



Oyster TONGING



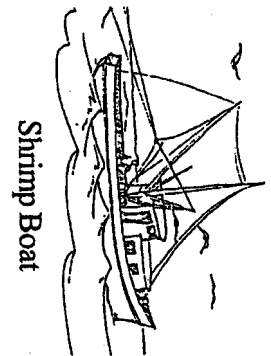
Bow Line



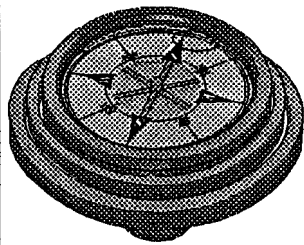
Fire Extinguisher



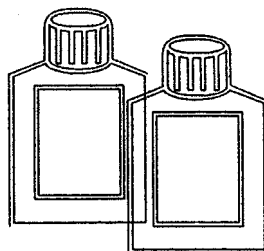
Fishing Line



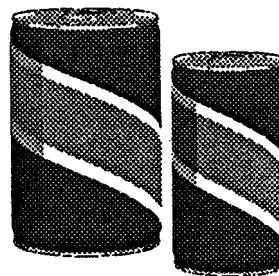
Shrimp Boat



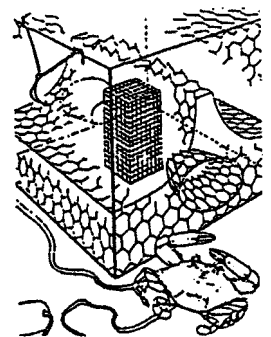
Compass



Plastic



Metal Cans



Crab Pot

WORD SEARCH

Concept: To identify words involved with the concept of marine debris and coastal marine animals.

Materials: Word Search page duplicated.

Procedure: Review word list, find words and circle.

WORD LIST

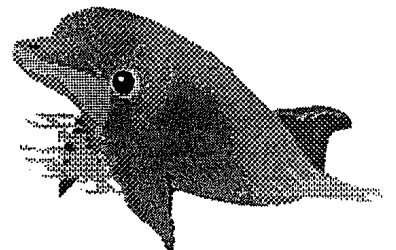
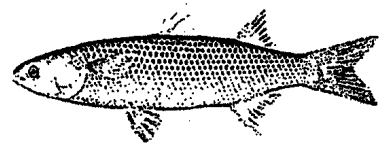
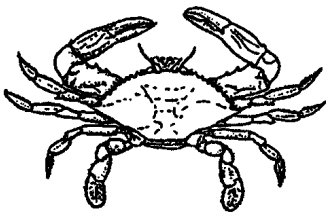
flounder
mussels
bags
styrofoam
Gulf of Mexico
cans

crabs
fishingline
plastic ring
bottles
fish

bay
Mobile Bay
dolphin
shrimp
bay

COASTAL WORD SEARCH

P	P	O	S	T	Y	R	O	F	O	A	M
M	L	P	O	E	W	H	S	I	F	A	U
O	B	A	Y	C	R	A	B	S	N	M	S
B	V	C	S	D	O	L	P	H	I	N	S
I	B	O	T	T	L	E	S	I	L	X	E
L	A	S	E	D	I	F	H	N	J	K	L
E	C	G	R	K	O	C	I	G	U	Y	S
B	Z	A	S	Q	A	W	R	L	E	R	T
A	C	U	N	I	S	H	R	I	M	P	R
Y	A	N	E	S	G	A	B	N	N	W	Q
F	L	O	U	N	D	E	R	E	G	G	L
G	U	L	F	O	F	M	E	X	I	C	O



CLEAN UP DATA CARD

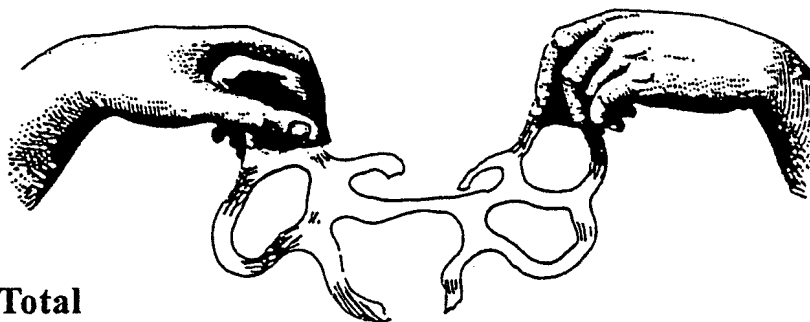
Concept: Students will collect trash on the school campus, divide it into categories, tally, total and graph the results.

Materials: Plastic or paper bags, cotton gloves (optional), clip boards, pencils, graph sheet.

Procedure: Divide class into groups. Assign the Bag Holder, Trash Recorder, and Pick Up People.

Trash is categorized and recorded before it is placed in the bag. Each group totals their bag and graphs the results. Class discussion follows.

CLEAN UP DATA CARD



Item

Total

Plastic

Styrofoam

Glass

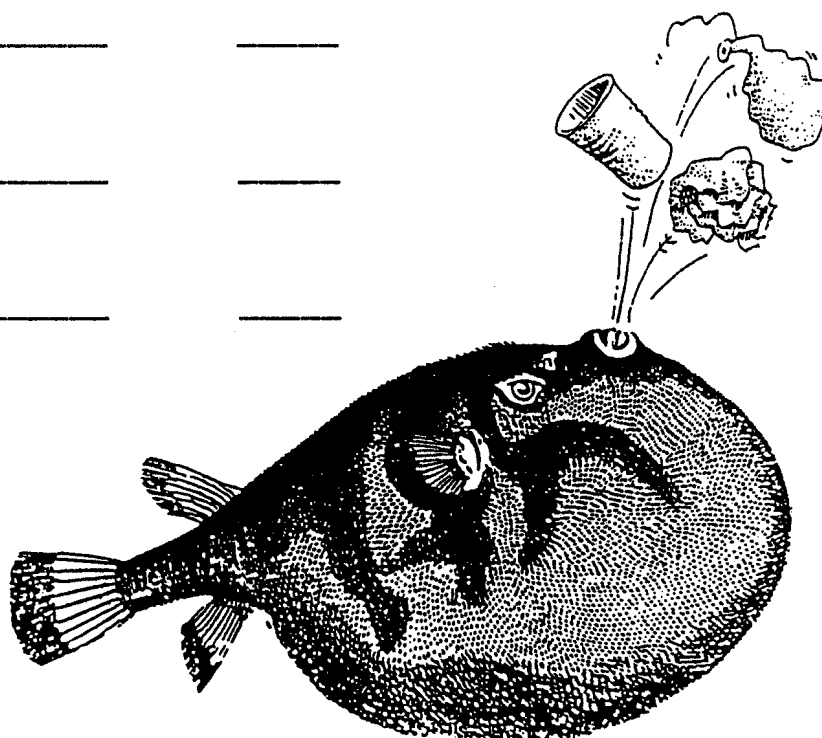
Rubber

Metal

Paper

Wood

Cloth



MARINE DEBRIS TIME LINE

Concept: Students will discover how long the breakdown time is for a variety of debris.

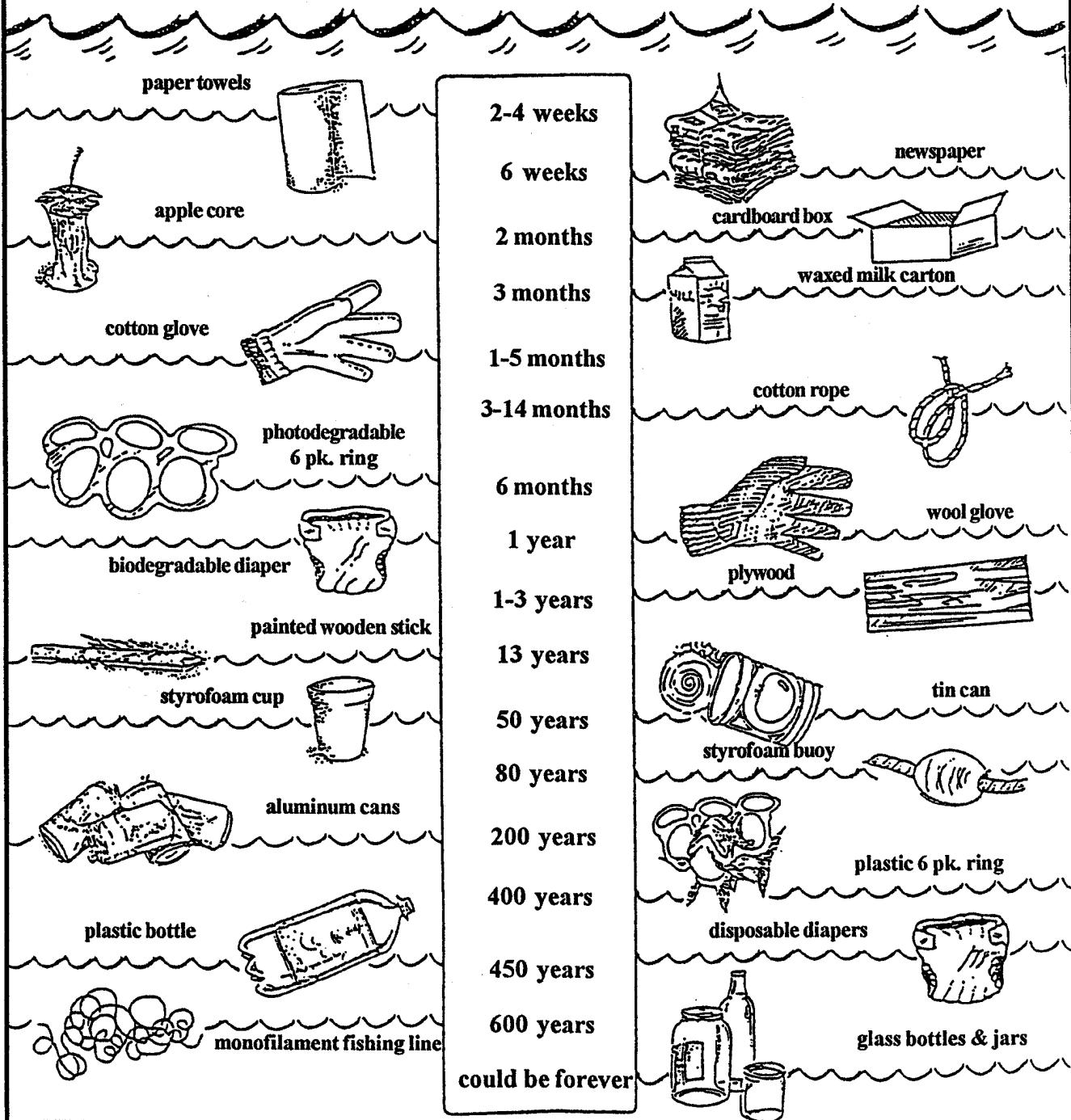
Materials: Assorted litter/debris, paper, pencils, duplicate time line sheet.

Procedure: Lay assorted litter/debris out on table or floor with sheets of paper next to each one. Students write their names on the sheets and predictions of breakdown time. Refer to time line for correct answer. Classroom discussion on solving litter problems.

Keep it 'above board'

Please don't throw your trash overboard.

It takes a long time for litter and debris to "disappear" from the deep.



BOATERS PROMISE

Concept: Students will become familiar with good environmental practices for coastal waters.

Materials: Boater's Promise Certificate.

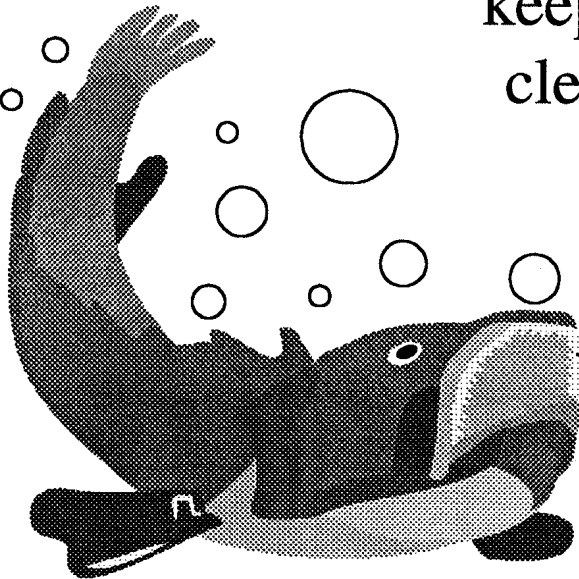
Procedure: Read Boater's Promise and sign name.

BOATER'S PROMISE

I, _____
promise to bring back to shore all
of my trash and litter (plastic,
glass and metal) and put it in a
trash can.

I will not throw anything
into the water.

I will help my parents
keep Alabama waters
clean.



George Crozier

○ George F. Crozier, Ph.D.
Executive Director
○ Marine Environmental Sciences
Consortium

Dauphin Island, Alabama