

Big Idea:
Where do we find water?
Guiding Questions:
How can we sort objects into groups that have similar patterns?
Can some materials be a solid or a liquid?
What should the three little pigs have used to build their houses?

21st Century Themes/Skills:

DCI (Disciplinary Core Ideas)	Science and Engineering Practices	Cross Cutting Concepts	Student Learning Objectives	Differentiated Activities (Consider the 5 Es)	Resources/Technology	Formative Assessments	Benchmark Assessment
PS1.A: Structure and Properties of Matter - Different kinds of matter exist and many of them can be either solid or liquid, depending on temperature. Matter can be described and classified by its observable properties. (2-PS1-1) - Different properties are suited to different purposes. (2-PS1-2),(2-PS1-3) - A great variety of objects can be built up from a small set of pieces. (2-PS1-3)	Planning and Carrying Out Investigations Plan and conduct an investigation collaboratively to produce data to serve as the basis for evidence to answer a question. (2-PS1-1)	Patterns Patterns in the natural and human designed world can be observed. (2-PS1-1)	SWBAT: Identify different types of materials. SWBAT: Compare properties of different materials. SWBAT: Identify ways people use the materials. SWBAT: Identify sources of natural and unnatural materials.	ENGAGE: Activate Prior Knowledge Have students look around the room to name different objects and identify the materials used to make them; e.g., desks (wood/metal), posters (paper), pencils (wood, graphite), windows (glass). On a piece of chart paper, use the different materials as headings (for example: plastic, metal, wood, paper). Then, have students list the objects that fit under each heading; some will fit under more than one heading. Have students work in small groups to discuss why they think different objects are made of different materials. For example, <i>Why are the windows made of glass? Why not ice? Why not metal?</i> Share as a class. Students will likely cite various properties of materials. Have students view the video segment and then discuss the answers to these questions: <i>What objects did you see? What materials were they made of? Where did the materials come from?</i> Begin a list of student-generated and teacher-generated questions. Present objects or pictures of objects (e.g., raincoat, ceramic mug, rubber eraser, small cardboard box, bronze statue, light bulb), and ask students what they would like to know about each of them. (<i>What are they made of? Why were those materials used? What are the products used for?</i>) Remind students that they will look for answers to these questions as they complete the activities over the next few days.	Unit 2 Resources	Have students complete the primary assessment. Students use the Board Builder tool to create a board that shows what they know about the focus question. Emphasis should be placed on the evidence they have collected to support their findings.	
				EXPLORE 1: Present students with the Lesson Questions and have them complete the "My Question" section of the Scientific Explanation using the questions. Introduce the "Evidence" section: Evidence is what you find out about the question during the lesson. As you learn, you can use this area to take notes and draw pictures. Guide students to think about what they already know about each question or what they learned during the Engage session. Have students begin the Evidence section with information they already know and information they gathered during Engage. EXPLORE 2: As a class, preview the text of the Core Interactive Text. Point out the relationship between the CIT and the Lesson Questions. This text gives us some of the information we need to answer our questions. Then have students work in groups of 2–3 to view the video segments. Guide students to review the Lesson Questions before viewing, and then pause after each segment to review what they learned with respect to each question. Students should take notes in the Evidence section of the Scientific Explanation, in the Assignment 1: <i>All About Materials</i> tables, or in their science notebooks. Come back together as a class to review what students have learned. <i>What more do we need to find out?</i> EXPLORE 3: As a class, brainstorm a list of different properties that materials can have (e.g., hard, soft, strong, weak, magnetic, flexible, inflexible, solid, liquid) or ways that materials can be described (e.g., by hardness, strength, flexibility). Have students view the video segments, looking for evidence of the properties that each material has. After each segment, students should pause to add to the Evidence section of their Scientific Explanations or information tables. Return to the list of properties, mark those that students observed in the video segments, and have students add others that they found. Discuss: <i>Why are the properties of a material important?</i> Guide students to understand the connection between a material's properties and what it can be used for. EXPLORE 4: Have students turn and talk to answer this question, and then come back as a class to discuss: Choose one of the materials that you learned about in the video segments. <i>Do you think that material is natural or human-made? What makes you think so?</i> Have students read the passages to compare natural and synthetic materials, and then evaluate their previous statements about whether particular materials are natural or human-made. Encourage students to back up their claims with evidence and reasoning.	Video Segment: Building Materials and Glass		
				EXPLAIN: Have students use the evidence that they collected in the Explore sessions to prepare drafts of the "My Claim" and "My claim is true because" sections of the Scientific Explanation Student Sheet. Have students turn and talk to share their explanations with each other, and then evaluate what they know and don't know. Is there anything else you need to find out to answer the questions well?	Video Segment: Clay from the Earth		
				EXPLORE 1 and 2: Explain to students that they will be conducting two investigations in which they will be comparing	Video Segment: Plastic Cups and Cutlery		

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