

GEAR (Global and Environmental Awareness and Responsibility) – a Toolkit for Inclusive Environmental Education

Project Element: Water

The Science of Rain Clouds for Buddy Lesson Grades 5 and 1

Rain Cloud in a Jar

Objectives (Grade 5):

1. To guide the pupil to perceive and understand connections between things they have learned: to learn the basic science of rain clouds
2. To guide the pupil to plan and carry out small-scale research projects and to make observations in versatile learning environments using different senses and research and measuring equipment
3. To offer the pupil opportunities to practice acting in a mixed-age group in different roles and interactive situations to inspire the pupils to express themselves and to listen to others as well as to support them in recognizing, expressing and regulating their emotions.
4. To work together with the younger learners to help them to predict what they think will happen (hypothesis setting)
5. To record what happened

Objectives (Grade 1):

1. To guide the pupils to understand simple models as representative of the environment: to become familiar with the basic idea of rain clouds
2. To guide the pupil to make observations and conduct experiments at school using different senses and simple research tools and to present the results in different ways
3. To offer the pupils opportunities to practice acting in a mixed-age group and to guide them to practice team-work skills and emotional skills and to strengthen their self-respect
4. To work together with the older learners to predict what they think will happen (hypothesis setting)
5. To record what happened

Transversal Competences

T1 Thinking and Learning to Learn

Using different materials, pupils work together to the basic science of rain clouds.

T2 Cultural Competence, Interaction and Self-expression

Grade 5 and Grade 1 pupils are working together to learn about rain clouds. The older pupils have the opportunity to teach the younger ones what they have already learned in a concrete situation that should be easy for the younger pupils to understand.

We also had five educators visiting from Austria and Hungary who were observing and interacting with the pupils in our lesson

Rain Cloud Science

Clouds are droplets of water and crystals of ice. Clouds are formed when water vapour rises into the air and condenses on to tiny particles of dust. A visible cloud forms when billions of these droplets come together.

Over time, the droplets and crystals that make up a cloud can attract more water to themselves. When water droplets grow heavy enough, gravity pulls them down as raindrops.

Rain Cloud in a Jar Experiment Materials

Water, a jar, shaving foam, a pipette, food colouring, a cup for the ‘rainwater’

How it Works

The shaving cream represents the clouds and the water represents the air. The coloured water represents rain. As the coloured water saturates the shaving-foam cloud, it gets heavy and eventually is so heavy that it can no longer hold the water and the drops “rain” down into the jar.

Sources:

<https://thestemlaboratory.com/rain-cloud-jar/>

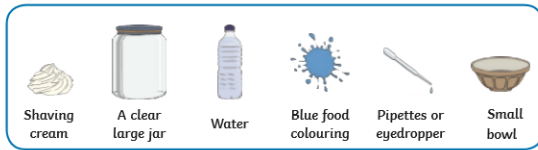
<https://funlearningforkids.com/rain-cloud-jar-science-experiment/>

Twinkl.co.uk



Rain Cloud in a Jar

You will need:



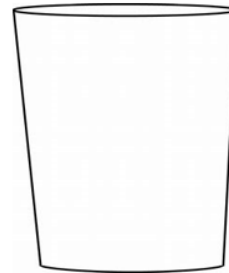
Method:

1. Fill the large jar with water, leaving 2 inches at the top.
2. Add the shaving cream to the top of the water until it reaches the top of the jar.
3. Next, add 1 cup of water to the small bowl and 3 drops of blue food colouring.
4. Mix the water and food colouring together.
5. Use the pipette to add drops of the water mixture to the top of the shaving cream cloud.
6. Continue adding the water mixture until you begin to notice the raindrops begin to break through the bottom of the cloud.



Rain Cloud in a Jar

What I think will happen. Draw and colour.



What I observed. Draw and colour.

