Lesson Plan – Stormy the Solar Storm

1. Overview

Grade Level: Elementary / Middle School

Subject Areas: Science (Space, Weather, Technology)

Duration: 45–60 minutes

Learning Goals:

- Understand what space weather is.

- Identify how solar storms impact people on Earth and in space.

- Connect NASA's real data and missions (SDO, Parker, SOHO) to the story.

2. Materials Needed

1. Stormy the Solar Storm storybook (digital PDF or slides)

2. Coloring sheets (Stormy, Parker, auroras)

3. Flashcards (Solar Flare, CME, Magnetosphere, etc.)

4. Glossary handout

5. Optional: Jar + glow sticks (Aurora activity)

3. Lesson Flow

A. Warm-Up (5–10 min)

- Show a real photo/video of auroras (from NASA).

- Ask: "What do you think causes these magical lights?"

- Briefly explain: They're caused by solar storms from the Sun.

B. Storytime (10–15 min)

- Read aloud or project Stormy the Solar Storm storybook.

- Pause at "Science Spark" moments and explain the NASA fact in simple terms.

- Ask quick questions: "Who met Parker? What happened to Farmer Lila?"

C. Activity Time (15–20 min)

Choose one, depending on class level:

1. Younger kids: Coloring sheet of Stormy & auroras.

2. Middle school: Flashcard game (match word with meaning).

3. Hands-on demo: Glow-stick aurora in a jar.

D. Discussion & Reflection (10 min)

- Ask: "Why do astronauts, farmers, and pilots care about space weather?"

- Show how NASA satellites (Parker, SOHO, SDO) protect Earth by monitoring the Sun.

- Highlight how science and technology help keep us safe.

4. Wrap-Up / Assessment (5 min)

- Quick quiz (from Assessment Tools).

- Reflection question: "What did Stormy teach you today?"

- Optional homework: Draw your own "space weather superhero."

5. Teacher Notes

- Adapt activities to age group.

- Connect to local weather by comparing solar storms to Earth storms.

- Aligns with science literacy and NGSS standards (Earth & Space Sciences).