



## STEM for Inclusive Schools

Project no: KA220-NW-23-30-151162

### Lesson Plan:

## Making a Hat from a Paper Cup Using STEM Principles

**STEM4inclusive schools**  
**WP2 – Toolbox**  
**Școala Gimnazială Nr. 7 Galați**

-1-



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# Agenda



- ▶ Lesson objective
- ▶ Materials Needed
- ▶ Preparation
- ▶ Lesson Procedure
- ▶ Multiple Choice Questions
- ▶ True or False
- ▶ Fill-in-the-Blanks
- ▶ Extension Activities



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# Lesson Objective



- ▶ Objective of the Lesson
  - ▶ Develop fine motor skills
  - ▶ Enhance creativity
  - ▶ Improve ability to follow instructions
- ▶ Benefits of the Activity
  - ▶ Crafting skills development
  - ▶ Fostering creativity
  - ▶ Fun and interactive experience



# Grade Level and Duration

- ▶ Grade Level
  - ▶ Upper Elementary
  - ▶ Ages 7-10 years old
- ▶ Duration
  - ▶ 1 hour

-4-



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# Materials Needed



- ▶ Paper Cups
  - ▶ One per student
- ▶ Colored Construction Paper or Craft Foam
  - ▶ Various colors for creativity
- ▶ Scissors
  - ▶ For cutting paper and foam
- ▶ Glue Sticks or Liquid Glue
  - ▶ For sticking materials together
- ▶ Markers, Crayons, or Colored Pencils
- ▶ Decorative Items
- ▶ Tape
- ▶ Ruler (Optional)



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# Preparation



- ▶ Gather Materials and Prepare Workspace
  - ▶ Ensure all necessary materials are available
  - ▶ Organize the workspace for efficiency
- ▶ Set Up Demonstration Area
  - ▶ Designate a specific area for demonstrations
  - ▶ Ensure visibility for all students
- ▶ Optional: Prepare Templates for Decorations
  - ▶ Create templates to assist students
  - ▶ Provide extra guidance for those who need it

-6-



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# Lesson Procedure

- ▶ <https://www.youtube.com/watch?v=tx93QehDvPk>



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- ▶ Introduction (10 minutes)
  - ▶ Explain the craft activity: making a hat from a paper cup
  - ▶ Show a sample hat and discuss customization options
  - ▶ Share the lesson objective
- ▶ Activity Steps (40 minutes)
  - ▶ Preparation (5 minutes)
  - ▶ Cutting and Shaping the Hat (10 minutes)
  - ▶ Decorating the Hat (15 minutes)
  - ▶ Finishing Touches (10 minutes)
- ▶ Conclusion (10 minutes)
  - ▶ Showcase the hats and discuss designs
- ▶ Assessment

# Introduction to Craft



## ► Introduction to Craft

- Explain the activity: making a hat from a paper cup
- Show a sample hat
- Discuss customization options with different decorations

## ► Objective of the Lesson

- Share the lesson's objective
- Explain what students will learn and create



# Activity Steps



▶ <https://www.youtube.com/watch?v=Wd0mp-To-yw>

▶ [https://www.youtube.com/watch?v=y\\_dwSLjniFg](https://www.youtube.com/watch?v=y_dwSLjniFg)

-9-

▶ <https://www.youtube.com/watch?v=kDU99T9E4eY>

▶ <https://www.facebook.com/watch/?v=1749186458625395>

- ▶ Preparation (5 minutes)
  - ▶ Distribute paper cups to each student
  - ▶ Provide colored construction paper, craft foam, scissors, glue, markers, and decorative items
- ▶ Cutting and shaping the hat (10 minutes)
  - ▶ Cut the top rim off the paper cup to create a cylinder shape
  - ▶ Cut a circle of construction paper or craft foam for the hat's brim
  - ▶ Glue the brim to the bottom edge of the paper cup cylinder
- ▶ Decorating the hat (15 minutes)
  - ▶ Use markers, crayons, or colored pencils to decorate the hat
  - ▶ Add stickers, glitter, or other decorative items
  - ▶ Design patterns or themes for the hats
- ▶ Finishing touches (10 minutes)



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# Preparation



## Distribute Materials to Students

Provide each student with a paper cup  
Hand out colored construction paper  
or craft foam



## Supply Craft Tools

Give scissors, glue, and markers  
Include other decorative items

-10-



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# Cutting and Shaping the Hat

- ▶ Step 1: Cutting the Paper Cup
  - ▶ Instruct students to cut the top rim off the paper cup
  - ▶ Create a cylinder shape from the cup
- ▶ Step 2: Creating the Hat's Brim
  - ▶ Cut a circle of construction paper or craft foam
  - ▶ Ensure the circle is slightly larger than the diameter of the cup
- ▶ Step 3: Assembling the Hat
  - ▶ Glue the brim to the bottom edge of the paper cup cylinder
  - ▶ Ensure the brim is centered and secure

-11-



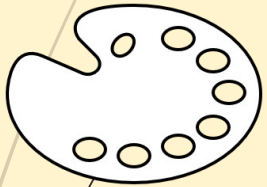
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# Decorating the Hat



## Step 4: Decorating the Hat

- 12- Use markers, crayons, or colored pencils
- Add stickers, glitter, or other decorative items



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## Step 5: Encouraging Creativity

Design patterns or themes for hats  
Examples: party hats, animal hats



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# Finishing Touches



- ▶ Adding Final Features
  - ▶ Students can add a ribbon or bow to the hat
  - ▶ Use glue or tape to attach the features
- ▶ Allowing Glue to Dry
  - ▶ Ensure sufficient time for the glue to dry



# Conclusion



- ▶ Showcase of Student Hats
  - ▶ Students present their hats to the class
  - ▶ Discussion on different designs and creative choices
- ▶ Reflection on the Activity
  - ▶ Students reflect on their learning and enjoyment
  - ▶ Discussion on applying skills to other crafts



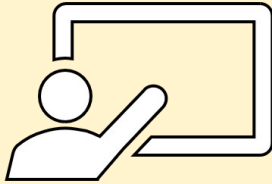
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# Showcase



## Student Presentations

Each student presents their hat to the class

Opportunity to explain design choices



## Discussion on Creativity

Analyze different designs

Discuss creative choices made by students

-15-



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# Reflection

- ▶ Encourage Student Reflection
  - ▶ Ask students to think about what they learned
  - ▶ Discuss what they enjoyed about the activity
- ▶ Application of Skills
  - ▶ Discuss how the skills used in the activity can be applied to other crafts

# Assessment



## ► Participation

- Observe students' participation in the activity
- Evaluate their ability to follow instructions

## ► Creativity

- Assess the creativity in decorating the hats
- Consider the effort put into the decoration

## ► Completion

- Ensure each student completes their hat
- Check application of skills learned in the lesson



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# Multiple Choice Questions



- ▶ First Step in Creating the Hat
  - ▶ Decorating the cup with markers
  - ▶ Cutting the top rim off the cup
  - ▶ Gluing the brim to the cup
  - ▶ Adding a ribbon
- ▶ Material for Hat Brim
  - ▶ Construction paper
  - ▶ Markers
  - ▶ Glue sticks
  - ▶ Tape
- ▶ Main Objective of the Lesson
  - ▶ To learn math skills



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# Question 1



- ▶ Steps to Create a Hat from a Paper Cup
  - ▶ Decorating the cup with markers
  - ▶ Cutting the top rim off the cup
  - ▶ Gluing the brim to the cup
  - ▶ Adding a ribbon



-19-



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# Question 4

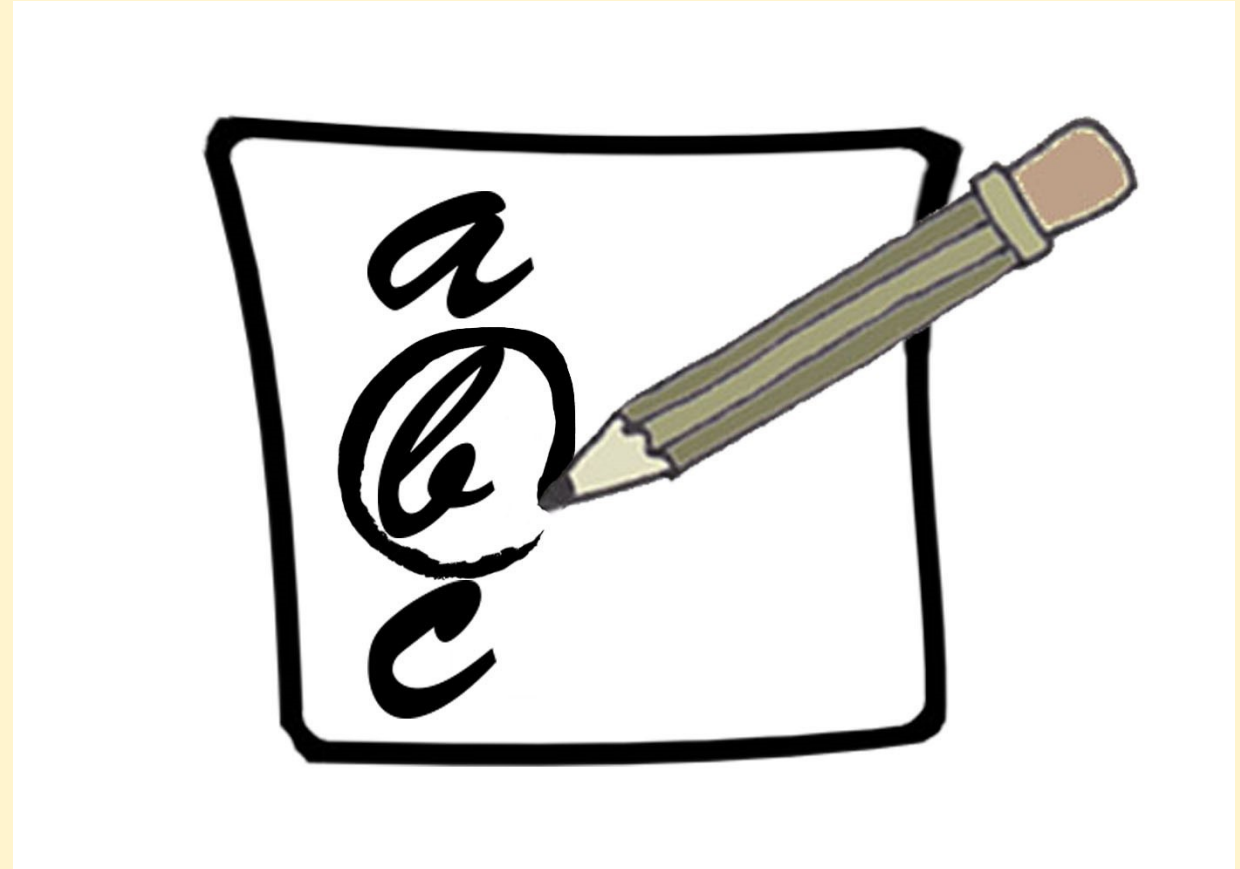
## ► Objective Options

- To learn math skills
- To create a simple hat and learn to follow instructions
- To learn the history of hats
- To practice writing skills



# Question 2

- ▶ Materials for Hat Brim
  - ▶ Construction paper
  - ▶ Markers
  - ▶ Glue sticks





# True or False

- ▶ Glue the brim to the top of the paper cup
  - ▶ Students should ensure the brim is securely attached
- ▶ Add decorations to make hats unique
  - ▶ Use glitter for a sparkling effect
  - ▶ Apply stickers for personalized designs

# Fill-in-the-Blanks



- ▶ Step 2: Creating the Hat's Base
  - ▶ Cut a circle of construction paper or craft foam
  - ▶ Ensure the circle is larger than the cup
- ▶ Final Steps: Adding Features
  - ▶ Add additional features using glue or tape
  - ▶ Possible features include decorations or embellishments





# Extension Activities



-24-

- ▶ Technology
  - ▶ Using tools for cutting or decorating
- ▶ Engineering
  - ▶ Thinking about structure and design for stability and wearability
- ▶ Math
  - ▶ Measuring dimensions and planning layout for symmetry or decoration
- ▶ Extension Activities
  - ▶ Creative Prompt: Imagine your hat is magical
  - ▶ Math Extension: Measure the diameter of the brim and the cup
- ▶ Critical Thinking Question
  - ▶ Which STEM fields were used in making a hat from a paper cup?
- ▶ Science

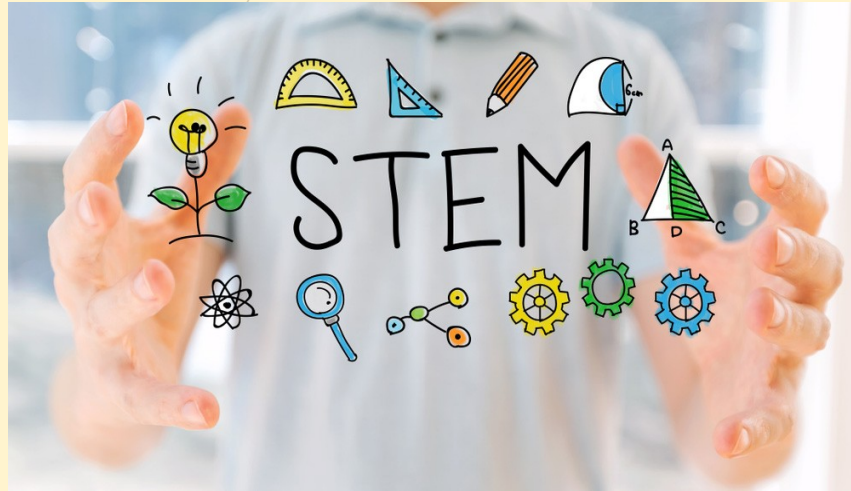


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# STEM Fields Involved



## ► Science

- Understanding material properties of paper, glue, or paint

## ► Technology

- Using tools for cutting or decorating

## ► Engineering

- Thinking about structure and design to ensure stability and wearability

## ► Math

- Measuring dimensions and planning layout for symmetry or decoration



# Creative Prompt



-26-



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- ▶ Creative Prompt: Imagine a Magical Hat
  - ▶ Describe the magical powers of the hat
  - ▶ Explain how you would use these powers
- ▶ Math Extension: Measuring the Hat
  - ▶ Use a ruler to measure the diameter of the brim
  - ▶ Measure the diameter of the cup
  - ▶ Calculate the difference between the two measurements