Walk among the clouds - getting to know the clouds' characteristics

1 Overall aims:

- Arousing interest in the natural environment,
- Developing understanding the external appearance and specific properties of different types of clouds,
- Developing the ability to plan and organize work efficiently while working in small teams,
- Developing the ability to share the opinion with others
- Improving creative thinking,
- Developing the ability to formulate hypotheses and test their validity
- Improving fine motor skills

2 Vocabulary - keywords

Properties of clouds, types of clouds (cumulus, cirrus, stratus, nimbostratus, cumulonimbus) , sky model, observation

3 Sustainable abilities developed

- Systemic thinking competency
- Anticipatory competency
- Collaboration competency
- Strategic competency

4 Pillars of sustainability included

- ecological
- social

5 STEAM domains

S, E, A

| 6 | # Teaching methodologies/activity outline |

Workshop are best conducted when interesting forms and shapes of clouds can be observed in the sky. It is also important to draw children's attention to the variety of clouds in different weather.

1. **Introduction - observing clouds**

Going out for a walk to the park /kindergarten garden. During the free observation of nature, the teacher shares observations about clouds with the children. Questions:
Do all clouds look the same?

- How can they be similar and how are they different?
- What can clouds be made of?
- Can clouds send us messages, e.g. predict the future?

2. **Distinguishing and defining clouds**

There are pictures of different clouds presented on the board. Children listen to the description read by the teacher, and match the type of cloud to the appropriate picture. The teacher asks questions:

- Which of these clouds do you like the most?
- What feelings do you think these clouds bring? (e.g. nimbostratus - sad, cumulonimbus - upset, cumulus - happy). Why did you choose these feelings?

3. **Building the model of the sky - teamwork**

The work is carried out in groups of 3, who choose one type of cloud. Each group has a description/ picture of a given cloud at their disposal.

Each group prepares a cloud model from materials of their choice (paper, cotton wool, glue, wires, threads, paints, tissues, toothpaste, etc.). When the work is finished, the clouds are attached to the wire / thread and hung in the right place in an aquarium/ box prepared by the teacher.

Children hang their clouds at the proper sky level where their counterparts are in reality. Such an installation can be used for later work as a learning aid to consolidate the acquired knowledge.

| 7 | # Expected learning outcomes |

The child will be able to:
- Distinguish different types of clouds and explain their properties
- Use knowledge by observing the sky to predict the coming weather
- Observe the effects of own work, consolidating previously developed concepts

8	**Assessment**
	Initial: Activating children's prior knowledge about the weather - conversation
Ongoing: described in scenario
Final: Conversation: Which of these clouds did you find the hardest to prepare?
Creative analogy/ drama play: Imagine you are a cloud. Which one would you like to be? How do you look like? How do you feel?
9	**Equipment and materials to be used in learning unit (tools, ingredients etc)**
	printed charts A3 with clouds + descriptions of different types of clouds
prepared base - a large rectangular aquarium or a cardboard box. On the back wall, the boundaries of the sky levels are drawn: low, medium and high.
materials for building clouds' structures and decorations (paper, cotton wool, glue, wires, threads, paints, tissues, toothpaste, etc.)
10	**Kind of setting - lab, kitchen, outdoor etc.**
	Outdoor: preschool garden or public park, preschool classroom
11	**References - source:**
	https://mz.pan.pl/pl/ponad-ziemia-przeglad-chmur/
English version: https://www.metoffice.gov.uk/weather/learn-about/weather/types-of-weather/clouds/cloud-names-classifications
12	**Autorzy**
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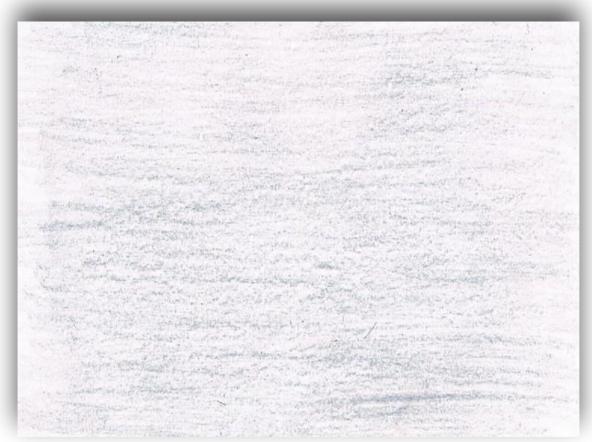Martyna Szczotka

Source: Own design
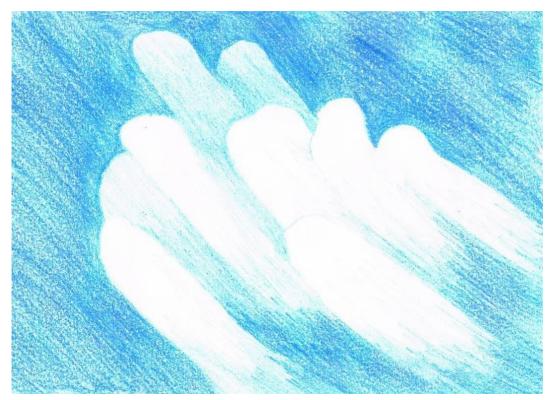
Ryc. 1. Cumulus-layer clouds

Ryc. 2. Cumulus clouds

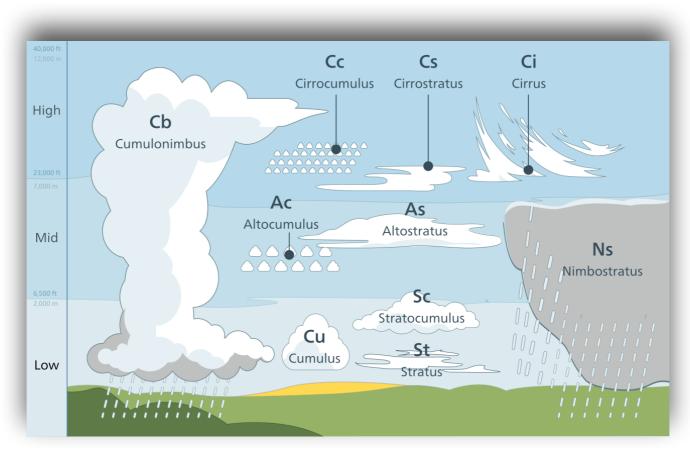**Ryc. 3. Stratus - stratified clouds**

Ryc. 4. Cirrus clouds

Ryc. 5. Medium cumulus clouds

Ryc. 6. Cirrus - cumulus clouds

Ryc. 7. Valentin de Bruyn / CotonThis illustration has been created for Coton, the cloud identification guide for mobile. - Praca własna, CC BY-SA 3.0, https://commons.wikimedia.org/w/index.php?curid=17899555