

CIVILIZATION DOUGH

Purpose of the Activity:

To enable students to experience the paper production process by reusing waste materials and to help them recognize the importance of using resources efficiently and recycling for life.

Learning Area / Theme:

A Journey in the World of Living Things



**CURIOUS
BOX** 



CIVILIZATION DOUGH



Let's Spark Curiosity

Before the activity, the "Planets" poster is put up in the classroom. The following questions are asked to the students:

- Have you ever thought that a piece of paper you held in your hands was once a tree?
- So, when we throw the paper we use into the trash, does it really disappear, or can it be made useful again?

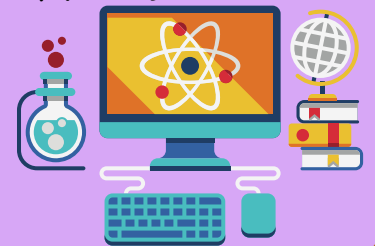
Many of the things we use every day are made from resources we get from nature. These resources are not unlimited and can run out if we are not careful.

In today's activity, we will find out how paper is made and how old paper can be reused to make new things. This way, we will see why it is important to take care of nature and recycle through experimentin.

Let's Start Exploring!

The activity video is watched by pausing when necessary. The contents of the set are checked, and the experiment is conducted. All lids and packages are opened together with the students.

Watch the video
by pausing it!



Set Content

- Experiment tray.....
- Cell tray.....
- Mixing bowl.....
- Wooden spoon.....
- Civilization dough template.....

- Piece of fabric.....
- Map pin.....
- Warm water.....
- Sponge.....
- Civilization Dough activity sheet.....

How Do We Do It?

1. Cut the cell trays into small pieces and put them in the mixing bowl.
2. Add warm water on top and let them sit for about 15 minutes, stirring occasionally.
3. Mash the softened pieces with your hands until they reach a dough-like consistency.
4. Attach the piece of fabric to the four edges of the civilization dough template using map pins.
5. Place the template in the center of the experiment tray.
6. Slowly transfer the paper dough onto the fabric using a wooden spoon and drain any excess water.
7. Use a sponge to remove the remaining water on top.
8. Wait for the paper to dry; once it is dry, it is ready to use.

What Are The Things That Little Scientists Should Discover?

The following questions are asked to the students:

- Do you know what it means to use resources carefully?
- Why is recycling important?
- What do you think happens when the paper we use is thrown into the trash?

Natural resources are things found in nature that are necessary for life, such as water, trees, soil, minerals, and energy sources.

These resources are not unlimited. For example, trees are cut down to make paper. Trees take a very long time to grow.

That is why it is very important to use natural resources carefully, meaning to consume only what we need.

Using resources carefully helps them last longer and keeps nature in balance.



What Are The Things That Little Scientists Should Discover?

For life to continue on Earth, we need water, soil, trees, and air. These things are called **natural resources**.

People get many of the products they use in daily life from these resources.

For example, paper comes from trees. However, trees do not grow back quickly. That is why it is very important to use natural resources carefully, meaning to consume only what we need.

Used materials like paper, plastic, glass, and metal can be recycled instead of being thrown away.

This process is called recycling. Recycling helps create less waste, keeps the environment cleaner, and protects natural resources.

Also, some waste can be reused to make different products.

For example, we can tear used paper into small pieces and mix it with water to make new paper pulp. When this pulp dries, it becomes a product that can be used again.



Scientific Explanation for The Inquisitive

The following thought-provoking questions are asked to the students:

- What kinds of waste do we produce most at home or at school?
- What can we do to reuse this waste?
- What problems can happen in the environment if recycling is not done?

What is environmental pollution?

Environmental pollution is the contamination of air, water, and soil caused by litter, wastewater, harmful gases, and chemicals.

Environmental pollution negatively affects the health of living things and damages the habitats of plants and animals. Especially, waste that does not disappear quickly in nature (like plastics) increases environmental pollution.

Which materials can be recycled?

Recyclable materials are grouped into categories:

- Paper and cardboard (notebooks, newspapers, packaging boxes),
- Plastic (bottles, caps, packaging),
- Glass (jars, bottles),
- Metal (cans, beverage cans).



When these materials are sorted properly, they can be processed and turned into new products.

Which materials cannot be recycled or need special care?

Some waste cannot always be recycled or requires special handling:

- Dirty and greasy paper (like tissues and wet wipes),
- Batteries and electronic waste,
- Chemicals and medicine waste.



These kinds of waste should not be mixed with regular trash because they can harm the environment and should be taken to special collection areas.

Why does recycling help reduce environmental pollution?

Thanks to recycling:

- The amount of waste thrown into nature decreases,
- Soil, water, and air become less polluted,
- Natural resources are protected,
- Energy is saved.



For example, recycling waste paper means fewer trees are cut down to make new paper, which helps protect forests.

What Have We Discovered?

“In this activity, students discovered that paper comes from a natural resource and that waste can be recycled to protect the environment.”. Activity sheet is completed.

What Else Can We Do?

Dear teacher, you can guide our little scientists to design an “eco-friendly” product using recycled paper, encouraging them to develop creative ideas to protect the environment.

Designing Pencilcase from Waste

Materials

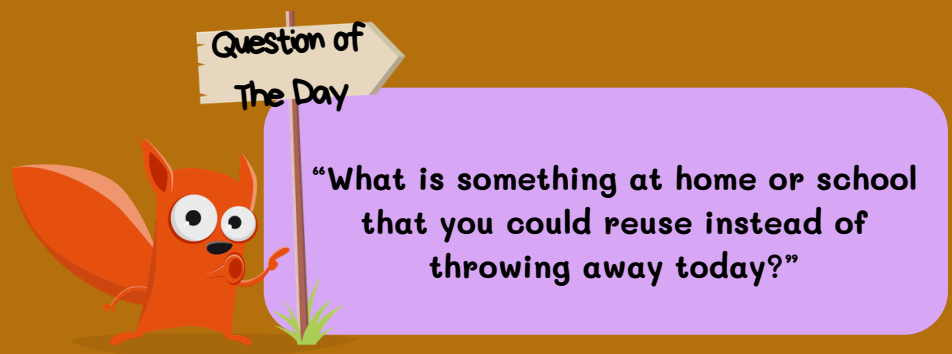
- Toilet paper roll or empty cardboard cup
- Waste paper, newspaper, or magazine pieces
- Scissors
- Glue
- Felt-tip pens or colored pencils
- Optional: fabric pieces, buttons, string

With this activity, students realize that simple materials that could be thrown away at home or school can be reused with small touches.

This emphasizes that recycling is not just about throwing things into a bin, but also about giving them a new purpose.

Activity

1. First, the waste materials to be used are selected and cleaned.
2. The cardboard roll or cup is used as the body of the pencil holder.
3. Waste papers are torn or cut and glued around the body.
4. The top is decorated with colored pencils or covered with magazine pieces.
5. Students who wish can decorate their pencil holders with small waste materials like string or buttons.
6. When the work is finished, students explain to the class which waste materials were used to make their product.





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