

What is a sawfish's saw for?

Learning objective

To demonstrate how sawfish use their saw to find prey.

Background

Sawfish use their saw to find prey such as fish or crayfish. Sawfish have tiny, jelly-filled pores on their body called ampullae of Lorenzini. The ampullae of Lorenzini are sensory organs that allow sawfish to sense electric fields in the water and a sawfish has a lot of these pores on their saw. Living organisms produce an electric field, so a sawfish is able to detect the electric field of a fish with its saw. This makes a sawfish a very good hunter, especially in murky waters like mangroves where visibility is limited.

Materials

Handheld metal detector wand (available on Amazon)

Large piece of blue cloth or a blanket

1 sheet of tan craft foam

1 sheet of white craft foam

2 plastic googly eyes

Cut out fish and crab

Pennies

Scissors

Double-sided tape

Hot glue gun & glue sticks

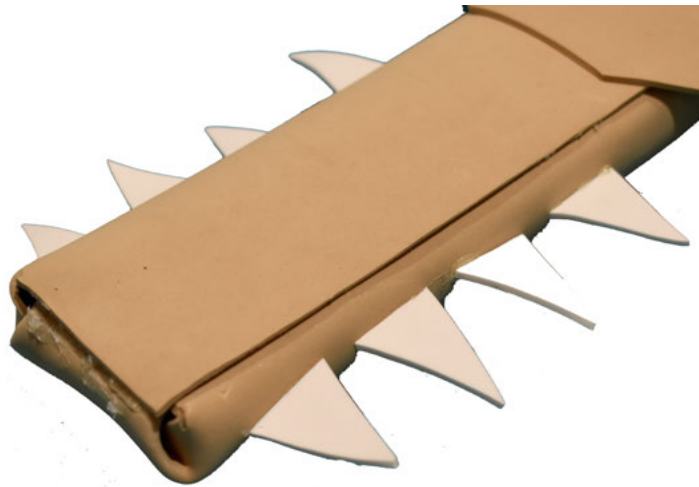
Black sharpie



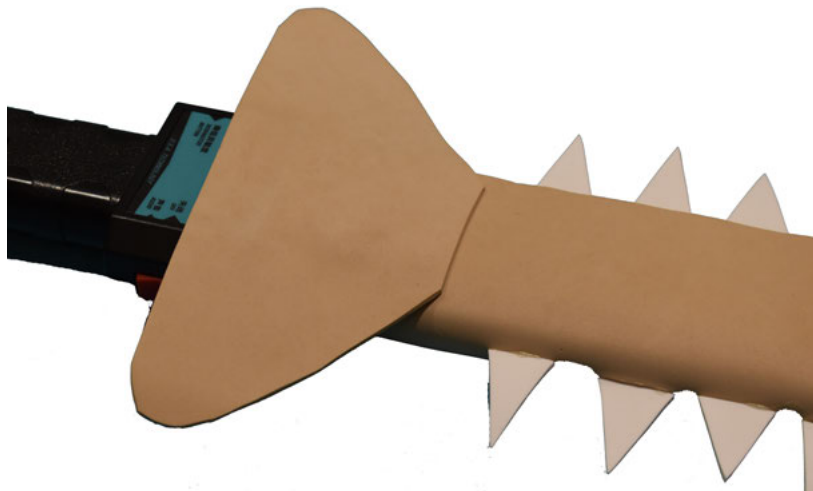
Instructions

*Do not glue anything directly to the metal detector wand. Only glue pieces to the tan foam wrapped around the wand (step 1). This way, the saw is a “sleeve” that you can take on and off the metal detector.

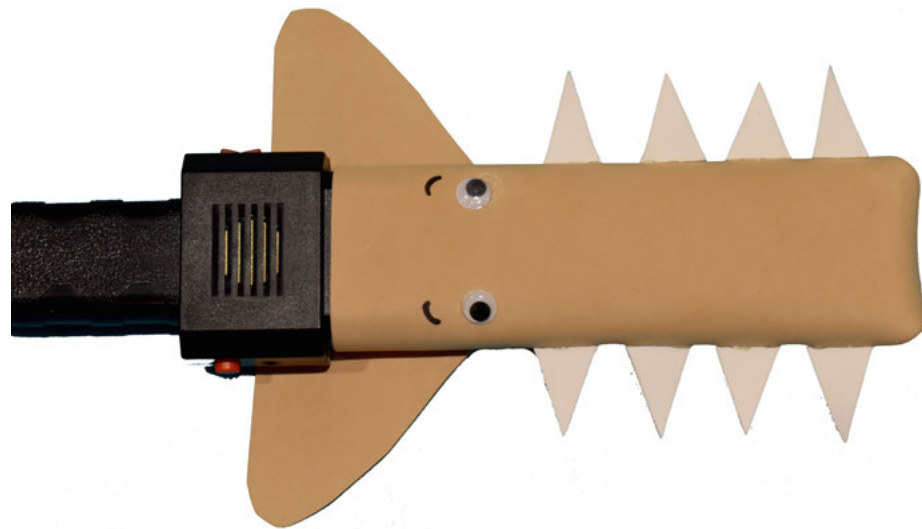
1. Cut the tan foam to an appropriate size to wrap around the wand of the handheld metal detector. Once wrapped, cut a tab at the end of the foam to cover the tip of the wand. Use the hot glue to seal all edges.
2. Cut ~8-10 triangle teeth from the white foam and glue them to the sides of the foam-wrapped wand.



3. Cut out a large triangle, roughly twice the width of the metal detector wand, from the tan foam and glue to the underside of the foam saw.



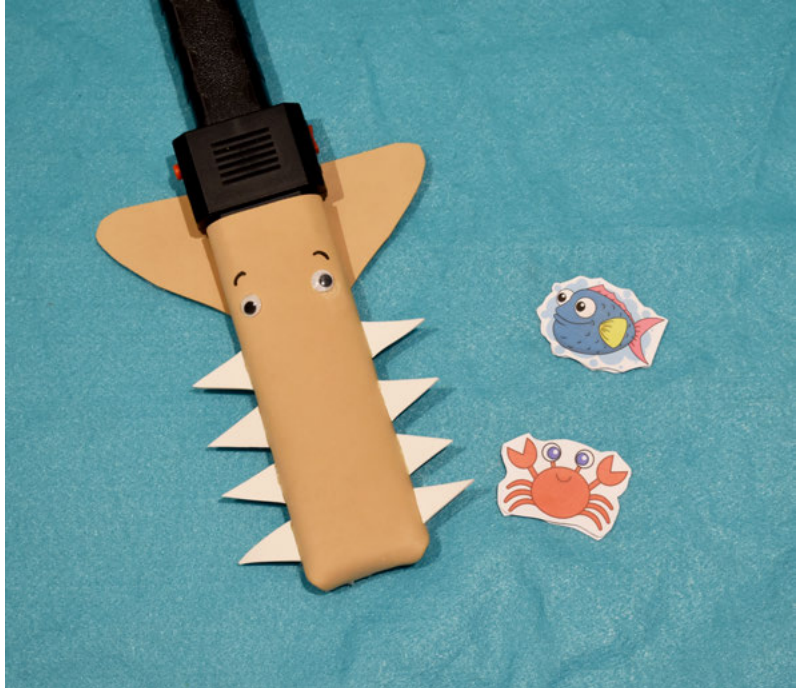
4. Hot glue 2 googly eyes on to the foam saw and draw spiracles behind the eyes using a sharpie.



5. To make the prey, cut out the crabs and fish. Place a piece of double-sided tape onto each side of a penny and then tape a crab to each side. Repeat for the fish.



6. To play, first turn the metal detector on and test that it is working with one of the prey items. There are two options depending on the amount of space and age of the students. Option 1: the instructor can hide the fish and crab under the fabric/blanket and then have a student find it by making the sawfish swim slowly over the fabric/blanket. Option 2: if space permits, for older students, the teacher can blindfold a student and have them use the sawfish saw to find the prey items from a designated floor space.



Sawfish prey

