Big Idea: Making Weather (Kindergarten)

Standards:

K-5-ETS1-1.

Ask questions, make observations, and gather information

Earth Sciences

3. Weather can be observed, measured, and described. As a basis for understanding this concept:

b. *Students know* that the weather changes from day to day but that trends in tem-perature or of rain (or snow) tend to be predictable during a season.

Materials:

- My Weather Workbook
- Crayons
- Pencils
- Erasers
- Shaving cream
- Water
- Food Coloring
- Document Camera
- Baking soda
- Syringe/Eye dropper
- Glitter
- Empty Water Bottles (5)
- Bowls (25)
- Spoons (25)
- Trays
- Youtube for videos on rain, tornadoes, and snow

I. Formation of Groups:

For the guided practice portion of the lesson, students will be working with their table members to complete the *Tornado in a Bottle* activity.

Commented [SFB1]: Great Hook!

II. Role Assignments: Beginning with the glitter pourer all roles are assigned to the right (clockwise).

Glitter pourer: Uses the funnel to pour glitter into the empty water bottle.
Water filler: Goes to the sink to fill up the water bottle more than halfway with water.
Lid closer/checker: Tightly secures the lid and makes sure there is no leaking.
Spinner:Turn the bottle upside down, grabs it by the neck, and begins to spin it fast.
Timer: Looks at the timer to make sure the spinner spins the bottle for 15 seconds.

III. Task

Hook: Students will be seated in their assigned seats at the beginning of the activity. Tell students that they have been learning about different types of weather for the past week. Ask, "*What is **weather**?","What are some examples of the different types of weather we have been learning about?"* Write their examples on the whiteboard. Tell students that today they will be making their own weather within their own classroom and will become weather experts. The weather that they will be focusing on is rain, tornadoes, and snow. Ask students if they have experienced all of the ones listed firsthand or know how they happen. Tell students that part of what they are doing today will have them making **predictions.** Ask, "*What is a prediction?"* Once task and vocabulary is addressed, the lesson can proceed.

Commented [SFB2]: Good. Important to identify vocabulary to be used in an experiment.

Engagement:

Direct Instruction

- Tell students grab a pencil and their workbook and come take a seat on the rainbow rug . Have students flip open to the first page in their workbook. Tell students that the first activity that they will be doing is **Cloud in a Jar**, which relate backs to clouds/rain
- Have students follow along while reading the short passage aloud. Show students a quick clip on rainfall, then begin doing the activity.
- Tell students to create a semi-circle on the rug. Make sure that all students can see and have them place their fingers on step 1. Read it aloud and choose one student (using the name cup) to go fill up the jar with water then the teacher will squirt shaving cream on top until the students yell "STOP!".
- Have students place their fingers on step 2. Read it aloud and have one student go fill up the smaller cup with water, one add the food coloring, and another stir it.
- Have students place their fingers on step 3 and read it aloud. Before proceeding, give students the opportunity to think-pair-share to make a prediction about what they think is going to happen. Once everyone has written a response, continue with the activity.
- Have students place their finger on step 4 and read it aloud. Have students record what actually happened. After, have students return to their desk for the next activity. (remind students that the faster they go to their desks and are sitting quietly, the faster they get to move on)

Commented [SFB3]: How much time will you need for this?

Establish clear expectations

- Tell students that they will be using a lot of different materials during this activity. During anytime if they are not using the materials respectfully, that they will be taken away from them and they will sit out for the rest of the lessons. **(Be respectful)**
- Tell students that some parts of the activity require volunteer help, but to keep it fair the stick name cup will be using. No matter who is picked there is no whining or yelling. **(Make good decisions)**

Commented [SFB4]: Yes. This is important!

- Safety is the number one priority, that is why it is important that all students are listening and following the directions. **(Be safe)**
- **Write these three rules in different colors on the board. (Two of them are already classroom rules so students can refer to them above the whiteboard)**

Explore

Guided Practice

- Have students flip to the next page in their workbook. Tell students that the next activity they will be doing is **Tornado in a Bottle**. Do hand movement: tornado (spin index finger in a fast circular motion). Call on student volunteers to read short passage in workbook. Then show students a short clip on what an actual tornado looks like.
- Tell students that for this next activity they will be working with their table members. Each table member will have a specific job. These jobs will be listed on the What's My Job page in the workbook. (assign jobs in clockwise motion):
    - ➔ glitter pourer
    - ➔ water filler
    - ➔ lid closer/checker
    - ➔ spinner
    - ➔ timer
- Make sure students are all aware of their job. Have glitter pourers read step one then complete the task. Then, have water fillers and lid closer/checkers read step two then complete the task (**Make predictions)**. Next, have the spinner and timer read step 3 then complete the task (have time placed under document camera so that all timers can see). Finally have everyone read last step and fill out remainder of Making Predictions worksheet.

❑ **Independent Practice**

- Have students ~~to~~ turn to the final activity in their Making Weather Workbook. Tell students that the last activity that they will be doing is called **Fake Snow** and it will be done independently. Do hand movement: snow (slowly wiggle fingers from high to low, left and right). Have students choral read the short passage on snow, then show short clip on snowfall.
- Tell table monitors to come to the back to get a tray with the bowls, spoons, and baking soda. Students will raise their hand once they have the baking soda in their bowl, and the teach will come to give them a small amount of shaving cream.
- After the students have received all of the materials necessary to complete the activity, the teacher will walk around and observe how well students are adhering to the directions and assisting students if necessary.
- Once students are finished with their "snow", they can go back and add color to their workbook.

Explain

- During the guided practice and independent practice students will be formulating their own predictions by drawing a picture and a filling out the sentence “I predict that…” This gives students the opportunity to observe the materials they are working with and deduce an outcome. Once students have completed the activity, they will then draw a picture of what actually happened. That way students can compare what they thought was going to happen and what really happened.

Commented [SFB5]: Yes! I am pleased that you are assuring that students have the opportunity to “make the internal, external.” Show what they predict and what they have learned.

Evaluate

- At the end of the activity, students will be responding to the question, “Why do you think weather is important?” This has students evaluating the activities they have done and thinking of how it relates to the big concept of weather in our world. This also leads students to question how learning about the types of weather is important (e.g. rain water conservation, snowmelt runoff, etc.).

IV. Time Limits:

45 minutes to 1 hour; depending on if students need additional help understanding what the directions are saying.

V. Social Skills and or Habits of Mind to Engage/Assess:

Teamwork: being aware that all members of the group are working together to achieve a common goal by staying in their assigned role but helping others when necessary
Drawing on past knowledge: taking what they have learned from the week about the different types of weather and applying it when they are making their predictions.
Checking for accuracy: after activity is complete, going back to see if their predictions were correct and writing down their findings.
Flexibility in thinking: respecting others ideas and being open to their suggestions and ways of thinking.
Questioning: Being able to question “why” something is happening (e.g. why the food coloring is coming through the shaving cream cloud).
Decreasing impulsivity: adhering to the expectations that were set up at the beginning of the lesson. Knowing that your actions have consequences.
Application to new situations: After seeing an activity modeled, being able to reproduce the same work on a similar activity and go through the same steps.
Time management - ensuring that the students are completing their given task within the provided time increment.

VI Level of Voice:

Commented [SFB6]: Great inclusion—and so age-appropriate!

***Level 3** for directed instruction**, Level 2** for guided practice, **Level 1** for independent practice

VII. Processing--Questions for groups and individual reflections:

- *What is weather? (This will be asked in the beginning and end of activity)*
- *What is a prediction? (This will be asked in the beginning and end of activity)*
- *What were the three types of weather we made today?*
- *How does each one happen?*
- *What was your favorite weather to make? Why?*

➢ *Why do you think learning about weather is important?*

VIII. Assessment <u>Content</u>:
Students will be informally assessed via teacher observation of participation and following of the expectations during the lessons. Students will be formally assessed based on the completion of their My Weather Workbook. They will be graded on a 6 point scale. 2 points for drawing and writing their predictions and 1 point for drawing their findings. This will be both for the guided practice and independent practice making predictions pages. The last point will be for students answering why they think weather is important on the back of their workbook.

Commented [SFB7]: Everything in the lesson has been addressed very well. I think the children will enjoy the lesson.

VIII. Encouraging Energizer:
Clam Claps!