



STEM for inclusive Schools

WP2 – Activities

Worksheet – Water wheel a source of renewable energy

Physics / Engineering

Scoala Gimnaziala Nr. 7 Galati, RO

Project Title: STEM for inclusive Schools

Acronym: STEMInSCH

Reference number: 2023-1-DE02-KA220-000000

Project partners:

- P1 University Paderborn (UPB), DE
- P2 Universitatea Dunarea de Jos din Galati (UDG), RO
- P3 Scoala Gimnaziala Nr. 7 Galati, RO**
- P4 Siec Badawcza Lukasiewicz - Instytut Technologii Eksploatacji, PL
- P5 Inovatif ve Girisimci Toplum Dernegi, TR
- P6 Sucessos Criativos, Lda, PT



Worksheet for the Activity:

What is a water wheel?

Task description:

Time to finish the task: 100 minutes

Supplies:



- Plastic Bottle Caps
- Plastic Bottle
- Soldering Iron
- Wooden Popsicle Sticks Ice Cream Sticks
- Glue Gun With Glue
- Water
- Bolt
- Straw Pipe

Method:



Small group work



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Instructions:

<https://youtu.be/i7w6g3KlJzY?si=-uOmVEi64eGxlwlp>

Use the template of the video.

Cut the plastic bottle in half. This will be the base of your water wheel.

Poke holes in the bottle caps. The holes should be big enough for the popsicle sticks to fit through.

Insert the popsicle sticks into the holes in the bottle caps. Make sure the sticks are sticking out about an inch.

Glue the popsicle sticks to the bottle caps.

Cut a piece of straw pipe to the desired length. This will be the axle of your water wheel.

Insert the axle into the center of the water wheel.

Secure the axle in place with the bolt.

Fill the bottle caps with water.

Place the water wheel in a stream or river.

Watch your water wheel spin!

Your Group name:



Write the names of your group members in the box:





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- Can you tell what worked well in your design?
- Can you tell what would you change to improve the efficiency or speed of your water wheel?
- How does your water wheel model demonstrate energy transformation?

Write down your observations.

