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X1.005: Weather Wonders - Creating Your Own Weather Station

Core Concept	Search Keywords (Inbound/Outbound)	Related Network Resource	Linked Action	Practical Example / Impact
<p>Help children (ages 0-6) explore the weather by creating their own mini weather station. Through simple tools and playful experiments, children learn to observe, measure, and record different weather patterns (sun, rain, wind). This experiment nurtures scientific curiosity, creativity, and understanding of the world. Using local weather elements, children can see how the weather changes in their own neighborhoods, be it Montpellier or Tippecanoe.</p>	<p>Inbound Keywords: - Search “weather experiments for kids” or “early childhood science activities” - “DIY weather stations for preschoolers” - “exploring weather with toddlers”</p> <p>Outbound Keywords: - Use phrases like “family weather projects” or “global weather learning for children”</p>	<p>1. Weather Observation Journals: Use journals where children can draw pictures of the weather each day and record simple observations. 2. Purdue Family Science Exploration Programs: Search “Purdue early childhood science guides” to find activities that teach children about natural phenomena like weather. 3. Montpellier Local Weather Clubs: Explore “Montpellier children’s weather observation workshops” for hands-on experiences that allow kids to learn about the weather. 4. Global Science Learning Networks: Connect with platforms offering resources on</p>	<p>1. Create Weather Station Kits: Include a thermometer, wind spinner, rain gauge (simple DIY versions), and a booklet with fun facts about the weather. 2. Introduce Local Weather Tracking: Encourage families to track the weather in their local area (e.g., “Today in Tippecanoe, it’s sunny and 22°C!”) and compare it with other places. 3. Promote Weather Art Projects: Let children create drawings or crafts that represent different weather types, from fluffy cotton ball clouds to glittery raindrops. 4. Use Digital Tools: Apps like <i>Kid Weather</i> (to see weather forecasts designed for children) and <i>Plum’s Weather Adventure</i> (an educational game</p>	<p>Practical Example / Impact: Characters: The Thompson family, including 6-year-old Oliver. Event: Oliver wanted to be a “weather scientist,” so his family helped him build a mini weather station in their backyard. Experimental Subjects: Wind, rain, temperature, and cloud observations. Experimental Results: Oliver measured how many drops of rain collected in his DIY rain gauge, checked the wind speed with a homemade wind spinner, and drew pictures of the sky each day. Core Plot: Oliver became fascinated by how the weather changed every day, eagerly checking his station each morning. His curiosity grew, and he started asking, “Why is it windy today but calm yesterday?” Impact: By observing the weather daily, Oliver developed basic science skills, learned to track data, and became more curious about the natural world.</p>

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		science learning, including basic meteorology for young children.	about weather) can make the experience interactive and fun.	He even inspired his friends to build their own weather stations, turning it into a local weather club!

Table X1.005: Experimental Template - Oliver's Backyard Weather Station

Location: Thompson Family Home, Tippecanoe

Characters: The Thompson family - Laura (Mother), Alex (Father), Oliver (6 years old)

Plot Summary:

It all began when Oliver saw a weather forecast on TV and asked, "How do they know what the weather will be?" That simple question led to a weekend project: building a mini weather station in the backyard! With a little help from his parents, Oliver set up tools to measure the wind, rain, and temperature, turning himself into Tippecanoe's youngest meteorologist. Every morning, Oliver would rush outside to check his station, thrilled to see what the weather had in store that day.

Experiment Objective:

To introduce children to the basics of weather observation through hands-on activities. By setting up simple tools, children learn to observe, record, and talk about different weather conditions, helping them build a foundation in science, data tracking, and environmental awareness.

Experiment Steps:

1. **Materials Needed:**

- DIY thermometer (can use a store-bought one)
- Wind spinner (made from paper cups or pinwheels)
- Rain gauge (a simple plastic bottle with measurements)
- Notebook for weather journaling
- Colored pencils, cotton balls, and glitter for crafting weather "art"

2. **Setup:**

- Place the thermometer in a shaded area to get an accurate reading.
- Set up the rain gauge in an open spot where rain can fall directly into it. Use a marker to draw lines showing how much rain has been collected.
- Use a wind spinner to see how fast the wind is blowing. Make it fun by decorating the spinner with bright colors so it's easy to see when it's turning!
- Start a daily weather journal where Oliver can draw what the sky looks like, note the temperature, and write down how windy it is.

3. **Procedure:**

- Every morning, Oliver checked the thermometer to see how warm or cool it was. "It's 15 degrees! Time for a sweater," he'd announce, grinning as he added the reading to his notebook.
- On rainy days, he would run out to see how many millimeters of water had collected in his rain gauge. "Wow, it rained a lot last night!" he'd say, drawing

a picture of big raindrops with glitter to make them sparkle.

- To check the wind, Oliver would stand next to his wind spinner, watching it twirl. “It’s spinning fast today!” he’d report, learning to connect the spinning speed with how windy it was.
- Laura and Alex encouraged Oliver to use the *Kid Weather* app to see the forecast for Tippecanoe and compare it to what he was observing. They also looked up the weather in Montpellier, adding a bit of friendly competition: “Who has the sunnier weather today?”

4. Data Recording:

- Oliver’s weather journal became a treasure trove of colorful drawings, numbers, and stickers. Every few days, he would share his journal with his grandparents over video calls, proudly showing off how much he’d learned.
- Alex helped him create a simple graph showing how many rainy days they had in a week. Oliver liked coloring the bars and drawing little clouds above the graph.
- Using *Plum’s Weather Adventure*, Oliver learned about why it rained, how clouds formed, and even made his own mini cloud inside the app, deepening his curiosity about the weather.

5. Results:

- **Observations:** Oliver quickly learned to connect the temperature readings with how he felt outside (“It’s chilly at 10°C but warm at 25°C!”). He also loved checking his rain gauge after a storm, excited to see how much rain had fallen.
- **Conclusion:** By building his mini weather station, Oliver gained a basic understanding of weather patterns, learned to record simple data, and improved his observational skills. The project boosted his confidence, and he enjoyed sharing his findings with friends and family. He even organized a “weather day” at his preschool, where all the kids brought their own weather journals to share.

Core Plot:

Oliver’s weather station wasn’t just about numbers—it was about discovering the magic of the world outside. Every time the wind picked up, or raindrops fell, Oliver felt like he was part of something bigger, like a mini scientist uncovering the secrets of the sky. He loved telling his parents, “I’m checking the weather today!” with a serious nod, as if he were the official weatherman of Tippecanoe. And when he learned that his friends in Montpellier were building their own stations, he thought, “Maybe we can start a weather club and be weather scientists together!”

Data Table:

Weather Element	Date	Observation	Oliver’s Reaction	Weather Art
Temperature	October 15th	“18°C - A bit chilly today!”	“Sweater weather!” (Adds sweater sticker)	Drew a sun with a sweater hanging on it
Rainfall	October	“5 mm of rain	“It rained so much!”	Made glittery

Weather Element	Date	Observation	Oliver's Reaction	Weather Art
	16th	collected"	The plants will be happy!"	raindrops
Wind	October 17th	"Wind spinner moving slowly"	"Not very windy. Maybe the leaves are tired?"	Drew a leaf blowing in the wind
Cloud Coverage	October 18th	"White fluffy clouds"	"Looks like cotton candy!"	Glued cotton balls for clouds

Impact:

By engaging in daily weather observations, Oliver learned more than just science—he gained a sense of connection to his environment. Tracking weather patterns helped him understand why it's cold in the morning and warm in the afternoon, why rain makes plants grow, and even why the wind feels different on different days. His colorful weather journal became a point of pride, sparking curiosity in his classmates, and soon they were all keeping their own weather logs. The teachers decided to introduce "Weather Week" to encourage more children to be little meteorologists like Oliver.

Encouragement for Families:

Build your own weather station! It's simple, fun, and a great way to get kids excited about science. You don't need fancy tools—a plastic bottle rain gauge, a simple thermometer, and a pinwheel can do the trick. Let your child take charge, record their observations, and add a creative touch with drawings, stickers, or digital apps. You might find yourself checking the rain gauge first thing in the morning, just like Oliver! 😊