

control it. Their reasoning powers are weak, showing plainly their existence, however, in the fact that the child enjoys seeing relations that are on the surface and within his comprehension. For example he can appreciate the adaptability of the fish's wedge-shaped head and long, narrow, boat-like body to its easy, swift movement through the water; or the reason why the fish has a smooth skin usually covered with hard, shiny scales, rather than a hairy skin like the cat or dog; also the reason why the scales are so placed that they lap closely one over the other from the head to the tail. Perhaps it was by observing the scales of the fish that men learned how to shingle a house.

Draw attention to the fact that it is hard to hold a fish; it slips through our fingers as if there was oil on it. Explain that this slippery feeling comes from a sort of gluey substance that is made by the fish, and which runs along through little grooves in the scales. This must make it easier for a fish to glide about in the water and to get into small places to hide from its enemies. A very useful kind of glue is made from the skin and bones of some fish.

While watching a fish move about in the water the children will notice that it keeps opening and shutting its mouth. Lead them to observe also the opening and shutting of the gills. Explain the way in which the fish breathes. It needs air, but has to get it from the water, so it takes in water through the mouth and passes it out again through the gills after getting all the air it can from it. When water is running, or tossed into waves by the wind, it gets more air mixed with it. Whales have no gills, so they have to come to the surface of the water to breathe.

If possible, show pictures of different kinds of fish, and let the children attempt drawings of them.

Selections from Seaside and Wayside.*

The prettiest of fish, the trout, which lives in so many clear, shady streams, where there are deep, quiet pools to bask in, is very careful of her eggs. The mother trout sinks to the bottom of some clean stream, and selects a nice, sandy place. Then, with her tail, she fans out all the coarse sand and gravel. If there are larger bits of pebble, she carries them off in her mouth.

When she has made a smooth little nest, like a

cup, she drops her eggs into it. Then she covers them lightly with gravel, so that they will not be floated away. When she has finished one nest, she swims off to make another.

Little fish, from the time they are out of the egg until they are about half-grown, are called fry. A great many fish together are called a school. Thousands of fish will come leaping and tumbling along in the water, and we say it is a school of fish.

Different varieties of sticklebacks build different kinds of houses. One makes a nest like a muff among water-weeds. I will tell you of one kind of nest. The little fish carries straws and bits of grass and moss, and tucks them down into the gravel and sand. He glues them with the glue from his skin. While he is at work he holds and carries his material with his mouth, and presses it into place with his body. Having laid a floor, he builds a little hut of woven fibres and moss. This hut is about as large round as a twenty-five cent piece. A little door is at the top. He tries the strength of his house by stirring up the water near it with his tail.

When all is done, Mr. Stickleback swims off to find his mate. He seems to tell her that the house is ready. She is a lazy little creature, and does nothing but frolic in the water. She goes along to the new home and goes in to lay some eggs there.

Mr. Stickleback proudly swims up and down before the home to keep foes away. The little mate being fond of play does not like to stay in the house long. She lays a few eggs about the size of poppy seeds. Then she bites a hole in the house and runs away! Next day Mr. Stickleback goes to find her, and coaxes her back. This goes on for several days, until a great number of bright yellow eggs, like seeds, are laid in the nest.

After this, it is a whole month before the little fish will hatch. Meantime other fish and other sticklebacks will eat them, if they get the chance. All that month the kind, brave little stickleback swims up and down near his nest, and drives off enemies. He will let no fish, not even his mate, come near his treasure. Finally out come the wee, wee fish. Now the poor little father has a harder time than ever. The other fish want to eat up the young fry. The food of sticklebacks is grubs, tiny insects, and very small fry. As they are very hungry and greedy, they are on the watch to pick up the new little fish. But the stickleback, however hungry, never eats his own little ones. He leaves such bad conduct to the dog-fish.

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