

**Weekly Lessons/Overview and Goals:**

**TEKS:**

4.8 Earth and space. The student knows that there are recognizable patterns in the natural world and among the Sun, Earth, and Moon system. The student is expected to:

4.8A measure, record, and predict changes in weather (S)

4.8B describe and illustrate the continuous movement of water above and on the surface of Earth through the water cycle and explain the role of the Sun as a major source of energy in this process (S)

**Unit 7 Vocabulary:**

Evaporation

Condensation

Water cycle

Runoff

Accumulation

Weather

Map key

Pattern

Prediction

Cold front

Warm front

Weather map

Air mass

**Essential Questions:**

1. What is the water cycle?
2. How does water move through the water cycle above and on the surface of the Earth?
3. Which tools can be used to gather weather information and how should we record the data?
4. Why do meteorologists track weather over long periods of time?

**Monday:** Review

- [Notice and Wonder](#) - project for students. Make sure to really talk about each image. Partner pair/share would be good.
- \*Catch up from last week as needed.
- [\\*Clip from Bill Nye re Water Cycle](#)
- Practice Quiz - have students work on this on their own. Then review as a class. They will quiz tomorrow. The quiz is the blue, stapled handout.

**Tuesday:** 5 question assessment. (Melinda sent to print),

**If time:**

Which tools can be used to gather weather information?

Goals for class:

Students record weather using tools and personal observation

Students research weather websites to collect data -- weather.com is good

[Info Sheet for students](#)

[Data Collection Sheet](#) - Melinda sent to print

Show this video - <https://www.youtube.com/watch?v=YbAWny7FV3w>

\*Extra Resource: [StudyJams - Weather and Climate](#) (free)

**Wednesday:** Continue from yesterday

**EXPLORE (Day 2)**

1. Students will look at the current map and identify current weather conditions of 7 Texas cities. (*"STEMscopes Explore Part 1)* Model how to use the key. <https://weather.com/>
2. Begin to analyze data to look for changes and patterns.

### EXPLAIN

#### Discussion Questions:

- What is a front?
- What is the symbol for a cold front on a weather map?
- What is the symbol for a warm front on a weather map?

Students will analyze a weather maps for 3 days and color the key (blue for cold and red for warm front). Discuss what will happen to the weather in different Texas cities over the 3 day time period.

Weather map:

[https://drive.google.com/drive/folders/1pidWz\\_t\\_TfHsBN5qJbFSMLh8zTOyJPv](https://drive.google.com/drive/folders/1pidWz_t_TfHsBN5qJbFSMLh8zTOyJPv)

### Thursday: EXPLORE (*Day 3*)

1. Students will look at data from previous days and identify how the weather conditions have changed over time.
2. Students will then predict what the weather will be like the following day based on the patterns of change thus far.
3. Students will collect data for Part 3.

#### EXPLAIN Discussion Questions: Understand - Skill/Concept

- Which direction do most fronts move?
- What information does a weather map contain?
- What are some ways a meteorologist describes the weather conditions?

#### Extra Resources

[StudyJams - Air Masses and Fronts](#) (free)

\*\*Book in an hour. Each table group will receive a picture book on weather. They must create a presentation on their book within the class period. This can be a poster, song, or Google Slides presentation (or anything you are open to students working on). Students will present on Friday.

**Friday: Presentations on Books** (this may take the class period)

**EXPLORE** (*Day 4*)

1. Students will look at data from previous days and identify how the weather conditions have changed over time.
2. Students will then predict what the weather will be like the following day based on the patterns of change thus far.
3. Student will use collected data to start the graph on part 4 of the STEMScopes Weather Explore Part 4.

Discussion Questions: Apply - Skill/Concept

- What type of pressure is associated with severe or rainy weather?
- What type of pressure is associated with clear, sunny weather?
- The meteorologist is predicting cooler weather tomorrow. What must be happening to support that prediction?

**Differentiation:** A variety of activities (application, concrete, and kinesthetic) will be incorporated into both days to engage all learners. Kagan structures will be introduced the first week of school.