

Page 1: - Born on the SUN.

Deep inside the fiery heart of the Sun, plasma bubbled and boiled.

Then — BOOM! A giant burst of energy shot out, glowing and spinning.

Out of the stormy blast came a playful new character.

“Wooosh! I’m Stormy the Solar Storm!” he shouted.

With a grin, he stretched his fiery arms. “I’m going on an adventure... all the way to Earth!”



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SCIENCE SPARK!

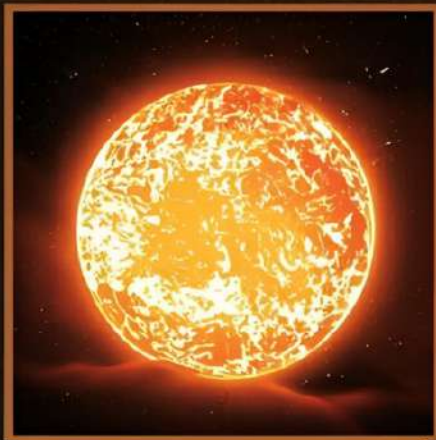


Image from NASA SDO

NASA’s Solar Dynamics Observatory (SDO) takes real pictures of the Sun every day. It captures events like solar flares and coronal mass ejections (CMEs) — the same kind of blast that created Stormy in our story.

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Meeting Parker

Stormy zoomed away from the Sun, swirling happily through space.

Suddenly, he spotted a tiny spacecraft with shiny blue panels.

“Hello there!” said the craft with a friendly beep. “I’m Parker, the Solar Probe.”

“I fly closer to the Sun than anyone else — just to study storms like you!”

Stormy giggled. “Cool! Watch me race to Earth!”

Science Spark:

NASA’s Parker Solar Probe, launched in 2018, is the first spacecraft to fly as close as 4 million miles from the Sun. It helps scientists understand solar storms like Stormy by measuring the Sun’s plasma and magnetic fields.



Image credit: NASA / Parker Solar Probe Mission

TROUBLE ON EARTH

FARMER LILA

Down on Earth, Farmer Lila was busy driving her tractor across wide green fields. Her GPS tablet suddenly beeped and glitched — the neat lines turned into zigzags! “Oh no!” cried Lila. “My rows are all crooked! How will I plant my crops?”



Science Spark: Farmers today depend on GPS satellites to plant crops in straight rows and save fuel. But solar storms can disrupt GPS signals, making farming harder. This challenge was even highlighted in the 2024 NASA–NOAA Space Weather User Needs Survey.



Pilot

TROUBLE IN THE SKY
—SVO-RY.

Trouble in Space: Astronaut Kai

- Far above Earth, Astronaut Kai floated calmly inside the International Space Station.
- Suddenly, his tablet beeped and flashed in red: “Radiation Alert!”
- Kai’s eyes widened. “Oh no! I need to get to the shielded safe room!”

SCIENCE SPARK

Science Space:

- Solar storms send dangerous radiation into space. Astronauts on the ISS are protected by moving into shielded areas until the storm passes.
- NASA carefully monitors space weather to keep astronauts safe.

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SAMMY THE SATELLITE:

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Far above Earth, a little satellite
spun cheerfully in orbit.

“Beep beep! I’m Sammy the
Satellite, and I see a storm coming!”

Sammy blinked his sensors and
sent glowing signals down to Earth.

“Warning! A solar storm is heading
your way!”



Science Spark

Satellites like SOHO (Solar and Heliospheric Observatory) and SDO (Solar Dynamics Observatory) constantly watch the Sun.

They detect solar flares and CMEs and send early warnings to protect Earth

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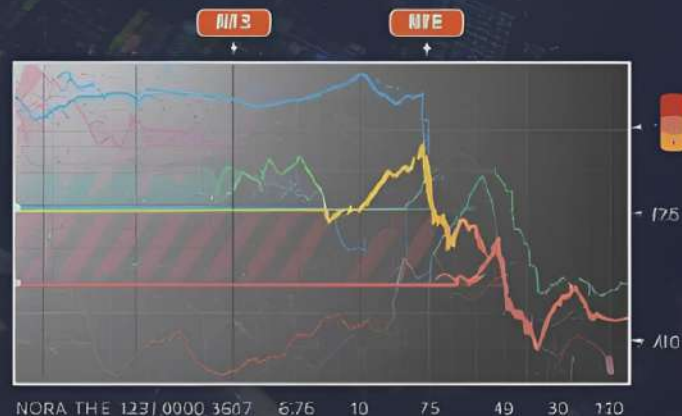
In a bright control room, Nora the Forecaster studied her glowing computer screens. Graphs spiked, and colorful images of the Sun flashed across the monitors. “It’s a G3 storm,” she announced. “Strong, but we can prepare!” She quickly sent alerts to farmers, pilots, astronauts, and power grid operators.

Science Spark:

Space weather forecasters at NOAA’s Space Weather Prediction Center and NASA use special scales to measure storms:

- G-scale: geomagnetic storms (like Stormy)
- R-scale: radio blackouts
- S-scale: solar radiation

A G3 storm can cause GPS errors, radio problems, and auroras visible farther south than usual.



Stormy Hits Earth's Shield!



Stormy raced through space, laughing as he zoomed closer to Earth.

But suddenly — BOOM! He crashed into an invisible barrier.

“What is this?!” Stormy shouted as waves of blue light pushed against him.

It was Earth’s magnetic field, bending and twisting his energy.



Science Spark:

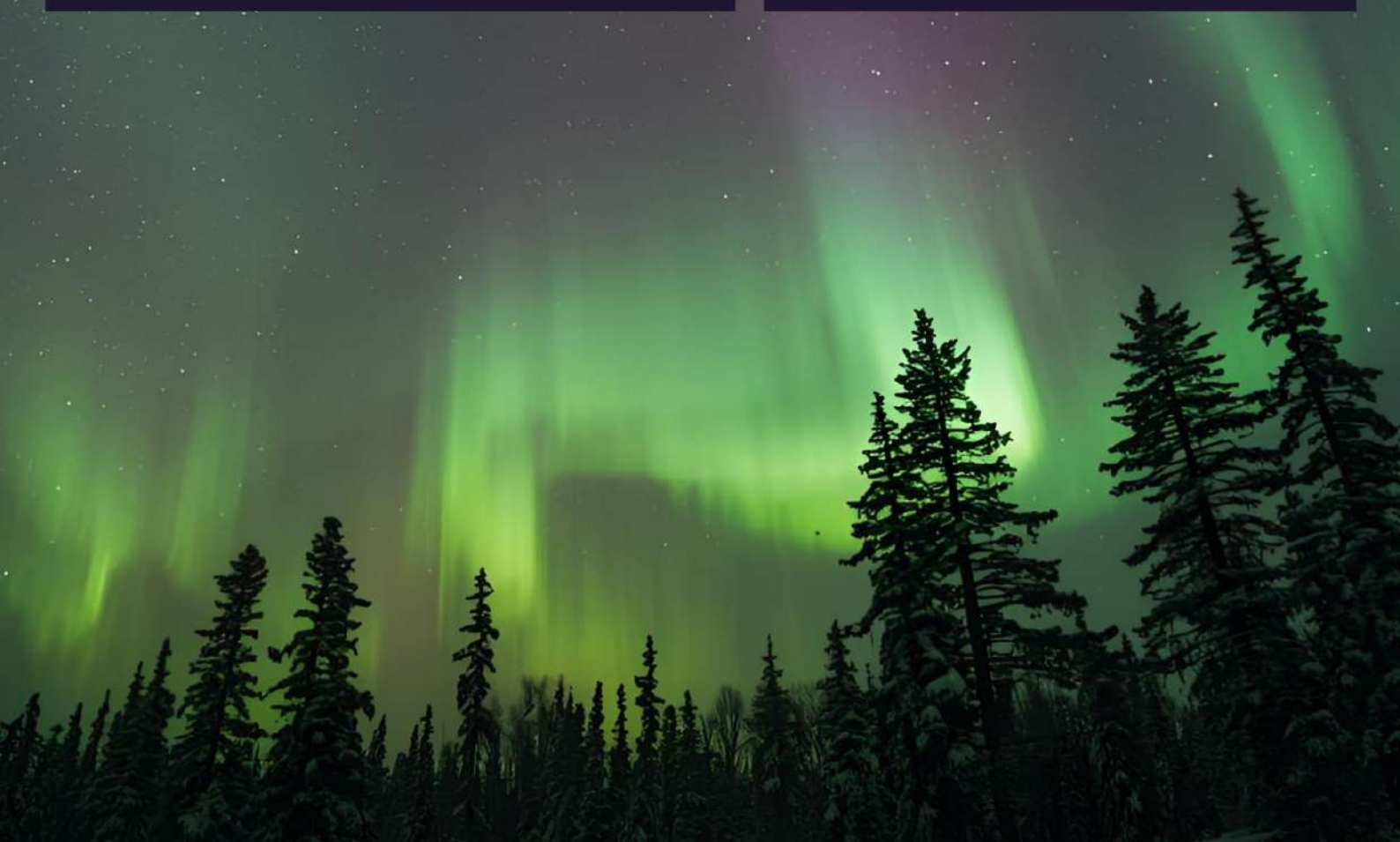
Earth is surrounded by a protective magnetic field called the magnetosphere. It deflects most of the Sun’s charged particles and keeps earth safe. Without this shield, solar storms could wipe out power, satellites, and even life on Earth.

Beauty in the Storm

- As Stormy's energy swirled into Earth's skies, something magical happened.
- The night lit up with ribbons of green, purple, and blue light.
- Children on the ground pointed upward in wonder. "Auroras!" they shouted.
- Stormy blinked. "Wait... I made the sky glow?"

Science Spark:

- Auroras happen when particles from solar storms crash into Earth's atmosphere. They make gases like oxygen and nitrogen glow, painting the sky with colors.
- NASA satellites often capture real aurora photos from space.



TEAMWORK AND LESSONS

Farmers adjusted their rows. Pilots landed tanks. Astronauts Nora, Sammy and protuns stay protected. Stormy smiled.

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GOODBYE



By **STORMY WAVLEN**

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