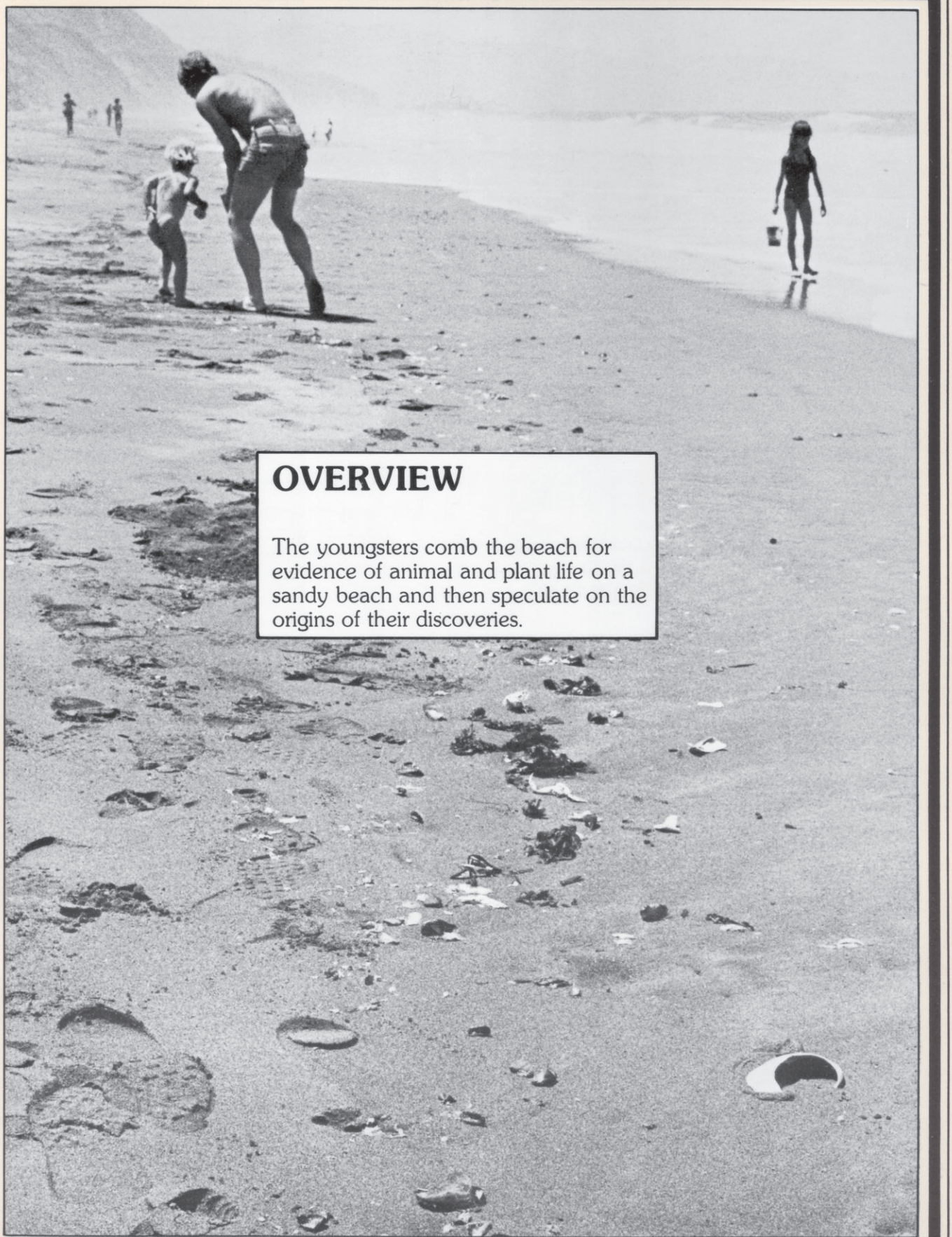
BEACHCOMBING

BIO KEY

Exploration
Observation
Story Telling



OVERVIEW

The youngsters comb the beach for evidence of animal and plant life on a sandy beach and then speculate on the origins of their discoveries.

Published by
Delta Education
12 Simon Street
Nashua, NH 03061-3000
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Developed by
Outdoor Biology Instructional Strategies
Lawrence Hall of Science
University of California
Berkeley, California 94720

BACKGROUND

An ocean beach, with its constantly shifting sand and unrelenting surf, is home for very few large living organisms. As any beachcomber knows, however, sandy beaches are often covered with evidence of life that has been transported from other areas by currents and wave action. Discovering remnants of unfamiliar life forms and evidence of distant human activities can be fascinating. A tarred feather, an empty sea shell, or a piece of cork are enticing fragments that conjure up speculations about distant places and events. This activity invites your participants to indulge in a little beachcombing and to speculate about the origins of the evidence of life that they discover.

CHALLENGE: SEARCH FOR EVIDENCE OF LIFE ON A SANDY BEACH.

MATERIALS

For each buddy team:
1 container* (plastic bag, dishpan, bucket, or cut-off milk carton)
1 magnifying lens* or bug box*

For the group:
1 "Aquatic Observation Aids" Equipment Card*

* Available from Delta Education.

PREPARATION

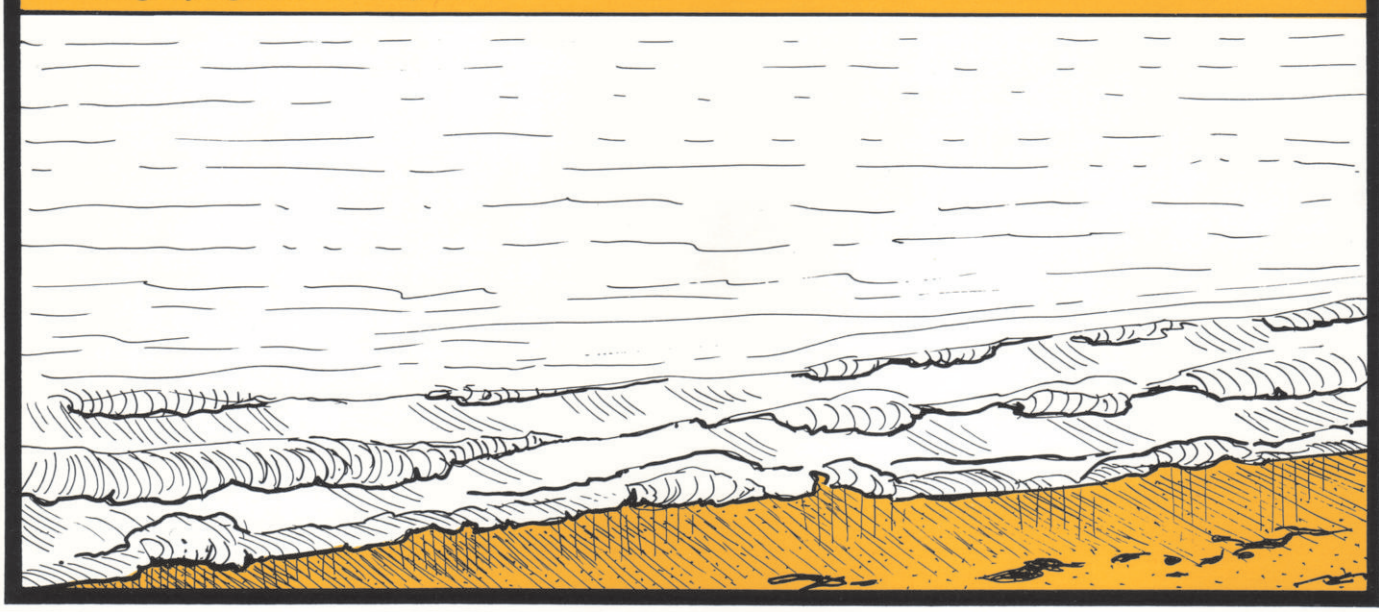
Group Size. This activity is suitable for any size group.

Time. Plan on forty to sixty minutes for this activity.

Site. Any sandy beach that is littered with evidence of life is suitable for this activity. *Beachcombing* is particularly good after a storm. Sandy shores of lakes and bays are also good sites.

Safety. When working around the water, use the buddy system. (See the *Leader's Survival Kit* folio.) Even though you do not need to go into the water, waves and slippery rocks can be dangerous enough to warrant safety precautions.

Take 'Em Back Alive! Check with your area's local fish and game representative or naturalist to determine if there is a moratorium on collecting



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organisms and shells. Any organisms collected for observation should be returned after the activity to the place where they were collected.

ACTION

Beachcombing for Evidence of Life

1. At the beach, tell the youngsters that they will comb the beach for evidence of life. Discuss safety precautions and any restrictions that apply to collecting shells or organisms at the site.

2. Tell the kids that shells, feathers, bones, or tin cans are all *evidence of life* because they were all part of or created by ***organisms*** (living plants or animals).

3. Divide the group into buddy teams, and distribute containers and magnifiers to each team.

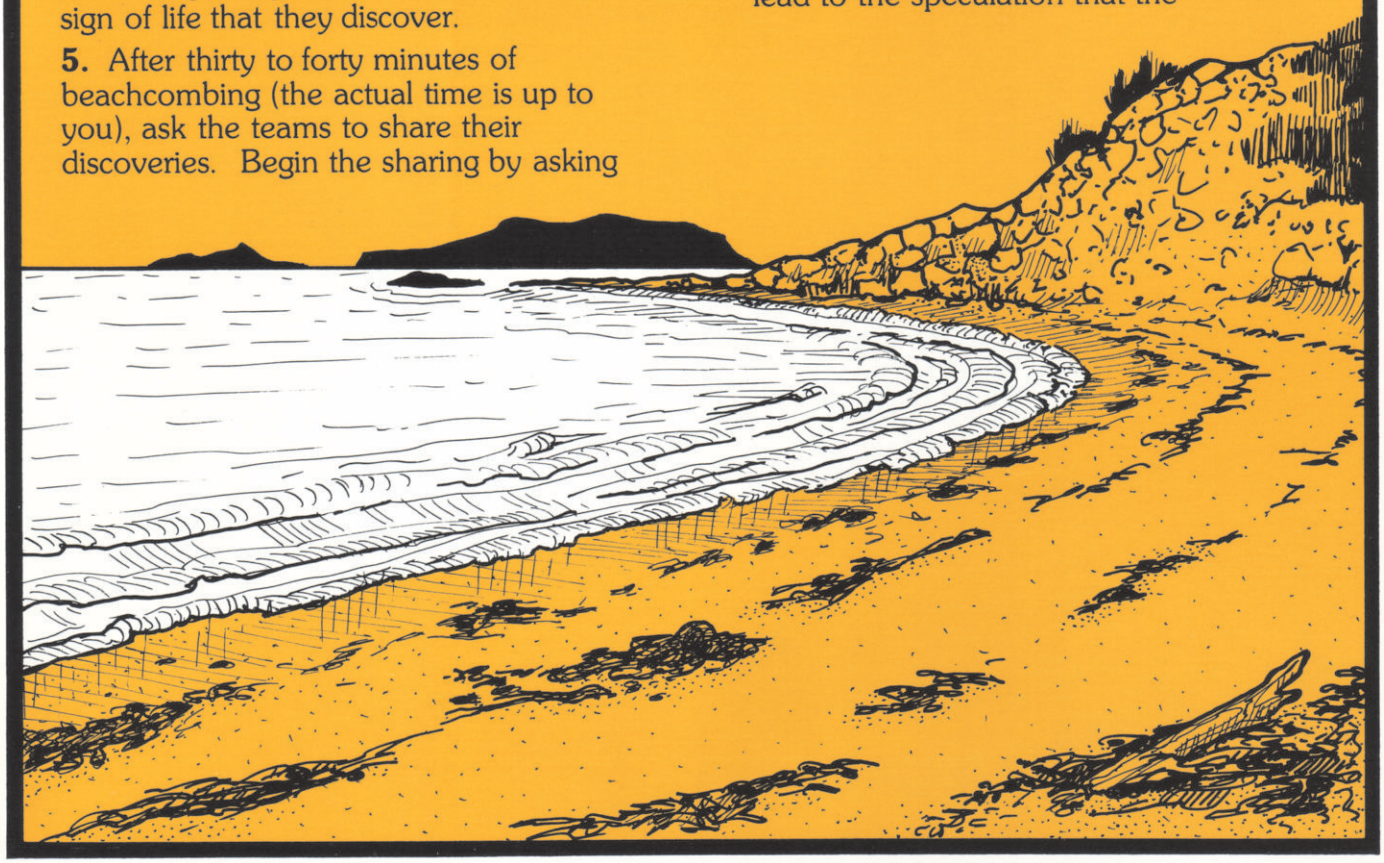
4. As a group, walk along the beach and search for evidence of life. Challenge the teams to pick up one example of each sign of life that they discover.

5. After thirty to forty minutes of beachcombing (the actual time is up to you), ask the teams to share their discoveries. Begin the sharing by asking the teams to divide what they found into plant, animal, and man-made evidence.

6. Point to the group's evidence of life, and ask the group what kinds of organisms might have left the evidence. Encourage the kids to match up the evidence of life they found with any living organisms they observed in the area (e.g. crabs, birds, picnickers).

COMBING IT OUT

Your group probably saw very few organisms that could have produced the evidence of life in your site. Call attention to the evidence of life that could not be identified with an organism in the site. Ask the group to speculate where such evidence (perhaps a shell or a feather) came from and how it happened to reach their beach. The fact that there is evidence of organisms in your site, but that very few or none live there, should lead to the speculation that the



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movements of the sea brought the evidence from another place. (In the OBIS activity *Seas in Motion*, youngsters investigate the possibility of oceanic motions being responsible for carrying evidence of life to different sites.) Ask the kids to speculate on what will become of the evidence they found after they put it back on the beach. How will it be recycled?

To make the stories more interesting, you may wish to award a prize to the team that comes up with the story that the group enjoys the most.

Returning the Evidence. At the end of the activity, return the evidence of life (if necessary) and any organisms to the places where they were found.

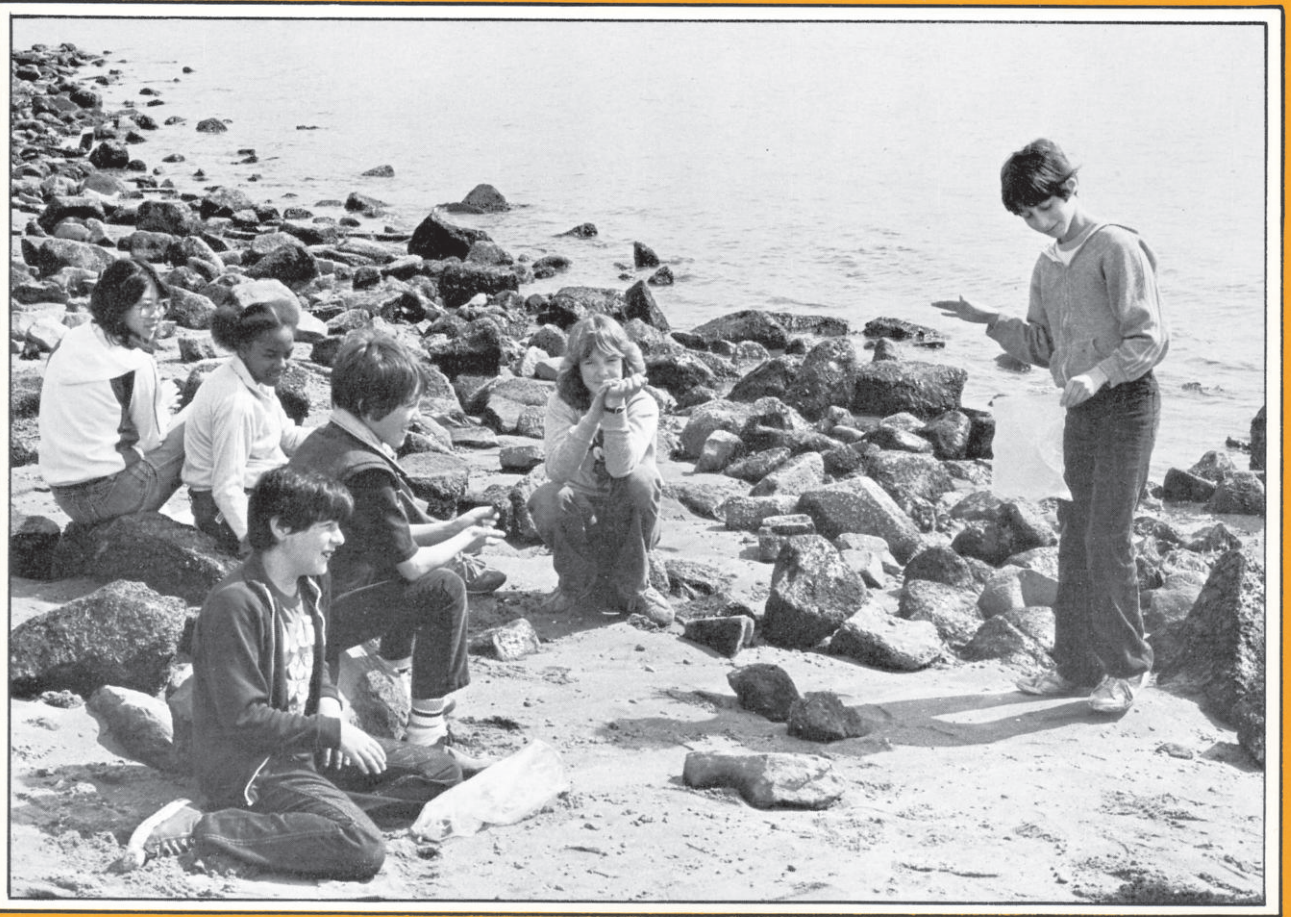
STORY TELLING

Ask each team to choose one piece of evidence and to make up a story about it that explains:

- what it is.
- where it lived or how it was used.
- where it came from.
- how it might have gotten there.

BRANCHING OUT

Conduct an organism search on a nearby rocky shore to discover if some of the organisms that live there match any of the evidence that your group found. The search will be more interesting if it is conducted during low tide.



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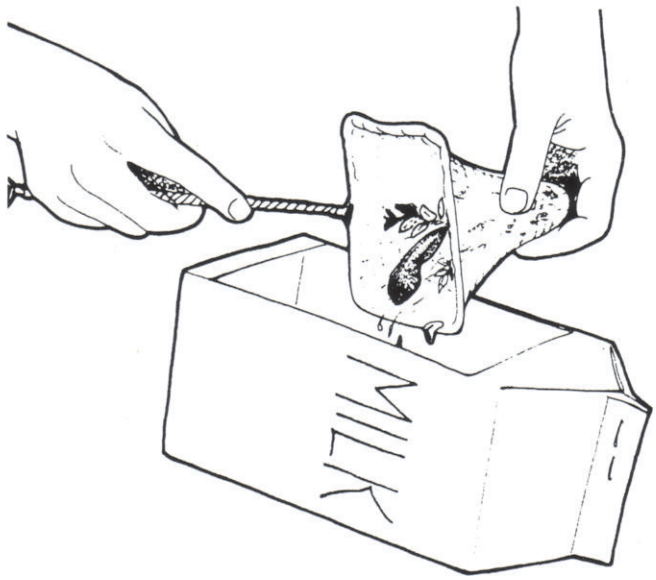
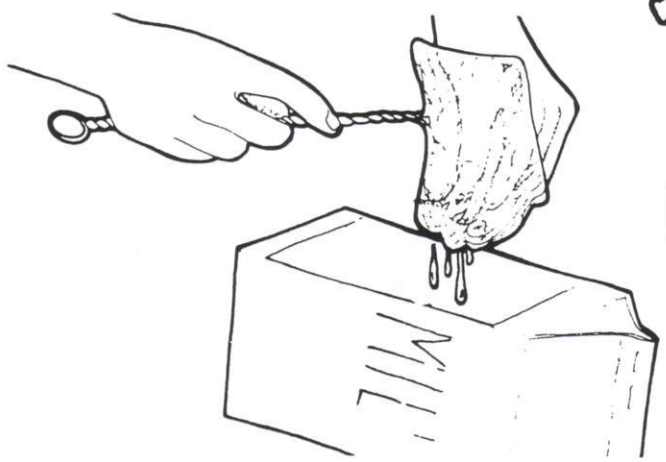
AQUATIC OBSERVATION AIDS:
For Aquatic Activities
Equipment Card Side 2

Transferring critters to observation trays. When using a net to transfer critters, first swish the net through the water without releasing the organisms. (You can use the pond or stream you are investigating.) The rinsing removes any sediment you may have netted. Fill your observation tray about one-half full of water (preferably water from the organism site). Hold the net hoop over the tray,



turn the net inside out, and dip the net bag into the water in the tray.

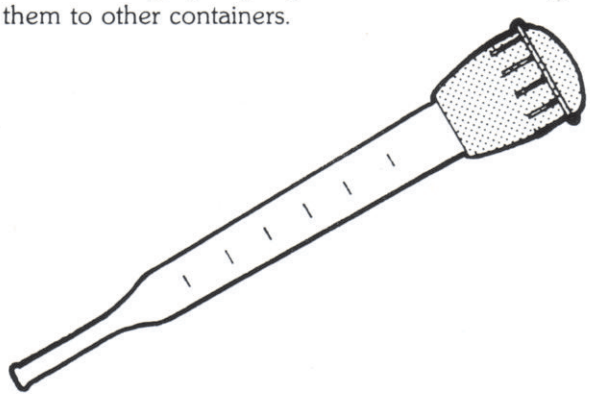


This will release netted organisms into the tray.

Spoons and Clear Plastic Cups

Spoons and cups are useful for transporting tiny organisms and observing them at a close range.

Simply dip up tiny organisms with a spoon or cup and place the organisms in a container partially filled with clear water. Turkey basters are also useful for sucking up tiny organisms and transferring them to other containers.



Note: All of these aids are available from Delta Education.

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AQUATIC OBSERVATION AIDS:
For Aquatic Activities

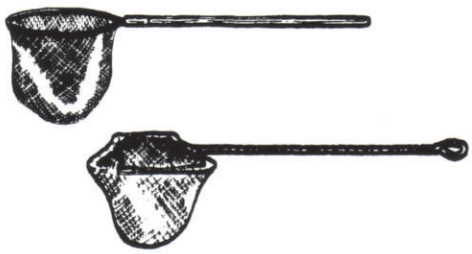
Equipment Card 2 Side 1

Bug Boxes

A bug box is a small, clear plastic box with a magnifying lens for a lid. To use the bug box, place an object or organism in the box and replace the lid to magnify the contents. When exposed to direct sunlight a closed bug box heats up rapidly, so release organisms promptly after observing them. The lid can also be used separately as a magnifying lens.

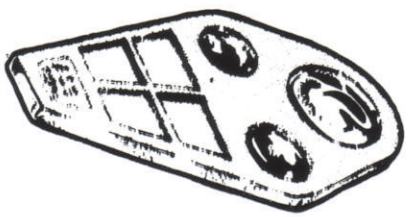
Dip Nets

Nets can either be made or bought. Aquarium nets work fine. You may want to extend the reach of an aquarium net by attaching a dowel, a stick, or a similar extension to the handle. A gradual, gentle scoop of the net is usually more successful and less damaging to organisms than a sudden, violent scooping motion. To prevent eye accidents, ask that the nets never be raised above shoulder level.



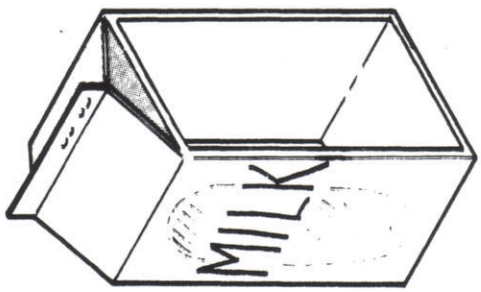
Magnifying Lenses

To use a magnifying lens, hold the lens close to one eye and move either your head or the object back and forth until you can see the object clearly.

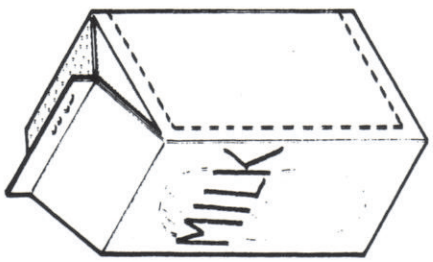


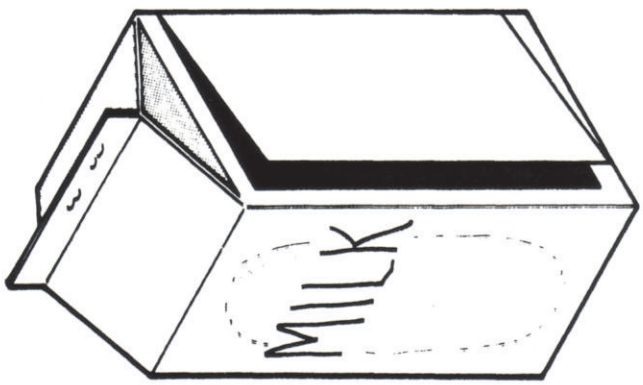
Observation Tray

Any container that will hold water can serve as an observation tray. Containers with light-colored bottoms are best for easy viewing of organisms that have been added. Half-gallon milk cartons can be made into deluxe observation trays. To make one, staple the pouring spout closed and cut out the carton wall on the same side as the stapled pouring spout.



To make a hinged-top observation tray, just cut along three sides (two short and one long) of the carton wall on the same side as the stapled spout.





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