

5E Lesson Plan Template

Teacher's Name	Subject/Course Title Grade Level	Date
Nevena Rudinac	Science/Different materials, different uses 2nd Grade	2025.
Materials Needed:	Lesson Outcomes: (what the student is expected to learn and to do) <ol style="list-style-type: none"> 1. uses adequate materials for making items 2. Explains and understands why a certain materials is suitable for making an object. 3. Lists and distinguishes the properties of stone, wood, metal, plastic, glass, cardboard and recognized which materials is adequate for making a particular object. 	
Engage 20 min	Instructions: <ol style="list-style-type: none"> 1. Watch the Three Little Pigs cartoon and pay attention to the materials the little pigs make houses from. 2. List the materials you observed and classify the materials as soft, hard, rough, smooth. 3. Group task: <p style="padding-left: 20px;">The teacher shows the students the binding (scarf, scarf, cap...) and together they check the transparency of the material. One student puts on a blindfold, and the teacher hands him an object. He gropes and tries to guess which item it is. While feeling the object, comments aloud, with the help of the teacher, about the properties of the object (soft, hard, rough, smooth)</p>	
Explore 40 min	Divide students into groups. Students conduct experiments and solve problems within the group. <ol style="list-style-type: none"> 1. Group – STONE 2. Group – WOOD 3. Group – METAL 4. Group – PLASTIC 5. Group – GLASS 6. Group – PAPER/ CARTON <p style="padding-left: 20px;">1. Group – STONE</p> <p style="padding-left: 20px;">What you need: Item: decorative pebble (painted pebble) Accessory or tool: a small hammer (from the technical kit), a small box or lid.</p> <ol style="list-style-type: none"> 1. What do you feel when you touch a stone? _____ 2. What shape is it? _____ 3. Will the shape of the stone change if you squeeze it in your fist? _____ 4. Put the stone in the prepared box, using thr hammer tool, hit the stone two to three times. 	

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Circle the correct statement.

- | | | |
|----------------------------------|-----|----|
| A) The stone is damaged. | YES | NO |
| B) The stone changed shape. | YES | NO |
| C) The stone is easy to process. | YES | NO |
| D) The stone remained unchanged. | YES | NO |

5. How is a decorative stone made? Circle it.

by cutting by crowding bending twisting by stretching drilling
painting

6. Complete the sentences with one of the offered words.

A) The stone is _____ shaped, it is needed to shape the stone

HARD / EASY

COMMON / SPECIAL TOOL

B) Draw two examples to how a man uses a stone. What did the pig use the stone for in the story of the Three pig?

2. Group – WOOD

What you need:

Objects: two toothpicks, an unsharpened wooden pencil, a wooden flute, and a wooden spoon

Tools: a paring knife, a bowl of water

1. Take a wooden spoon from the table and evaluate it.

a) Is it light or heavy?

b) Is it hard or soft?

2. Bend the toothpick with your hands. What has changed?

3. Take a pencil and sharpen it.

What happened to the pencil? Circle it?

a) The pencil remained unchanged.

b) The pencil shrank and changed its shape a little, creating chips.

4. Complete the sentence.

A wooden pencil is shaped using a special sharp tool _____.
easy/difficult

5. List three things you see around you that are made of wood.

6. What do people use wood for in winter?

Look at the flute? Write what it is made of and what it is used for?

3. GROUP – METAL

What you need:

Objects: small metal spoon, larger metal screw, pot of warm (not boiling) water

Utensils or tools: large tongs (or other tongs), sheet of paper

1. Take the metal spoon in your hand and squeeze it.

a) Has the shape of the spoon changed? Explain why?

b) Take a metal screw in your hand.

Is there a difference? What did you notice first? Explain.

Try to bend and twist the screw and the handle of the spoon. Has anything changed? Explain why you think so.

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2. Place a metal spoon in a pot of hot water and count to 60. Pick up the spoon with tongs and place it on the paper, look at it and feel it. Has anything changed?

3. Complete the sentence with one of the given words.

The metal spoon is _____ heated.

easy/difficult

4. Observe the pot of water.

a) Does the metal pot leak water?

b) What is the pot used for? Explain why you think so.

5. a) Why didn't any pig build a house out of metal?

b) Draw three objects made of metal.

4. GROUP – PLASTIC

What you need:

Objects: plastic cup made of regular (thin) plastic, plastic container made of harder plastic. Bottle of clean water, plastic straw (several pieces)

1. Pour water into a plastic cup. Does the plastic cup leak water?

2. Empty the glass, raise it high and drop it on the table. What happened to the glass?

3. Twist both plastic containers in your hand.

a) What happened to the glass?

b) What happened to the harder plastic container?

4. a) Why didn't any of the pigs in the fairy tale build a house out of plastic?

5. Draw three different plastic objects.

5. GROUP – GLASS

What you need:

Objects: a clear glass cup and a colored glass object (colored jar, bowl, saucer or something else), a pencil

1. a) Slowly lift the cup, hold it firmly and look through it. Can you see what is on the other side? Explain why windows are made of glass?

b) Why is the glass cup held firmly and slowly lowered onto the table? Explain why you think so.

2. Mark with a pencil the line where you will pour the water. Pour the water. Does the glass cup leak?

3. Take both glass objects and place them next to each other. What difference did you notice first? How is this glass different from the first? Compare.

4. Why didn't any of the pigs in the story The Three Little Pigs build a glass house?

5. Draw three glass objects (look around the classroom).

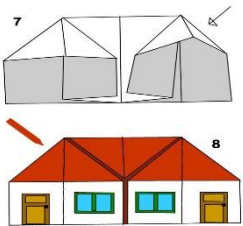
6. GROUP – PAPER/CARTON

What you need:

A4 white paper, cardboard box (any packaging, for example from soap or toothpaste), paper house diagram

Tools: scissors, ruler, crayons

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	<div style="text-align: center;">  </div> <ol style="list-style-type: none"> 1. Take a white piece of paper, measure and draw a square with a pencil, with four equal sides of 20 cm. Did you write on the paper with a pencil easily? Explain why you think so? 2. Cut out the square with scissors. a) Was it easy for you to do? Explain why? b) Stretch the rest of the paper. What happened? c) Take the paper scraps and carry them to the basket, before throwing them away, look at them and squeeze them in your hand. Has anything changed? 3. Fold the paper according to the diagram and shape the house. Did you succeed? Explain why? 4. Draw the windows and doors and color them as desired. Write down whether it was difficult to make the paper house? Why do you think so? 5. Look at the cardboard box. Explain what you think. a) Why is the soap packed in cardboard and not in paper? b) Unwrap the box, cut out a rectangle with scissors and fold it in half. Are there any similarities between paper and cardboard? Explain why you think so. 6. a) Write why none of the pigs in the fairy tale The Three Little Pigs built a house out of paper or cardboard. b) Draw three objects on paper.
<p>Explain</p> <p>10 min</p>	<p>Students ask questions if they need further clarification. Each group is asked what objects they drew from the materials they were given.</p>
<p>Elaborate</p> <p>15 min</p>	<p>Students apply what they've learned. A presentation is shown that students need to complete based on their research.</p> <p>Students compare and contrast materials. They indicate which material is suitable for making certain items</p>
<p>Evaluate</p> <p>15 min</p>	<p>Students check their knowledge by playing a quiz. For the end of this activity, students play game paper, rock, scissors.</p> <p style="text-align: center;">https://wordwall.net/resource/63262812/science-grade-2-materials</p>

STEAM Components:

- **Science:** recognition of materials and their properties
- **Technology:** Using devices (projector) for watching cartoon, playing online quiz
- **Reading and writing :** reading and writing down answers
- **Engineering:** making a diagram of a paper house
- **Art:** designing and drawing objects from different materials
- **Mathematics:** Measuring a square of paper