

# Rain Cloud Exploration Mini Challenge

Name: \_\_\_\_\_

Date: \_\_\_\_\_



## Problem Scenario:

Spring is here and that means rain! Rain falls from the clouds, but how and why does this happen? Explore clouds and rain!

## Challenge:

Create a rain cloud and find out how much water it can hold before it begins to rain.

## Criteria:

- Clear Cup / Water / Shaving Cream / Blue Food Coloring
- Document how long it takes the “rain” to fall
- How many drops of food coloring does it take to penetrate the cloud
- Be able to explain what happens to the cloud over time.

**1. Brainstorm:** Use the space below to brainstorm the design and approach to building a rainstorm.

- Think about the following questions before you get started!
- How do clouds form?
- Why does it rain?
- Do there have to be clouds in the sky for it to rain?

## **2 & 3. Design/ Build:**

1. Fill the clear cup 3/4 full of water.
2. Spray shaving cream on top of the water in your cup until it is just above the rim of the glass to create your cloud.
3. Begin to drop the blue food coloring onto the shaving cream one drop at a time.
4. Count your drops as you add to your cloud.
5. Continue to add drops until you see the blue food coloring fall into the water in the cup.

## **4. Evaluate:**

- How many drops did it take for it to start raining in your cup?
- What observations did you make about your cloud?
- How much did it rain in your cup?

## **5. Modify:**

- Create a bigger or smaller cloud with the shaving cream?
- How many drops did it take for your cloud to rain?
- Add another color of food coloring to create a bigger storm!

## **6. Share:**

Share your creation on Social Media!

Tag us on Facebook, Twitter or Instagram @pastfoundation

Use the hashtag #ThisIsPAST or #DesignThinking