



KELVIN® Economy Flow Tank Test Your Designs!

Use for testing Boat Hulls, Sail Designs, Experiments, etc. This tank is ideal for indoor and outdoor use. Easy to store with its removable, strong six mill plastic lining. Includes a pulley system and hand siphon pump. Works with the Drag & Wake Testing Attachment shown right (not included).

- 841987 6ft. long x 24" wide x 3" deep **\$175**
- 841988 8ft. long x 24" wide x 6" deep **\$275**

Drag & Wake Testing Attachment
Add this optional attachment to your Economy Flow Tank (shown right) for even more experiments. Requires Economy Flow Tank (at left).

- 841989 **\$85**



KELVIN® Wave Runner Kit

Personal Watercrafts (PWC) have become extremely popular. These recreational water vehicles can be found on lakes and oceans all over the world. Their unique propulsion system uses an impeller to draw water into the system and then pump it at high velocity out the back of the craft. The water jet pushing backward propels the craft forward.

This activity will allow your students to design their own Jet Ski® body, assemble and mount the impeller and test their design. As a STEM activity, it integrates Hydrodynamics, Buoyancy, Volume, Newton's Laws, Symmetry, Circuits and Hull Design.

This kit includes a foam blank, motor, impeller parts, stabilizer materials, wire, pushbutton switch, battery holder and instructions. Req. [2] 'AA' batteries.

- 842362 **\$19.95** or **\$17.95** ea./10+

As Low As
\$17⁹⁵
Per 10+

Design, Build and Test
"Jet Ski Activity"



Solar Water Pump

- 280514 [A] 0.5V, 1000mA (Req. [3] Solar Cells) **\$9.95** or **\$9.75** ea./3+

Project Water Pump

- 280604 [B] 12V DC **\$22.95** or **\$21.95** ea./3+

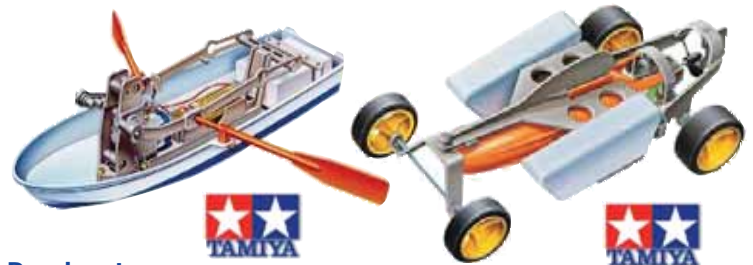
Power Water Pump

- 450076 [C] Empties 300 Gallons/Hour **\$127.95**

Apprentice Boats Paint Kit

Paints are safe and non-toxic and clean up easily with water. Contains the following (1/2 oz. jars): [2] White, Antifouling Red, Orange, Green, Gray, Buff, Blue, Black, [3] Wood Sealer, #4 Flat Brush and #6 Flat Brush.

- 420588 **\$26.95**



Rowboat

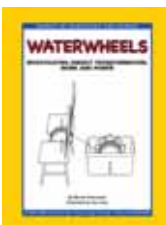
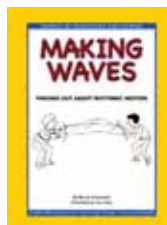
Sturdy white plastic hull holds all interior engine parts with no cover. Kit includes a crank arm, gear box, switch lever, AA battery, link rod and a square foam float.

- 281658 **\$22.95** or **\$19.95** ea./3+

Amphibious Vehicle

An amphibious vehicle, designed for travel on land or shallow water. Kit includes a chassis, submarine motor, floats, worm gear, propeller and rudder.

- 281656 Kit.. **\$25.95** or **\$24.95** ea./3+



Find More
**MODELS IN
TECHNOLOGY
& SCIENCE** in
the **TEACHER
RESOURCES**
chapter on
pgs. **TE4-5**

KELVIN® Advanced Submarine Design Challenge

The sight of a submarine disappearing into the vast ocean deep captures the imagination of both the young and old. How does the sub descend and then climb back to the water's surface? What propels the submarine deep underwater?

The KELVIN® Submarine Designer Challenge will help your students answer these and other scientific and technical questions about the operation of submarines.

Designed for elementary through high school students, this activity will challenge your students to design, model and test a working submarine model. Younger children can make the sub descend and ascend while older students can add a propulsion system to the diving submarine.

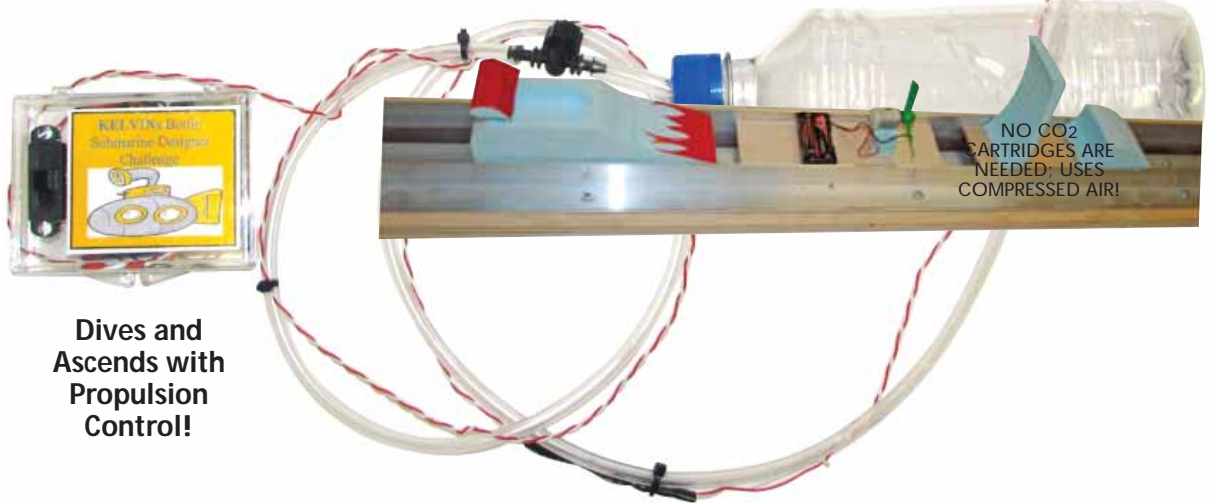
Each challenge includes detailed instructions and resource materials along with plastic bottles and all the necessary materials for building variable designs.

842106 Advanced Submarine Design Challenge\$19.95 or \$18.95 ea./10+



Advanced Submarine Challenge Features:

- Forward and reverse motion
- Dive and ascend
- Adjustable rudder
- Underwater DC motor pack design and assembly
- Open ended design, build and test activity
- Integrates Science, Technology, Engineering and Math



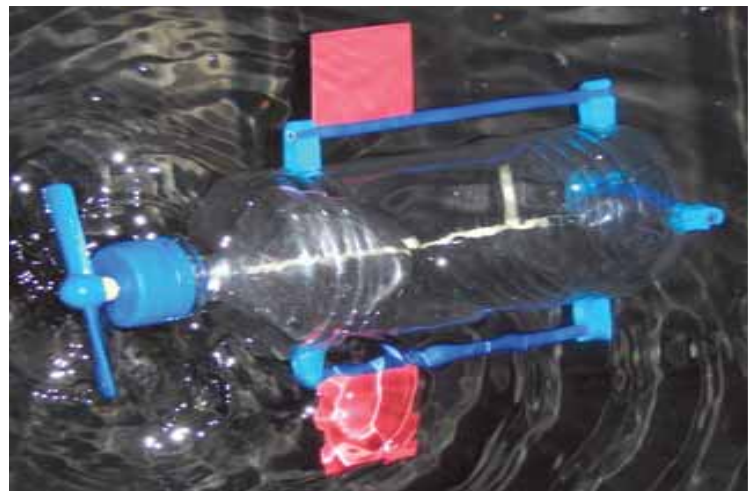
Dives and Ascends with Propulsion Control!



KELVIN® Basic Submarine Design Challenge

Designed with a younger student in mind, the basic version of the Submarine Design Challenge allows children to design, test and modify a submarine that ascends and descends in a tank of water. Students will discover the principles of buoyancy, balance, density and pressure while engaging in a hands-on, learning by doing activity. Each challenge includes plastic bottles, additional resource materials and instructions.

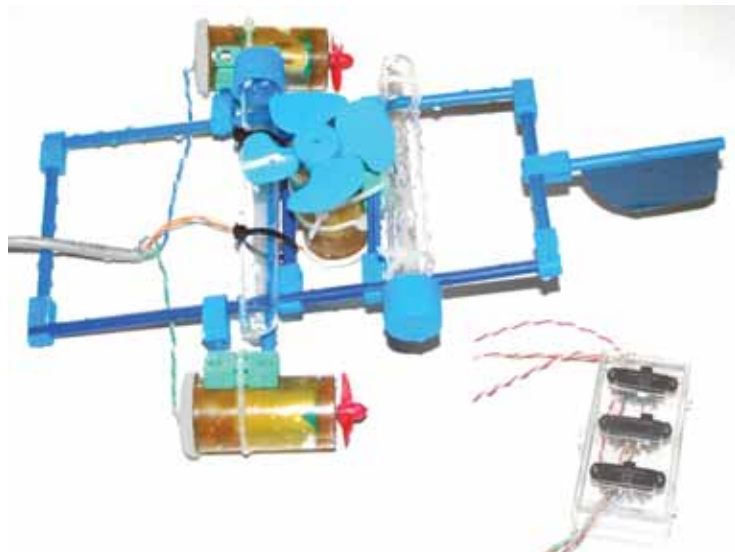
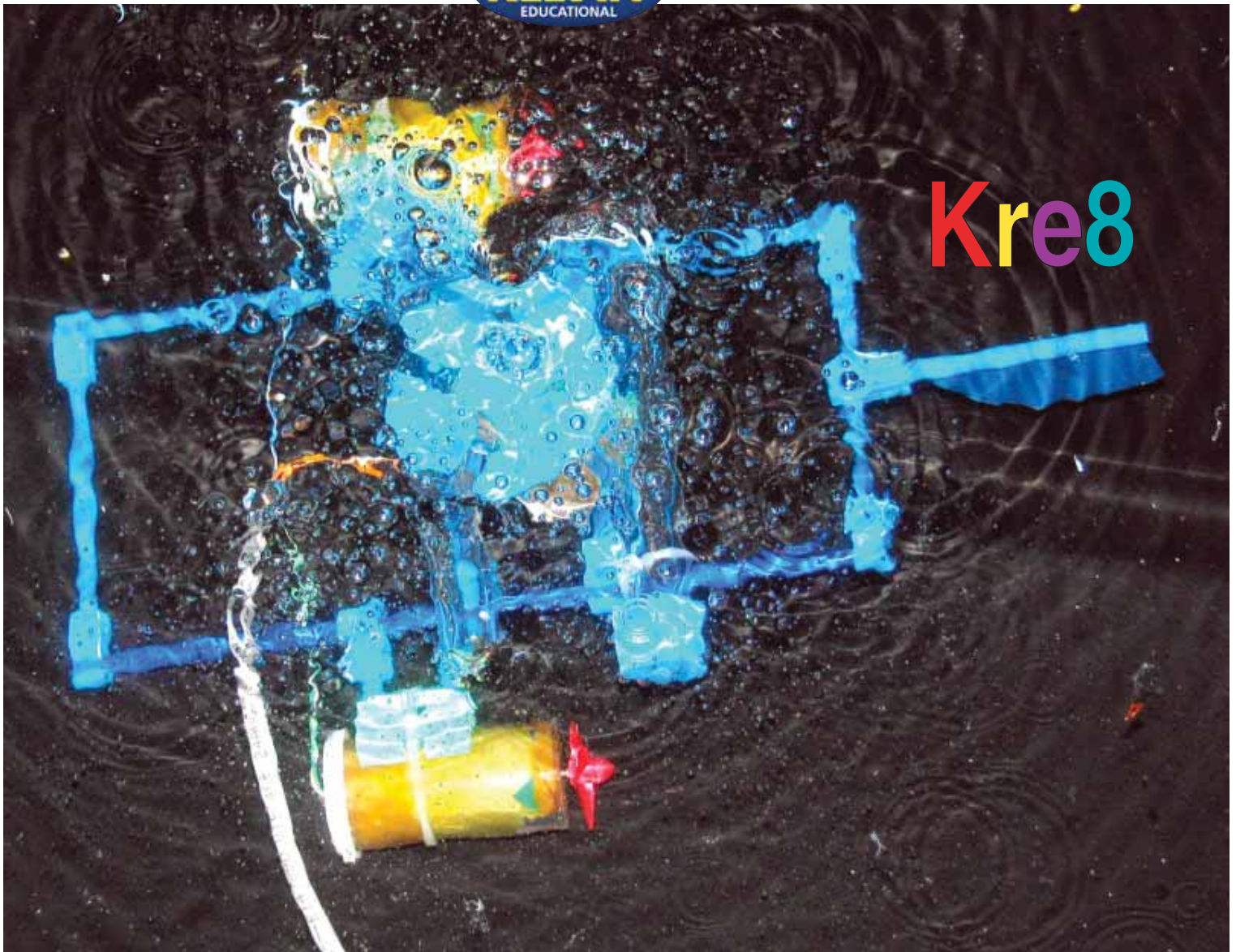
842105 Basic Submarine Design Challenge.....\$9.95 or \$8.95 ea./10+



KELVIN® Rubber Band-Powered Submarine

New from KELVIN®, our unique rubber band powered submarine kit allows students to test and observe changes in the sub's performance as design changes are made. After assembling the kit students will experiment with different propellers, rudder sizes and the placement of stability wings. Students will experience through application the concepts of buoyancy, action and reaction, friction and drag. Bottle is not included.

842108 Kit.....\$9.95 or \$8.95 ea./10+



Explore Buoyancy & Motor Propulsion

KELVIN® Kre8® Sea Explorer™

A submersible is a type of underwater vessel used in research and exploration by oceanographers, scientist and explorers. Submersibles are different from submarines. They have a limited range of service, they are usually transported to its area of operation and many times remain tethered to the mother ship (via a 15 ft. umbilical cord).

KELVIN®'s Sea Explorer™ allows your students to design, build and test their own submersible vessel. The kit includes three motors to allow for vertical and horizontal control of the vessel. Also included in the kit are plastic ballast tubes, control switches, Kre8® structural frame parts, propellers, detailed instructions and resource material, plus much more. Soldering, melting and pouring of low temperature wax is required. A Lantern Battery (see below) is required as a power source.

842107 Kit	\$39.95 or \$37.95 ea./3+ or	\$33.95 ea./10+
220012 Lantern Battery, 6V		\$7.95 or \$7.45 ea./10+



Find KRE8® PRODUCTS in the KRE8® chapter

As Low As

\$6.45

Per 25+



KELVIN® Mousetrap-Powered Boat

Our mousetrap powered boat captures the kinetic energy released by the spring of the trap to turn a large propeller.

Students have the opportunity to design the length and shape of the boat's pontoons as well as a system to transfer the energy from the trap to the prop. Challenge your students to "think out of the box" for this unusual use of the mousetrap. Fill a rain gutter with water and hold timed and distance races for hours of fun and learning. Included in the kit are bevel gears and gears of different diameters. Minor soldering is required.

- 841880 Individual Kit.....\$7.95 or \$7.45 ea./10+ or **\$6.95** ea./25+
- 841881 Bulk Pack of 20 Kits\$129

As low as \$6.45 per student!



KELVIN® Balsa Boat Hull Design Challenge

Students design and shape a boat hull to be propelled either by an inboard or outboard motor (not included). This kit includes a balsa blank (2 x 4 x 12 in.).

- 841113\$6.95 or \$6.50 ea./10+ or \$5.95 ea./25+

Motor Propulsion Kit

Kit includes a motor, 1 in. propeller, shaft and a mounting bracket.

- 280412\$8.95 or \$8.50 ea./6+



As Low As

\$8.99

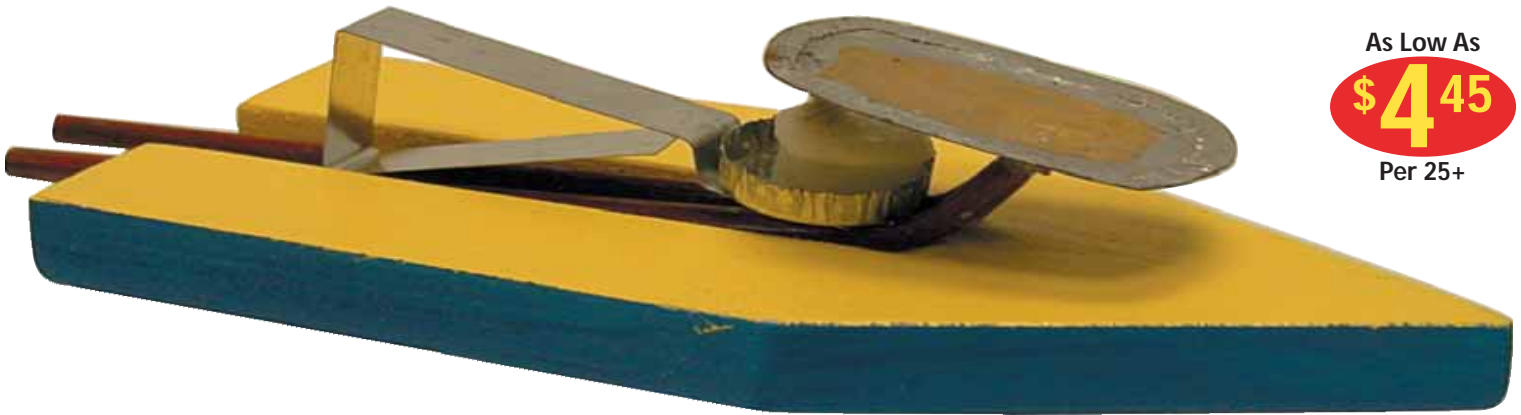
Per Student

KELVIN® Foam Boat Hull Design Challenge

Capture your student's interest and engineering abilities with KELVIN'S Boat Hull Design Challenge. Begin by students researching monohull, catamaran and trimaran boat designs. Have your students then design, build and test rubber band powered vessels that will travel down a tank of water in the fastest time. This kit includes two pieces of balsa wood for pontoons, high density foam, competition rubber band, prop assembly and instructions.

- 842147 Kit\$9.95 or \$9.65 ea./10+
- 842269 Bulk Pack for 10\$89.95

As low as \$8.99 per student!



As Low As
\$4.45
 Per 25+

KELVIN® Kel-Kel™ Steam Boat Design Challenge

Design and build a boat propelled by steam. As an additional challenge, students can see who can design a steam boat that will travel the fastest or can carry the most cargo.

The Kel-Kel™ Steam Boat Complete Kit (#841326) includes: a wood blank (not included with the engine unit), candles, steam generator, candle holder, instructions and an eye dropper.

Complete Kit with Assembled Steam Engine and Wood

- 841326 Complete Kit\$5.95 or \$4.95 ea./10+ or \$4.45 ea./25+
- 281911 Replacement Eye Dropper, 50/pkg.....\$2.95

Assembled Steam Engine Only (No Wood Body)

- 851238 6-3/4 in. Long\$5.95 or \$5.35 ea./10+ or **\$5.05** ea./25+



Basic Steam Boat

The basic steam boat is unpainted and has no rudder. Students can decorate the boat as they want while they also design and create the rudder.

The assembled steam boat comes in a box with an eyedropper, two candles, a spoon and instructions. Measures 5-7/8 x 2-1/2 x 1-1/2 in.

- 283001\$5.95 or \$4.95 ea./10+ or \$4.45 ea./25+

Tug Steam Boat

This demo steam boat includes a rudder and is completely decorated.

The assembled steam boat comes in a box with an eyedropper, two candles, a spoon and instructions. Measures 5-1/2 x 2-1/4 x 1-3/4 in.

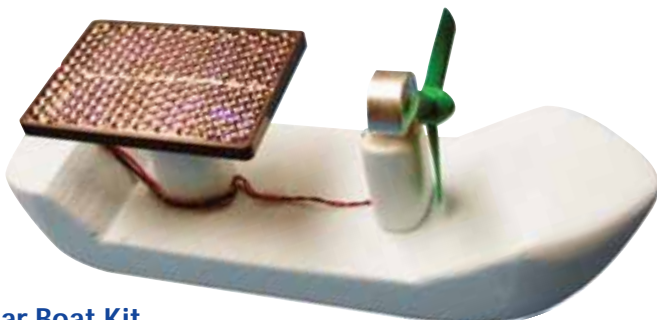
- 283002\$6.95 or \$5.95 ea./10+ or \$5.45 ea./25+

Large Harbor Tug Steam Boat

This demo steam boat includes a rudder and is completely decorated.

The assembled steam boat comes in a box with an eyedropper, two candles, a spoon and instructions. Measures 6-1/2 x 2-3/4 x 3-1/2 in.

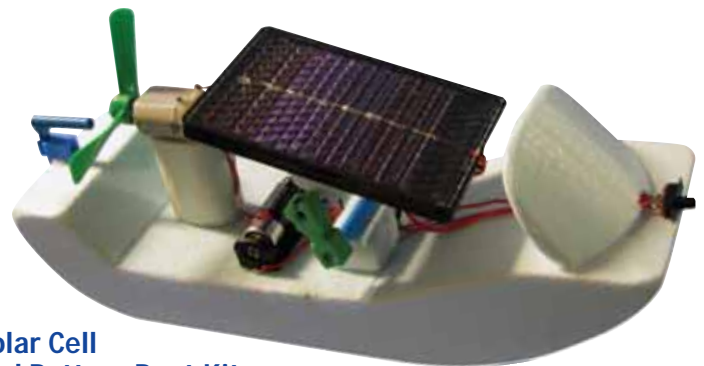
- 283003\$8.95 or \$7.95 ea./10+ or \$7.45 ea./25+



Solar Boat Kit

Design a boat powered by energy from the sun. The kit includes a foam blank (2 x 3 x 12 in.), motor, switch, solar cell and a propeller.

- 841252\$9.95 or \$8.45 ea./10+ or \$8.45 ea./25+



Solar Cell and Battery Boat Kit

Advanced kit includes: solar cell, motor, rudder, large propeller, boat propeller, foam blank (2 x 53 x 12 in.) and AA battery holder. Requires [2] AA batteries .

- 840853 ..\$13.95 or \$13.45 ea./10+ or \$12.95 ea./25+

TRANSPORTATION BOATS



KELVIN® EDUCATIONAL



As Low As

\$4.65

Per 25+

Propeller Boat Kit

Kit includes a propeller, rubber band, dowel and foam blank (2 x 3 x 12 in.).

840852\$4.95 or \$4.75 ea./10+ or \$4.65 ea./25+



Pontoon Boat Kit

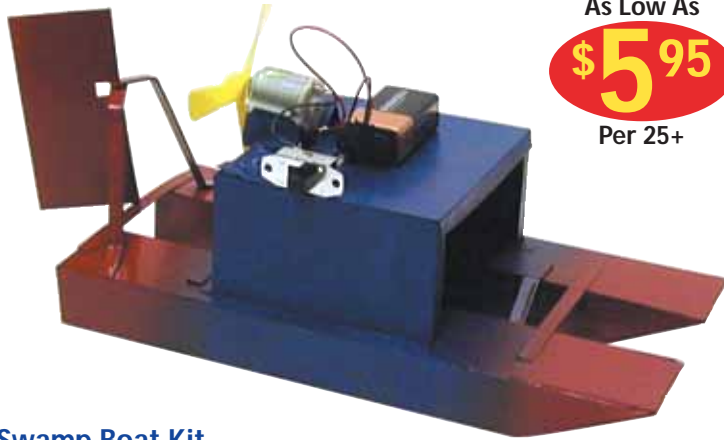
Design a boat that runs on an alternate form of energy. Kit includes [2] foam blanks (2 x 2 x 12 in.), wood parts, propeller and a rubber band.

841250\$5.95 or \$5.65 ea./10+ or \$4.95 ea./25+

As Low As

\$4.95

Per 25+



As Low As

\$5.95

Per 25+

Swamp Boat Kit

The Swamp Boat Kit has the students work with flotation and propulsion of an aquatic vehicle. Careful construction techniques are required for this activity. Kit includes Pre-Printed Cardstock, Battery Holder, Toy Motor and a Propeller.

841316\$7.95 or \$6.95 ea./10+ or \$5.95 ea./25+



As Low As

\$5.95

Per 25+

Air Boat Kit

Design an air boat like those used in the Everglades. Includes motor, [2] foam blanks (2 x 2 x 8 in.), wood, propeller, switch and battery holder.

841251\$9.95 or \$8.95 ea./10+ or \$7.95 ea./25+



As Low As

\$5.75

Per 25+

Motor Boat Kit

Design a boat powered by a motor, propeller and battery. This kit includes a foam blank (2 x 2 x 8 in.), motor, switch, boat propeller kit assembly and a battery holder.

841247\$6.45 or \$5.95 ea./10+ or \$5.75 ea./25+

As Low As

\$7.95

Per 25+

Sail Boat Kit

Design a boat powered by wind. Kit includes a balsa blank (2 x 4 x 12 in.), dowel, metal keel and paper for sails.

841246 (shown right)
\$8.95 or \$8.45 ea./10+
or \$7.95 ea./25+

