$\mathbf{\tilde{w}}$ Lesson 2: "Temperature's Quest – The Rise of $\mathbf{CO_2}$ and the Power of Knowledge"

Goals

- **Review** key concepts: temperature anomalies, line chart reading, CO₂'s role.
- **Reinforce** understanding for the 20% who need more support.
- Expand the story with new characters to deepen engagement and contextual understanding.

Learning Objectives

- Retell the temperature anomaly story with added characters and context.
- Identify roles of different characters in climate change (hero, antagonist, sidekick).
- Interpret chart data to describe temperature trends and link them to events/actions.
- Brainstorm actions with the "sidekick" to help the hero.

Story Arc:

Act 1: The Hero Returns – Temperature's Struggle Continues

Recap the Story:

"Last time, we met *Temperature*, the hero who just wants to stay steady and comfortable. But something started to change... and fast!"

Chart Re-introduction: Show the line chart again and ask:

"What does this line tell us about how our hero is feeling?"

Anchor Concept: Temperature anomaly = something *not normal* for Earth's climate.

The Antagonist Revealed – The Rise of CO₂

Introduce the Villain:

"Meet CO_2 Pollution, the sly villain from Human Activity. Every time fossil fuels are burned, CO_2 gets stronger!"

Visual Skit / Puppets: Role-play a scene where Temperature is overwhelmed by CO₂'s power. CO₂ throws "heat bubbles" while Temperature struggles to stay cool.

Mini Review Discussion:

- "What makes CO₂ stronger?"
- "What are some things humans do that make this worse?"

🧟 Act 3: A New Ally – The Expert Sidekick Joins the Fight

Introduce the Sidekick:

"Just when things seem the worst, a new character appears – Dr. Data! They can read charts and explain what's going on to help Temperature!"

Activity: Students become "Data Detectives," working in groups with simplified temperature anomaly chart cards from different decades. They:

- Describe how the line looks
- Decide if Temperature is calm, warming, or overheating
- Report findings to "Dr. Data"

Act 4: A Plan to Help Temperature

Group Brainstorm:

- Each team suggests one way to help Temperature.
- They write a mini "Action Comic Panel" showing their idea (e.g., biking, planting trees, using less electricity).

Share & Reflect:

- Which ideas could help weaken CO₂?
- Which ones can students try themselves?

Support for Diverse Learners

- Visual storytelling and charts reused from lesson 1
- Comic drawing, role-play, and team work for engagement
- Use of anchor visuals (hero, villain, sidekick posters)

 • Movement break mid-lesson with role-play or " ${\rm CO_2}$ dodgeball" (soft toss game representing ${\rm CO_2}$ hits)

Optional Exit Ticket

Draw and Label:

- $\bullet \quad \hbox{One panel showing CO}_2 \ \hbox{causing trouble}$
- One panel showing the expert and a student helping Temperature
- Caption: "How can we help?"