

Exploration Fish

COMPARE

What's different about these fish? Describe each fish using words.



How would you describe the shape of this fish's body?

Are all of the fish shaped the same?

Porcupinefish



Do you see any fins on this fish?

How would you describe this fish's shape?

Seahorse



How would you describe the shape of this fish?

Are all of the fish the same colors?

Angelfish

Exploration Fish

FUN FACTS



Porcupinefish

This fish inflates itself when disturbed by predators so it looks like a spiky ball. It does this by pumping water into its stomach, which can inflate by 100 times and by having really stretchy skin (up to 8 times more than other fish).



Seahorse

Seahorses move slowly. They have long mouths which are used for feeding on plankton.



Angelfish

This fish lives near coral reefs and boulders where it can find shelter. Their colors help them to communicate with each other and also hide from predators.



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FIELD JOURNAL

Instructions

Let's go on a fishy field trip!

Think of some places near your home where you might be able to find some fish. (If you can't find any fish outside, try an aquarium or a pet store.) Try to find at least three different fish and draw a picture of each one.

When you are finished with that, look at all of your fish together. How are these fish the same? How are they different?

Your Name:

Today's Date:

What's the Weather Like?

Draw the fish you see in the space below.



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TIPS FOR ADULT HELPERS

General Tips

- 1. Try to ask children open-ended questions.** These kind of questions help children talk about nature. For example, a useful open-ended question could be, “How would you describe this shell?”
- 2. There are many “correct” answers.** When asking open-ended questions, remember that there is no one “correct” answer. There are many “right” answers. The goal is to have children and adults have a thoughtful discussion.
- 3. Praise thoughtful answers.** If you ask a close-ended question (such as “What animal lives in that shell?” or “What color is that bird?”), any thoughtful answer could be praised. Even if the child’s answer is inaccurate, you could say something like, “That was a great idea. You know, that is how scientists learn, by thinking and trying out different ideas.”
- 4. Start from what the child knows already.** When trying to get a thoughtful discussion going, start with what the child already knows about a topic. Use that information as a springboard for further exploration. Through discussion and exploration, children can expand and revise their knowledge about nature.
- 5. Explore together.** If the topic is new to you as an adult helper, share this information with the child. You can make guesses and explore together. All science starts off with questions, not answers.
- 6. Science IS exploration and discovery.** When you let children try out different theories, you help introduce them to the scientific method and start building research skills.
- 7. Explore a science book together.** If a child is interested in a particular topic, you might want to follow up the activity reading a science book together and writing down what you have learned about the topic.

Examples of Open Ended Questions About Fish

When you **compare and contrast** different fish, you might want to begin by asking the child questions such as:

- What colors do you see on this fish?
- Do you see any designs on this fish? Do you see any patterns on this fish?
- How would you describe the shape of this fish’s body?
- Do you see any fins on this fish?
- How would you describe its fins? How would you describe its mouth? How would you describe its eyes?

To discuss **similarities and differences**, you might ask:

- How are these fish similar to each other?
- How are they different?

If the child is having a hard time coming up with ideas, you might prompt her/him with more narrow questions such as:

- Are all of the fish the same color?
- Do all of the fish have the same number of fins?
- Are the fins the same size?
- Are all of the fish the same shape?
- Are some narrow?
- Are some wide?