

ARTIFICIAL SNOW

Experiment Purpose:

To acquire knowledge about seasons and observe the formation of artificial snow through an experiment.

Interdisciplinary Theme:

How the world works.



**CURIOUS
BOX** 



**TUNING
IN**
Sparking Curiosity



**FINDING
OUT**

What Should Little
Science People
Discover?



**SORTING
OUT**

What Should
Little
Scientists
Explore?



**GOING
FURTHER**

For the Inquisitive
Minds, Scientific
Explanation, What
Else Can We Do?



**TAKING
ACTION**

Question of the day?



**MAKING
CONCLUSIONS**

What Did We
Discover / Activity
Pages / Exit Card



INQUIRY CYCLE

ARTIFICIAL SNOW



Let's Spark Curiosity

Ask students the following questions:

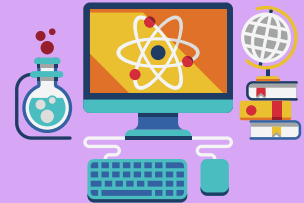
- Can you tell me your favorite season and its features?
- Do you like playing in the snow?
- Why is the weather cold during snowy days?

"I love winter the most. Do you know why? Because when it snows in winter, the pure white scenery makes me very happy. Playing with snow makes me even happier. After winter, suddenly spring arrives. Then summer, autumn... How do the seasons follow one another like this? We learned that the Earth we live on rotates around itself and revolves around the Sun. This rotation and revolution create day and night as well as the seasons. If I tell you it will snow today, would you believe me?" Ask this while showing the experiment materials and encourage students to share their thoughts.

Let's Begin Exploring!

Watch the activity video by pausing it. Check the set content before starting the activity. Perform all cover and package opening steps with students simultaneously.

Watch the video by pausing it!



Set Content:

- | | |
|---|--|
| <input type="checkbox"/> Snow globe template..... | <input type="checkbox"/> Water (not included in the set..... |
| <input type="checkbox"/> Sodium polyacrylate (fake snow)..... | content)..... |
| <input type="checkbox"/> Mixing container..... | <input type="checkbox"/> Stirring stick..... |
| <input type="checkbox"/> Storage container..... | <input type="checkbox"/> "How Do My Leaves Look" activity..... |
| | page |

It should be applied under adult guidance!

How to Do?

1. Remove all parts from the template, and turn the largest piece upside down.
2. Attach small pieces to the corners. (Pieces are carefully attached to each other.)
3. Flip the template, and attach the snow globe template to the gaps.
4. Place the mixing container in the middle of the prepared template.
5. Add sodium polyacrylate (fake snow) to the mixing container.
6. Add about half a cup of water on top. Artificial snow is ready!
7. Play games by storing the pieces from the template inside the snow.
8. Store the snow in the storage container to reuse it.



What Little Scientists Should Explore?

Ask students the following questions::

- How does day and night occur?
- How are seasons formed?

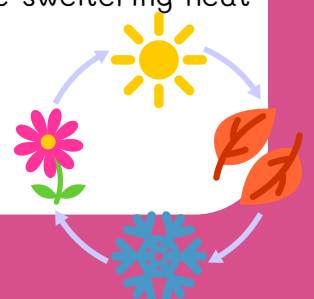
Formation of Day-Night and Seasons

Explain that our Earth both rotates around itself and revolves around the Sun. The Earth's rotation takes 24 hours (1 day). During this rotation, one part of the Earth faces the Sun and becomes illuminated, while the other part becomes dark. When it gets dark, we experience night, and when it gets illuminated, we experience daylight.

The Earth's revolution around the Sun creates **seasons**. This revolution takes 365 days and **6 hours (1 year)**. In Turkey, depending on how much sunlight the Earth receives during its revolution around the Sun, we experience different seasons. Sometimes we get less sunlight, which leads to winter, and sometimes we get more sunlight, which leads to summer. In the transitions between these two seasons, we experience spring and autumn.

Features of the Seasons

- Summer: Generally, summers in our country are quite hot. While temperatures, wind, and humidity levels may vary from city to city, overall temperatures rise.
- Winter: In winter, there can be heavy snowfall and significantly low temperatures. Generally, cold weather prevails throughout the country.
- Spring: Spring comes as the herald of summer, breaking the harsh cold and causing flowers to bloom.
- Autumn: Welcomes us as we head into winter, signaling the end of the sweltering heat and causing leaves to fall from the trees.



Going Further: Scientific Explanation

Following questions will be directed to students:

- The substance we used in the experiment was like a powder; how did it grow with water?
- How does snowfall occur?

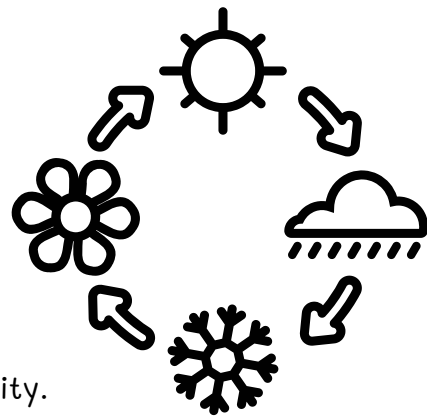
When water is spilled somewhere, we use a cloth or tissue to absorb it and dry the area. The cloth or tissue absorbs water but continues to maintain the same structure. If the tissue absorbs too much water, it shrinks and breaks.

Some materials absorb water when they come into contact with it and grow. The substance we used in the experiment is one of them; it absorbs water and swells. It is a superabsorbent material.

Because of this feature, it is commonly used in water-absorbing products, especially in baby diapers and farm products with water-absorbing bases.

How Does It Snow?

Explain that snowfall generally occurs in cold weather conditions. In cold atmospheric conditions, water vapors freeze. The frozen water droplets, called snow crystals, form regular structures. These snow crystals combine, and when they become large enough, they fall to the ground due to the force of gravity.



What Else Can We Do?

“Dear Teacher,
With our little scientists, you learned about the formation and characteristics of seasons. You created sensory activity by making artificial snow. In addition to these activities, you can make a season window with your students.

Season Window

Materials

- "How Do My Leaves Seem" activity page, colored pencils, scissors, A4 paper, glue
1. Color the tree images on the "How Do My Leaves Look" activity page according to the seasons.
 2. Divide the page in half and glue the trees side by side.
 3. Draw an open window picture on A4 paper or use the image below.
 4. Cut openings from the inside and sides of the window images.
 5. Slide the colored tree images into the window openings.
 6. Observe the four seasons through the window.



WATCH THIS!

https://www.youtube.com/watch?v=S2_XOjGLABQ&t=27s

What Did We Discover? / Exit Card

"Today, we explored how snow falls and how seasons are formed. The snow we created wasn't real snow, but it entertained us just like real snow, didn't it? How did you feel during this activity?" Ask this question and conduct a brief experiment report.

Provide students with an exit card at the end of the activity:

- Draw three things you learned today.
- Draw two things you want to learn more about.

Question of
the Day?



"Do all parts of the world experience four seasons? Are there countries where it doesn't snow?"

WHAT DID YOU LEARN TODAY?

Draw three things you learned today!

Draw two things you're curious about!

CURIOUS BOX



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