

Science: Air Masses and Storms

Week 8

Welcome to week 8 of Science. Lightning and thunder and fronts- oh, my! Learning and understanding weather events can really help us be more impressed with them than afraid. This week we are learning how storms work.

Preparation:

- Prepare to do the experiment.

Lesson:

Now watch this video to learn all about weather events and how storms work. [Air Masses](#)

Activity:

In today's activity, you are going to be making a model of a hurricane and designing a solution to reduce the effects and protect the home you create.

Materials in your kit:

- Paint tray
- Construction paper
- Cardstock paper
- Printer paper
- Play dough
- 4 Straws
- 12 Popsicle sticks
- 6 Paper clips
- 1 bag Rocks
- 1 bag Sand

Other:

- Water
- Fan
- Glue
- Tape
- Cardboard
- Paper plates
- Newspaper
- Plastic wrap
- Aluminum foil
- Any other materials you can find to use to build a structure

Instructions:

1. In this scenario we are going to create a beach. Your job is to create a structure that will be able to withstand the winds and waves from the storm. What else could you do to protect the surrounding areas from this extreme weather? Think about these things as your brainstorm ideas for your design.
2. Pour the sand onto the top part of the paint tray. Smooth it out and create your beach.
3. Fill the deep part of the tray with water. This will be the ocean. The water and the sand will overlap some, and that's okay! It will be just like the shallow part of the ocean.

4. Now it's time to make our model house. What ideas did you come up with in your design? Don't forget the roof, walls, windows, and flooring of your home. Provided in your kit are a variety of building materials. You may have other materials at home that you can use as well that will help you bring your design to life.
 - Remember, your job is to design a solution to reduce the effects of the weather related hazards from this hurricane. How can you secure your structure and surrounding areas to withstand the crashing waves and strong winds that come with a hurricane?
5. Once your structure is ready, set it up on the beach. It's time to start making the hurricane and test it out.
6. If you've got a fan, turn it on and aim it towards your beach (a blow dryer on low could work too). You can use your hands to create waves in the water. Sprinkle water on top to make some rain.
7. After your storm comes through, check on your structure. What did you do to help reinforce the structure? How well did it stand up? Is there anything you could add or change to help strengthen the house?

Discuss:

What did we learn about through our experimental observations today?

Before continuing, it might be good to reflect on your observations and findings. Here are some good questions to ask yourself and record in your science journal, even if you know the answer because of the lesson:

What is a front, and what are some of the different types? Which type do you think causes the most violent storms, and why?

Have you ever experienced a major storm? What was it like? What can you do to feel better-prepared for a major storm? How would that make it a better, or even enjoyable experience?