

Fish SD: Knot Tying

Background: Review Chapters 2: *Fishing Equipment*, 3: *Knot tying and Casting*, in Going Fishing

Duration: 30 minutes

Materials:

Knot Tying Kit (includes 10 Large hooks, 10 lengths of rope, 10 boxes of monofilament line), Knot tying cards, Hooks, empty 2 liter pop bottle, extra length of rope.

Objectives: Participants will learn how to correctly tie lures or hooks to fishing line and observe how knots influence the strength of the line.

Preparation: Fill the 2 liter bottle with water and tie a length of rope securely around the neck. Tie a loop in the free end of the rope, large enough to hang from a fishing hook.

Warm up: Ask students what the most important part of a fishing rig is. Discuss how a good knot is essential to catching fish and how a bad knot can make even the most expensive fishing gear ineffective.

Activity:

Part 1:

Students will work in pairs.

Pass out a shark hook and length of rope to each pair and a knot tying card to everyone.

Have one student hold the end of the rope and act as the fishing pole as the other student practices

making the improved clinch knot with the loose end of the rope, using the card as a guide.

Let both students practice with the rope and shark hook until they feel comfortable.

Part 2:

Pass out a box of fishing line to each pair.

Keeping the spool in the box, have students pull enough line out to tie on a hook using the improved clinch knot.

Before clipping the hook off to free the line for the next student, have the student check the strength of the knot by hanging the water filled pop bottle from it. The box of line should be held securely on a table by one student while the other attaches the weight to the hook.

OPTIONS: Make predictions about how much weight the line will hold, based on the test strength of the line. Test your hypotheses using a variety of weights.

Tie a wind knot (overhand knot) in the fishing line. Ask students if this knot weakens the strength of the line. Test the line with the pop bottle weight.

Fill pop bottles with a variety of substances (example: sand, water, ice, beads) and gather predictions about which is most likely to break the line (using line with or without a wind knot or testing both).

Wrap up: Discuss how a good knot retains the strength of the line, but a bad knot will pull through or will weaken the line so that it breaks when pressure is applied. Discuss scenarios in which this would affect fishing success.