

build-a-project

grades K-2nd

Step-By-Step Guide

Weather Journal

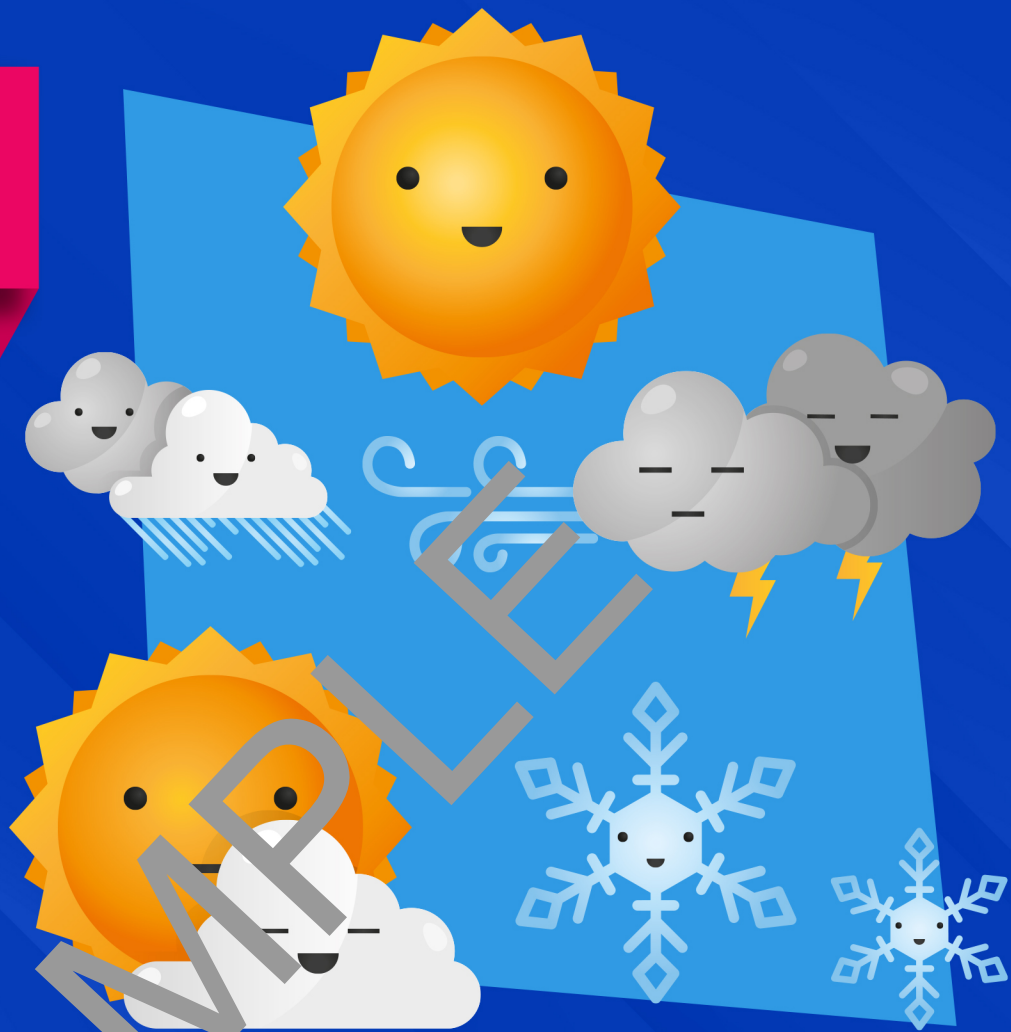
Content Standards

Reproducibles

Project Timeline

Additional Content Areas

Customized quality
projects for at
home learning!



Weather Project

STEP-BY-STEP GUIDE

Here is some need-to-know information and tips in order to make this project successful for your students:

1. **Content Areas:** This outlines standards that your students will meet according to their specific grade levels. It is highly recommended to share these standards with your students. It gives them perspective and a focus on what they are going to learn.
2. **Timeline For Project:** The timeline provided serves as a suggested general guideline on the pace of the project. This could be altered to better suit your family's lifestyle and schedules.
3. **Project:** The project description provides step-by-step instructions for the various project components included.
4. **Weather Journal:** This journal is for your child to track the weather and document what they are learning. Feel free to print as many weather sheets as needed.
5. **Checklist:** This is a helpful tool to ensure all components are complete.
6. **Research and Websites:** There are additional websites and resource recommendations at the end of the packet.
7. I use plural nouns for the sake of flow of explanation instead of having to say him/her, his/her :-)

CONTACT INFORMATION

Feel free to contact me anytime for questions and updates.

Nancy Mikhail

nancy@buildaproject.net

714.406.3522

www.buildaproject.net

CONTENT STANDARDS

SCIENCE

K-PS3-1.

Make observations to determine the effect of sunlight on Earth's surface. [Clarification Statement: Examples of Earth's surface could include sand, soil, rocks, and water.]

K-PS3-2.

Use tools and materials to design and build a structure that will reduce the warming effect of sunlight on an area.* [Clarification Statement: Examples of structures could include umbrellas, canopies, and tents that minimize the warming effect of the sun.]

K-ESS2-1.

Use and share observations of local weather conditions to describe patterns over time. [Clarification Statement: Examples of qualitative observations could include descriptions of the weather (such as sunny, cloudy, rainy, and warm); examples of quantitative observations could include numbers of sunny, windy, and rainy days in a month. Examples of patterns could include that it is usually cooler in the morning than in the afternoon and the number of sunny days versus cloudy days in different months.] [Assessment Boundary: Assessment of quantitative observations limited to whole numbers and relative measures such as warmer/cooler.]

K-ESS3-2.

Ask questions to obtain information about the purpose of weather forecasting to prepare for, and respond to, severe weather.

English

CCSS.ELA-LITERACY.W.K.2

Use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic.

CCSS.ELA-LITERACY.W.K.3

Use a combination of drawing, dictating, and writing to narrate a single event or several loosely linked events, tell about the events in the order in which they occurred, and provide a reaction to what happened.

CCSS.ELA-LITERACY.W.K.5

With guidance and support from adults, respond to questions and suggestions from peers and add details to strengthen writing as needed.

GOALS FOR THE PROJECT

Upon completion of this project, students will:

- Learn to differentiate different types of weather
- Practice writing about weather
- Present about weather
- Build a structure to avoid heat
- Learn about the four seasons



MINI ACTIVITIES AND MAIN PROJECT

Welcome To Your Weather Project!

In this project you will learn about the different types of weather and seasons through a series of fun activities and projects, all leading to the main essential question.

Essential Question: What is a structure you can build to decrease heat in a sunlit area?

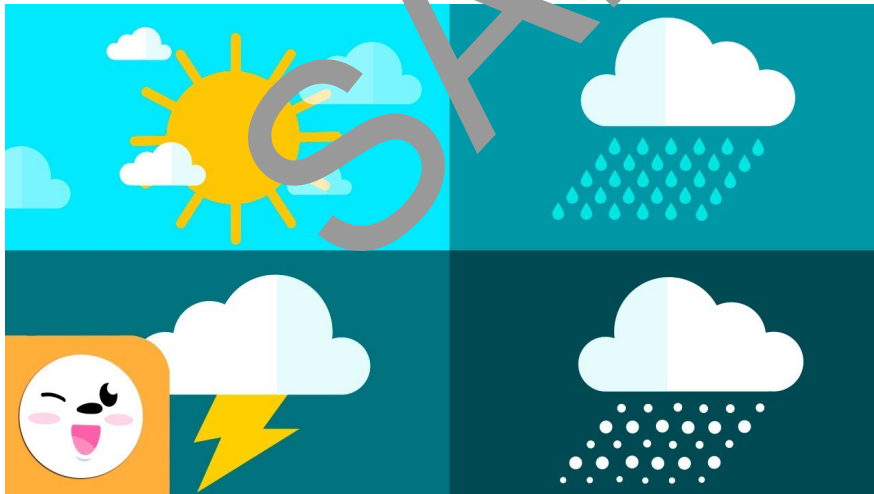
Subjects: Science, Writing, Art, Engineering, Speech

SCIENCE

Before we get to the main project, we have to learn what weather is first!

1. Learn about weather:

1. What is weather? Please find an information sheet on **page 6**.
2. **Watch this video on weather:** (click on picture)



Link to video:

<https://youtu.be/sn6GLgaTY0M>

3. Fill out first writing prompt on **page 17**.
4. Complete the science worksheet, "All About Weather" on **page 9**.
5. Complete sorting worksheet on **page 10**.
6. Track the weather in the Weather Journal for a few days found on **page 14**.

WHAT IS WEATHER?

Weather is the temperature outside. Different types of weather include: **sunny, cloudy, rainy, snowy and windy.**

The sun sends rays to the Earth and constantly heats it. In addition to warming the Earth, it also warms the air that surrounds us, including air.

During the seasons, the air temperature changes. In summer the temperature is usually high, so it is very warm, and during the winter it is low, so the temperature is cold. The air temperature is measured by a device called a **thermometer.**

Precipitation is caused by water vapor which, due to cooling, turns into a liquid or solid state. Sometimes water vapor cools high, in clouds. This is how high precipitation occurs in which include **rain, snow and hail.**

Rain and snow form when water vapor cools in the clouds. It rains when it is temperature above 0 ° C. If the temperature is lower, it usually snows.

Wind is the movement of air. This movement is due to a change in temperature. When the air heats up, it expands, becomes lighter and rises, and colder air comes to its place. Different types of winds blow (hurricane).

Weather conditions affect the lives of all living beings. Thus, the way of life of people are connected with the weather conditions of the area in which they live. Adverse weather conditions are called weather disasters. They can cause numerous problems. Too much rainfall can lead to flooding. If there is no precipitation for a long time, it occurs drought. Frost, strong storms and hail can destroy plants. Large amount snow traffic in the city is often difficult and ice on roads and sidewalks can be very dangerous.

Weather forecast means forecasting the weather in the next few days or weeks. The weather forecast is done by people called **meteorologists.** Meteorologists predict the weather and give weather forecasts based on data recorded by satellites orbiting the Earth. It is important to follow the weather forecast because people need to know in advance what kind of weather conditions await them in order to be able to organize their activities. For example: before we go to the beach, we look at the weather forecast to see if there will be sunshine.



temperature

How hot or cold it is

wind

The movement of air

SAMPLE

ALL ABOUT WEATHER

Ask your children these questions. If they are able to write at all, please have them fill in as much as they can.

1. What is weather?

2. Draw and/or write the different types of weather:

A large rounded rectangular box for drawing or writing, containing a large diagonal watermark that reads "SAMPLE".

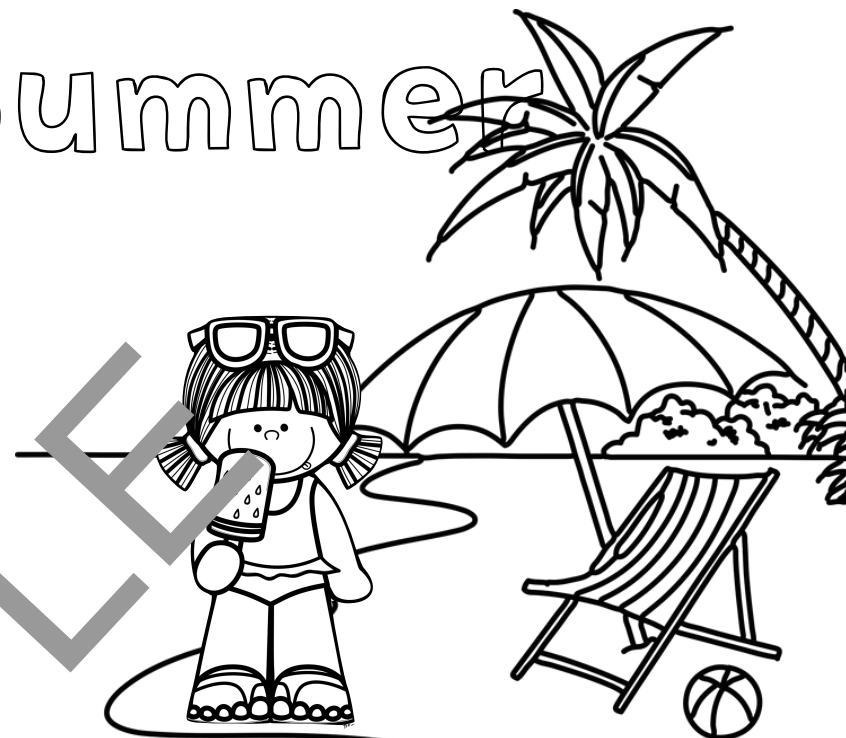
3. Circle what Danny would wear on a hot day.

4. What would he wear on a cold day?





Summer



Spring



Fall



WEATHER PRESENTER

It's your turn to be a meteorologist. Your assignment is to present the weather for the day!

1. What is the temperature of the day you will be presenting?

2. How will the weather feel outside? _____

3. Circle one: Will it be...

hot **cold** **snowing** **raining** **warm**

4. What should people wear today? Circle all that apply.

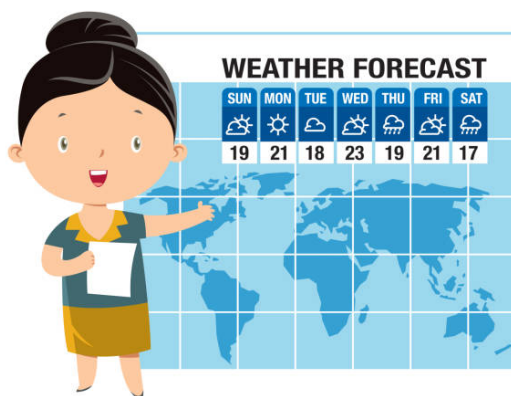
dress **shorts** **long sleeves** **sweater** **pants**

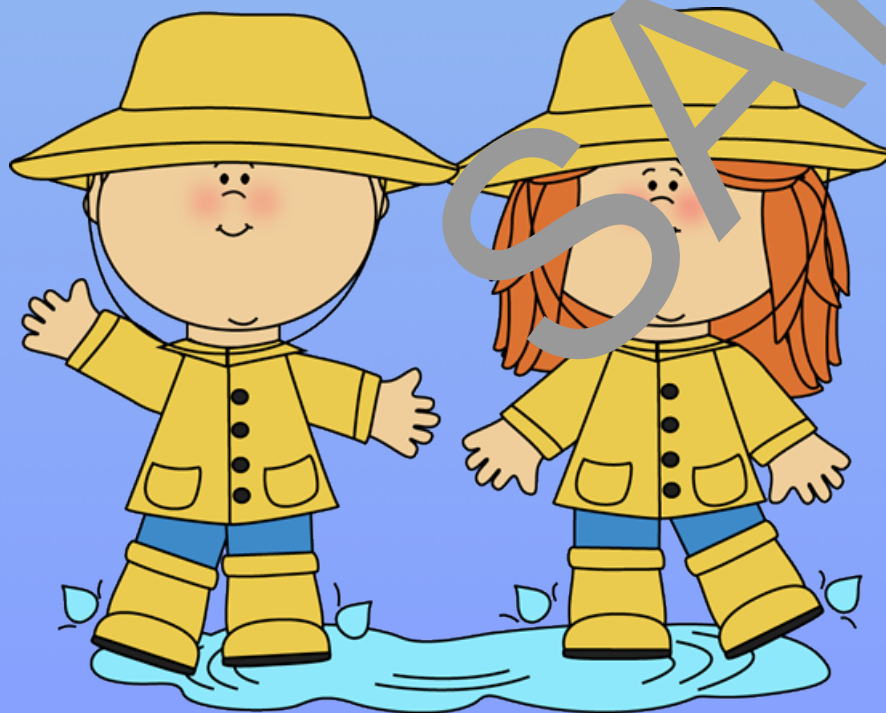
coat **scarf** **sandals** **shoes** **hat**

Now it's time to set up your presentation. Your presentation should last 2-4 minutes. You will basically talk about the four questions on this paper. Practice with a parent and present when you're ready! You could even dress up as a meteorologist and have a parent record you!

TIP

It would be beneficial if you had your child watch the weather report to familiarize themselves with what a weather forecast looks like.





Name: _____

My Weather Journal

Today's Date: _____

Temperature: _____



Today feels: (circle one) hot warm cold

It is: (circle one) sunny cloudy raining snowing

Draw what you would wear today.

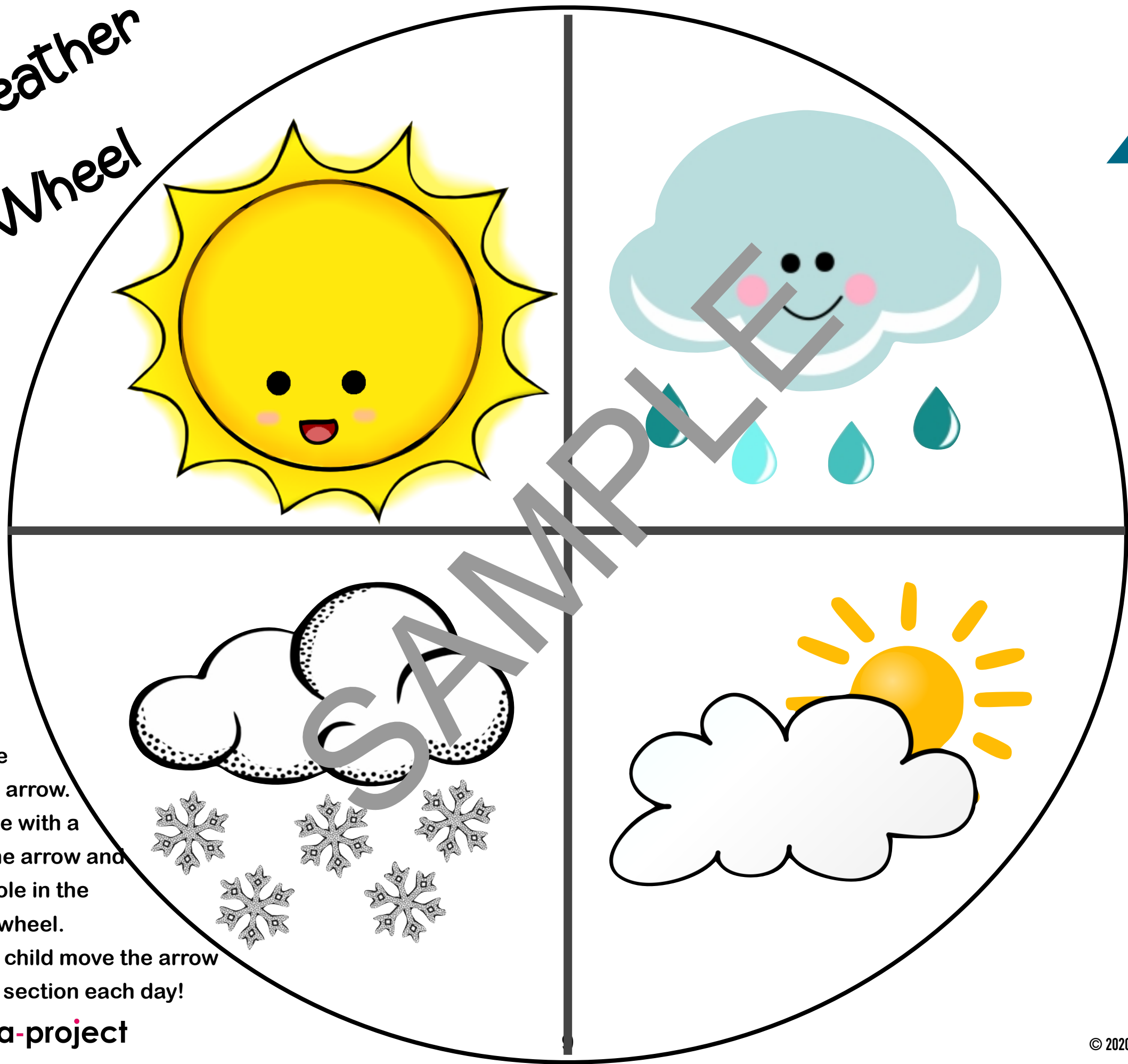
A large, empty rectangular box with a black border, intended for a drawing of clothing.

I predict tomorrow
will be _____.
(sunny, warm, cold, raining, etc.)

SAMPLE

This image shows a template for handwriting practice. It contains five identical rows of horizontal lines designed to help children learn letter formation. Each row is defined by three lines: a solid top line, a dashed middle line, and a solid bottom line. The word "SAMPLE" is written diagonally from the top right towards the bottom left in a large, light gray font, serving as a watermark to indicate that this is a preview or example document.

My Weather Wheel



Directions:

- 1. Cut out the wheel and arrow.
- 2. Poke a hole with a brass pin in the arrow and then poke a hole in the center of the wheel.
- 3. Have your child move the arrow to the correct section each day!

SHAVING CREAM RAIN ☁️🌧️

Materials:

Cup
Water
Shaving Cream
Food Coloring

1. Fill cup with water
2. Add shaving cream on top of the water
3. Add food coloring on top of the shaving cream
4. Watch what happens!

Explanation:

Rain droplets form clouds and they are held together until it gets really heavy, then rain falls.



BUILD A STRUCTURE

Your final project is to build a scale model of a structure to decrease heat in a sunlit area. (Note to parent: this would be a tent or canopy of some sort. See **page 29** for building tips.)

Steps:

1. Think about what could provide shade or decrease heat in a certain area. What have you seen that helps provide relief from heat? Along with a parent, write or draw your ideas here:



2. Then think about what materials you would need to build that structure. You could use sticks, construction paper, foil, cardboard boxes, or anything that will hold the structure! List the materials here:

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Tips to Build A Structure

These are some suggestions to guide the process if needed!

- Start with a foundation. This could be popsicle sticks glued together, a flat piece of cardboard, or anything sturdy.
- Move on to building the sides of the structure, then the roof.
- Materials you could use to build the structure (excluding decorative materials):
 - Pipe cleaners
 - Popsicle sticks
 - Cardboard
 - Glue/Hot glue
 - Tape
 - Shoebox
 - Cloth material
- Ask your child for their input regularly and be their assistant. Let them guide the process!

Have fun!

PROJECT CHECKLIST

- ☐ Print out the packet and gather books and resources about weather.
- ☐ Learn about what weather is, cut out flashcards and practice, and do weather related worksheets and assignments.
- ☐ Learn about the seasons.
- ☐ Plan and present the weather presentation.
- ☐ Conduct weather experiments/art projects.
- ☐ Work on building a structure for your final project!
- ☐ Finish any extra assignments.

SAMPLE

RESOURCES AND RESEARCH

How do students research information?

- **Books:** Gather book you may have at home and find books about weather at the library.
- **Internet:** Have your children research information on kid-friendly websites that are credible. This could be done through computers, iPads, or laptops.

Here are some websites and resources that may be helpful:

DK Findout

<https://www.dkfindout.com/us/earth/weather/>

Weather vs. Climate Video

<https://www.youtube.com/watch?v=YbAWny7FV3w>

Weather Songs

<https://www.prekinders.com/weather-seasons-songs-kids/>

Weather Books

<https://booksandgiggles.com/weather-books-for-preschool/>

Thank you for completing the Weather Project! I hope you truly enjoyed and learned from this experience. Please leave me a review on Facebook or send me an email to let me know what you enjoyed about the project and what else you would like to see in the projects at nancy@buildaproject.net.

Follow me for daily tips and ideas!

Facebook at buildaproject

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Weather Project Calendar

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday

Thank you for downloading the Weather Project Sample. These are just some the pages from the project.

The project is 33 pages long. To shop this project please visit www.buildaproject.net/shop