Lesson 2:

Where does energy come from?

ERGON ENERGY RETAIL
Part of Energy Queensland

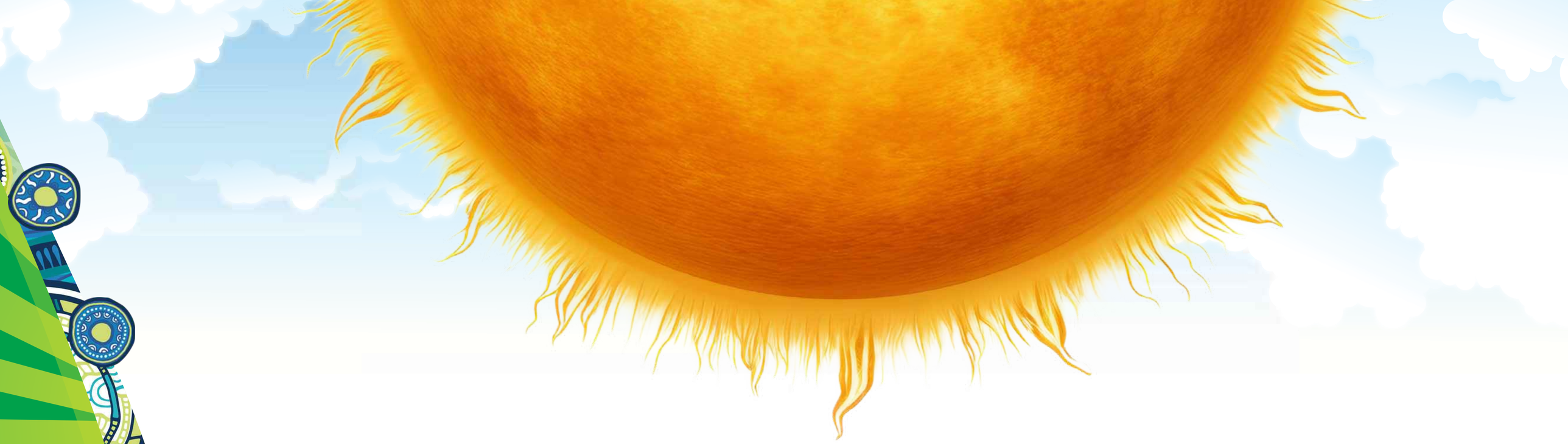
POWER SAVVY

What have we achieved on our mission so far?

In pairs, complete the Forms of Energy card matching game!

Match each form of energy with the correct definition and correct picture.

Make sure you are speedy – you only have 5 mins to match them correctly!



Learning intentions

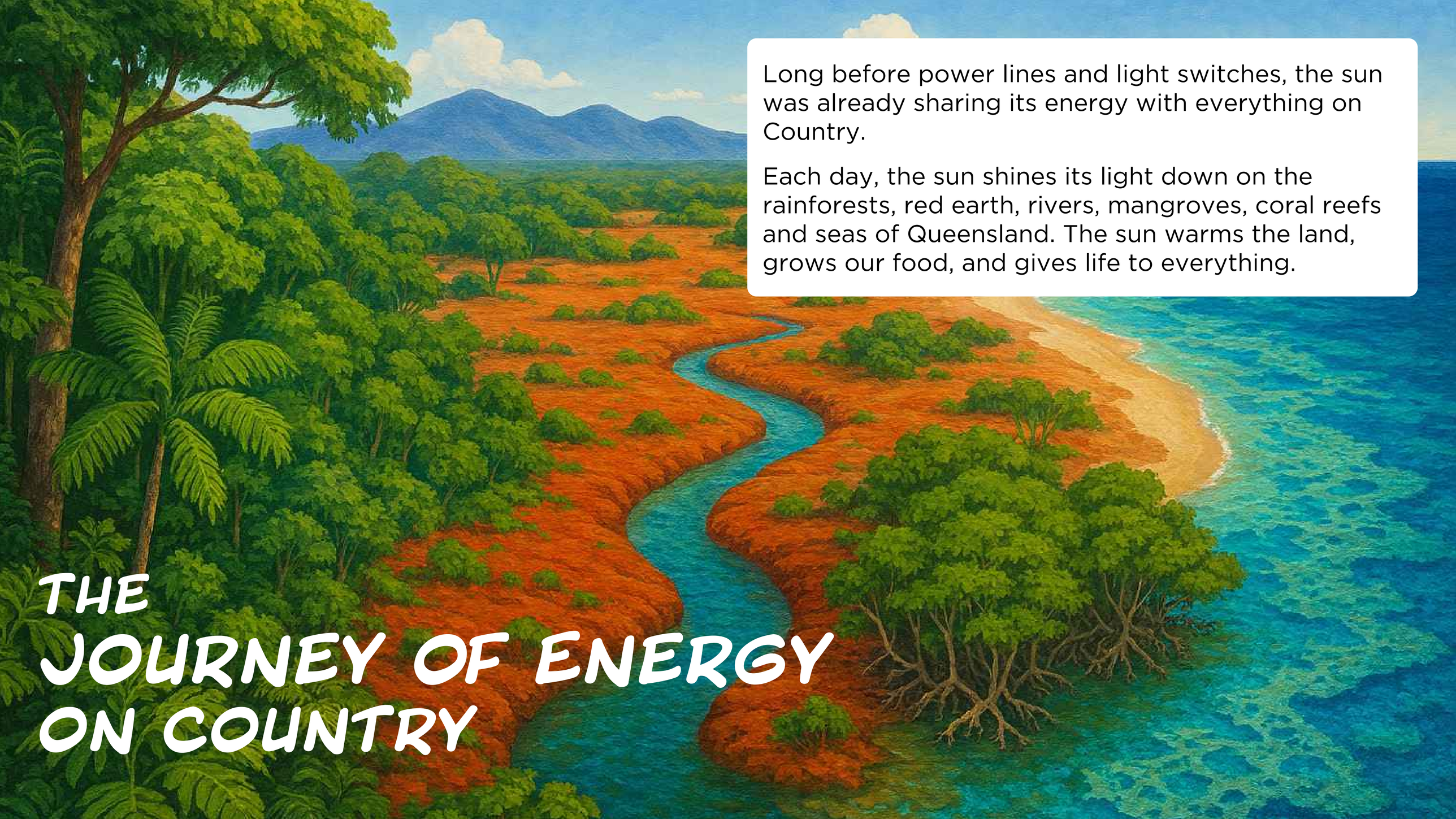
- Understand that the sun is the main source of energy in the world.
- Describe how energy from the sun reaches your home as electricity.

Today's Mission!

In our previous lesson we understood that energy can come in lots of different forms.

In today's lesson we are going to understand where energy comes from.

Read The Journey of Energy on Country story with your teacher, and answer the questions along the way!



THE JOURNEY OF ENERGY ON COUNTRY

Long before power lines and light switches, the sun was already sharing its energy with everything on Country.

Each day, the sun shines its light down on the rainforests, red earth, rivers, mangroves, coral reefs and seas of Queensland. The sun warms the land, grows our food, and gives life to everything.

One bright morning, a ray of sunlight landed on a green leaf of a paperbark tree growing near a freshwater creek.

The tree drank up water from the ground and breathed in carbon dioxide from the air.

With the help of the sun, it used photosynthesis to make its own food and grow tall and strong.

That sunlight became chemical energy inside the tree’s leaves, bark and branches.

After many seasons passed, the tree fell. Over thousands and thousands of years, the tree and other plant matter were buried by soil.

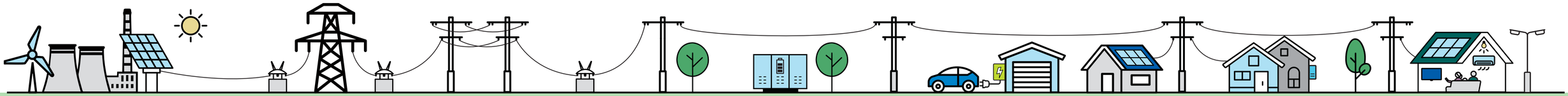
In some places, like deep inland or near old swamps, these ancient trees slowly turned into coal and oil, types of fossil fuels.

These ancient, buried trees hold energy from the sun deep underground.

Today, some of that coal is dug up in Queensland mines and taken to big power stations. There, it’s burned to make heat, which boils water into steam. That steam turns turbines, which spin fast to make electricity. Oil is also extracted from the Earth, refined into fuel and sent to our remote communities by truck and by boat. Just like how fuel powers our cars, this fuel is used by remote power stations to power communities.

The electricity from the power stations travels through wires and poles, along our streets and into our homes, buildings and schools.

That electricity might be lighting your classroom, powering the aircon on a hot day, or helping you cook dinner with your family.

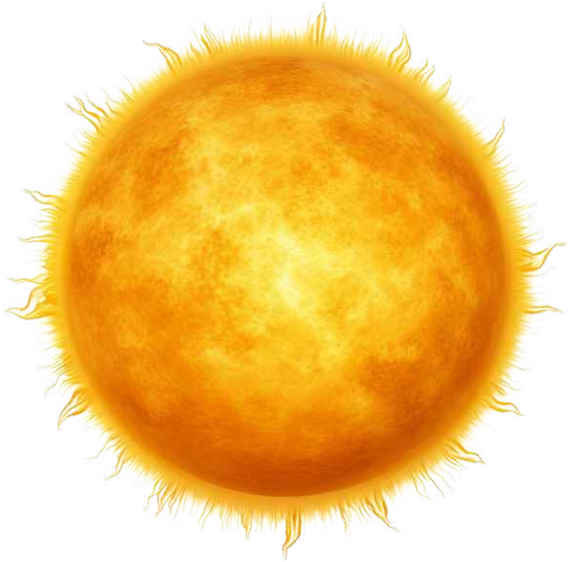


So, when you flick on a light remember:

You’re using energy that began its journey with the Sun, passed through Country, waited underground for millions of years, and now helps power your life on your land, your sea, and in your community.

Today’s task!

Using your understanding of where energy comes from, complete the storyboard worksheet to describe the journey of how energy from the Sun can reach your home.



Mission report

We now know that all energy comes from the Sun and makes fossil fuels!

What other ways do you think we could generate electricity?