

WEEK 2 Day 1

**STEM Investigation 2:
Structures of a Fish**

Children make observations of the structures of a fish body and record the data by creating scientific illustrations. The class develops the understanding that fish have particular structures such as scales, gills, and fins. Children compare and contrast human and fish body structures.

Big Ideas	Like humans, animals are part of interdependent communities that are affected by, and adapt to, the environment that surrounds them. Through shared or independent research, people gather, organize, and analyze information about the world to think critically and gain understanding.
Guiding Questions	What do you want to learn more about animals and their habitats? How and where can you find this information?
Vocabulary	structure function
Materials and Preparation	<ul style="list-style-type: none"> ● fish (live fish, or a fish video/photograph) Decide if children will observe a live fish, a video of a fish playing on a device, or color photographs of real fish. ● paper, one sheet per child ● writing tools ● clipboards ● <i>The Life Cycle of the Salmon</i>, Bobbie Kalman ● chart paper On the chart paper, write the focus question, <i>What are the important structures we can observe about a fish’s body?</i> ● body tracings, from STEM Investigation 1 ● yarn <p>Prepare the observational space. Place paper on clipboards and arrange</p>

	<p>them at each seat around the table. Crayons and pencils can be kept in small containers in the center of the table.</p> <p>Children will generate any number of authentic questions as they work. Keep a large piece of chart paper on the wall near the STEM Center to record and "bank" any spontaneous questions you hear. During the Sharing our Research meeting, review these child-generated questions.</p>
<p>Intro to Centers</p>	<p><i>What are the important structures we can observe about a fish's body?</i></p> <p>Point to the focus question and read it aloud.</p> <p><i>What are some important words in the focus question that we need to understand as scientists in order to answer it?</i></p> <p>Provide time for children's responses. Circle the words 'notice,' 'structures,' 'body,' and 'fish.' Discuss these words. Show children the real fish or the illustration.</p> <p><i>What is the fancy word scientists use for noticing something?</i></p> <p>Discuss and write the word 'observe' about the word 'notice' on the chart.</p> <p><i>As scientists in the STEM Center this week, you will be scientists investigating the structures of a fish's body. What will you do as scientists to answer the focus question?</i></p> <p><i>Scientists tell others about what they discover. We've learned that the information they record is called data.</i></p> <p><i>You will make careful observations of a fish body and record what you find by drawing a scientific illustration on paper.</i></p> <p>Model how to look closely at the fish and how to draw the illustration on white paper. Label one of the structures.</p>
<p>During Centers</p>	<p>Children will make observations of a fish body and create scientific illustrations. If a real fish is being used, children might need to stand up and walk around the table if they are curious about looking at all sides and features of the fish.</p>
<p>Facilitation</p>	<ul style="list-style-type: none"> ● What parts and structures of the fish's body do you notice? ● What does the fish look like? ● What are some things the fish can do with its body?
<p>Sharing Our Research</p>	<p><i>What did you do this week as scientists in the STEM Center?</i></p> <p>Revisit the focus question. Invite children to turn and talk about something he/she noticed. Have children's drawings available so they can reference</p>

	<p>their data.</p> <p style="text-align: center;"><i>Looking at the data you generated, what did you find out about the fish's body?</i></p> <p>Keep children focused on the observable features or structures of the fish body.</p> <p>Engage the children in a discussion about the differences between the structures of the human body {from Investigation 1} and the body structures of a fish. Use yarn to connect structures that serve similar functions.</p>
<p>Standards</p>	<p>K-LS1-1 Use observations to describe patterns of what plants and animals (including humans) need to survive. Further explanation: Examples of patterns could include that animals need to take in food but plants do not, the different kinds of food needed by different types of animals, the requirement of plants to have light, and that all living things need water. Examples could include the pattern a bear makes when preparing to hibernate for winter, the seasonal patterns of trees losing and/or keeping their leaves. Analyzing and Interpreting Data, Organization for Matter and Energy Flow in Organisms, Patterns</p> <p>K-2-ETS1-1 Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool. Asking Questions and Defining Problems, Defining and Delimiting Engineering Problems</p> <p>Grade 1 (Additional Standard)</p> <p>K-2-ETS1-2 Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem. Developing and Using Models, Developing Possible Solutions, Structure and Function</p>

<p>Notes</p>
