Shark Skin Activity

Have you ever wondered what shark skin feels like?

Follow the instructions below to create your own model of shark skin!

Materials Needed:

- Coarse sand paper
- Crayons
- Paper
- Black marker
- Scissors
- Iron (with adult supervision)

Directions:

1. Using the black marker, draw an outline of a shark on your paper. Make sure the outline is not larger than your sand paper.
2. Color the sand paper heavily with crayons.
3. Place the sand paper over your shark outline, colored side down. Have an adult help you iron the sand paper on top of the paper with the shark outline.
4. Let the pages cool, and then pull the sand paper off. Run your hand along the body of your shark. What does it feel like?

Discussion

Sharks are pretty incredible creatures. They have many adaptations that allow them to thrive in their ocean habitat, but there is one adaptation in particular that is not only spectacular, it is also unique to elasmobranchs (sharks and rays) *and* has real-life applications for humans! Shark skin is made up of tiny "skin teeth," also known as dermal denticles, or placoid scales. Pretty cool, but why? There a couple reasons sharks have this adaptation. First, by having thinner, ridged scales, sharks are often able to swim faster, easier, and quieter than other fish. Second, another layer of thicker, less ridged scales protects the shark from scrapes and scratches, and makes it harder for parasites to attach on to a shark's body. If you ever had the opportunity to touch a shark's skin, you might find that it feels very smooth running from head to tail. If you ran your hand going from tail to head however, the skin would feel very much like rough sandpaper.

How could this animal kingdom adaptation be applied in our lives? Scientists have found ways to reduce algae build up on boats, improve fuel efficiency in cars, make streamlined swimsuits, and create bacteria-resistant materials, all inspired by the design of shark skin. This idea, where the design and production of something is modeled after something in nature, is called biomimicry. If you are interested, we encourage you to do your own research on biomimicry, and even come up with ideas for other products based on some of your favorite animals.