

God is Provider Teacher's Topic Guide Year 5

Topic: Trees and Forests

Duration: 5 weeks

Spiritual Awareness: We have responsibility to care for the creation

God has provided trees for us to use. We have been given the responsibility of caring for the land. This includes care of forests and the amazing variety of trees contained within them. Natural forests provide a home for a huge variety of plants and animals, many of which are on the verge of extinction. Rainforests contain a greater number and variety of plant and animal species than any other habitat on earth. Many are still unknown and many plants have potential healing properties yet to be discovered by medical science. Tropical rainforests are not only important to wildlife, but to the human race as well. The roots of the forest trees hold the soil in place, preventing soil erosion. The trees themselves have an effect on the climate, gathering clouds that produce rain. The trees also absorb carbon dioxide and produce oxygen. In spite of this, destruction of rainforests to satisfy man's greed continues at an alarming rate. Wise management of the land, including forest plantation, is a way in which God provides for our needs.

Our response to 'God is Provider'

Values: Our response to 'God is a Provider'

- **Thankfulness** to God for the things He provides, and thankfulness to parents for the things they provide
- **Generosity**: Sharing with others the things that God has provided

Outcomes: Students will

- identify different types of trees
- understand the value of wood as a natural resource
- understand the difference between wood from plantations and the rarer species of trees from rainforests
- appreciate the value of the rainforest to both human and animal life
- explain the threat facing the world's rainforests
- understand the effects of rainforest clearance
- understand the rainforest as a living community of plants and animals

Bible stories and passages

Matthew 25: 14-30 - The story of the talents is a story of responsibility with that which the Lord has provided for us.

Genesis 37-46 - God gave Joseph wisdom and used this wisdom in providing food for his family.

Genesis 1:11 - The land produced vegetation.

Genesis 1:28 – We are God's caretakers.

Genesis 2: 8-9 - Trees in the Garden of Eden.

Psalm 104:10-18 - God provides for His creation.

Psalm 147:7-9 - God gives food to every living creature.

Bible verses

Psalm 92:12 – The righteous will flourish like palm trees; they will grow like the cedars of Lebanon. They are like trees planted in the house of the Lord.

1 John 5:14 – We are sure that God hears us if we ask Him for anything that is according to His will.

1 Peter 5:7 – Leave all your worries with Him, because He cares for you.

1 Phil 4:19 – My God will supply all your needs.

Key Questions

How do trees provide for our needs?

What would the world be like without trees?

How do trees provide for the needs of other plants and animals in the rain forests?

How long do some trees take to grow?

What are the dangers facing the world's natural forests?

What can be done to ensure that natural forests are not destroyed?

How can we take care of forests and bushlands in our country?

What did God mean when He asked Adam to rule over the creation?

Activities

a) Rainforests

- Identify the different layers of the rainforest: the upper and lower canopies, the emergent trees and the forest floor.
- Draw a diagram of a rainforest, showing layers.
- Explain the meaning of a canopy.
- Explain the battle for light as trees and vines grow upwards, chasing the light.
- Describe the plants growing in the different layers.
- Make a project on animals living in the rainforest.
- Describe the value of the rainforests to human life.
- Research the way of life of peoples of the Amazon rainforest, who manage to live in the forest without damaging it.
- Explain why people want to clear the forests, (agriculture, income from felling trees, building dams).
- Describe the effect of this destruction upon the world's climate and upon plant and animal species.
- Make a study of an endangered rainforest species.
- Plot rainforests on a world map.
- Make a list of ways people can help prevent the destruction of rainforests.

b) Forestry

- List the different uses for wood.
- Make a collection of wood samples.
- Compare a forest plantation and a rainforest.
- Identify rare expensive varieties of wood that come from rainforests.
- Classify wood according to different qualities e.g. hard, soft.
- Test wood for properties e.g. Will it float? Is it easy to saw / hammer?
- Compare weights of wood samples.

- Classify and identify trees in the local area.
- Classify and identify types of processed wood such as chipboard & plywood.
- Make a list of things in the home made of wood.
- Identify buildings made from wood in the local area.
- Research the value of wood to early pioneers.
- Make an article from wood, e.g. rhythm sticks.
- Make paper.
- Make a collage using bark, sawdust, wood shavings.
- Use pieces of wood to make prints.
- Label the parts of a tree.
- Explain the way that water and nutrients travel from the roots to the tip.
- Explain how the leaves use sunlight and carbon dioxide to produce oxygen.

Values education Year 5

God is Provider

Stewardship

Stewardship is ...

Being responsible for the property of someone else
Taking care of another person's property

Who is the owner of everything in the whole world?

In the beginning of Genesis, God creates everything and puts Adam in the Garden to work it and to take care of it. It is clear that man was created to work; and that work is the stewardship of all of the creation that God has given him.

God owns everything. We are simply managers, looking after what God has given us. We are all stewards of the resources, abilities and opportunities that God has entrusted to our care. One day each one of us will be called to give an account for how we have managed what the Master has given us.

What are we expected to do with these resources?

Like the servants in the Parable of the Talents, we will be called to give an account of how we have wisely used everything we have been given, including our time, money, abilities, information, wisdom, relationships, and authority.

What does the Bible say about stewardship?

Psalm 24:1 The earth is the LORD's, and everything in it, the world, and all who live in it.

Deuteronomy 8:18 Remember the LORD your God, for it is He who gives you the ability to produce wealth.

Colossians 3:23-24 Whatever you do, work at it with all your heart, as working for the Lord, not for men, since you know that you will receive an inheritance from the Lord as a reward. It is the Lord Christ you are serving.

Matthew 25:14-30 The parable of the talents

Matthew 25:21 Well done, good and faithful servant! You have been faithful with a few things; I will put you in charge of many things. Come and share your master's happiness!

Practical Science Year 5

God is Provider

Topic: Trees

How water travels through leaves

Materials for Leaf Experiment

- Leaves
- Scissors
- Clear cups
- Water
- Red food coloring

Procedure for Leaf Experiment

1. Start by taking a walk outdoors and collecting various leaves.
2. Snip off the bottom of each leaf stem. Then place each leaf in a glass filled about a third of the way with water.
3. Add red food coloring to the water, (a very dark shade of red will increase your chances of seeing changes in the leaves.)
4. Observe the leaves closely. (You can use a magnifying glass if you have one.) Record your observations of how they look on Day 1 of the experiment.
5. Observe the leaves for the next two days. Be sure to record your observations in the correct area on your observation sheet.

What's Going On?

You should notice the red color move slowly through the leaf.

The colored water was moving through the xylem tubes of the leaf. The xylem tubes of plants transport water and minerals up from the roots through the entire plant. (Their thick walls also provide support for the plant.)

Practical Science

Practical Science Yr 5

Topic: Trees: Leaves breathe

You will need:

- A glass or plastic bowl
- Lukewarm water
- A large leaf

Step 1: Fill a large bowl with lukewarm water

You can use a glass or plastic bowl. (Glass bowls are better as you'll be able to see the experiment from all angles. However, you will probably have the bowl outside so you may want to use plastic).

Step 2: Go outside and find a large leaf

You'll want to remove a leaf from a tree or plant and not just pick one up off the ground as we want an 'active' leaf for the project.

Step 3: Place the leaf in the bowl of water and put a small rock on top of it so it is FULLY submerged under the water. Then put the bowl in a sunny spot.

If you have a place inside that's very sunny, you can also try keeping the bowl there.

Step 4: Wait a few hours

Step 5: Take a peek a few hours later

What you should be seeing is small bubbles that form around the leaf and the edges of the bowl.

What's happening?

If you held their breath, went underwater and then let your breath out you would see bubbles coming up in the water.

That's what's happening here. The leaf is still using the sunlight as part of the photosynthesis process (where leaves convert sunlight to energy).

As a leaf creates that energy, it needs to get rid of the items it no longer needs so it will expel both the extra oxygen during photosynthesis along with water (the release of water from a plant is called transpiration).

The process of photosynthesis is what allows us to see the bubbles. As the leaf releases its extra oxygen while submerged, the oxygen can be seen as bubbles in the water.

And since oxygen is lighter than water, the bubbles will eventually rise to the surface.

Art Year 5

God is Provider

Topic: Trees and forestry

Biblical connection: God provides for his creation through the world of plants. Trees provide food, medicine, shade, oxygen and homes for animals.

Bible art as a wall display: Psalm 92:12 – The righteous will flourish like palm trees; they will grow like the cedars of Lebanon. They are like trees planted in the house of the Lord.

Construction

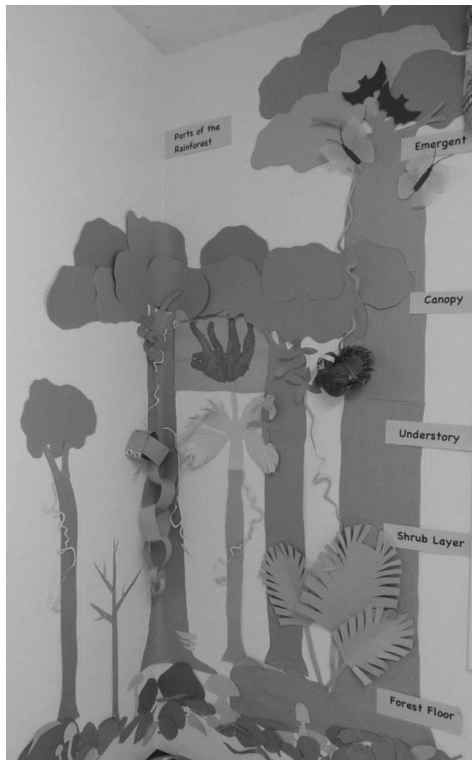
- Make something from wood.

Collage / painting / drawing

- Create a rainforest scene, adding cut-out plants and animals to a basic painted background.
- Make a collage or drawing of different shaped leaves.
- Paint a landscape that includes trees.

Printing

- Use pieces of wood, dipped into paint on sponges, to create a printed scene.



Thinking Skills

Year 5 Provider

<p>Trees and forests 1</p> <p>List 10 uses for trees.</p>	<p>Trees and forests 2</p> <p>List as many animals as you can that live in a rainforest.</p>
<p>Trees and forests 3</p> <p>You are lost in a forest. You have no food or water. Brainstorm ideas for how you will survive. Record your ideas in dot points.</p>	<p>Trees and forests 4</p> <p>Draw 5 leaves of 5 different shapes.</p>
<p>Trees and forests 5</p> <p>There is a forest between your house and the town. There is also a river to cross and a bog hole to avoid. Draw a map and show the route from your house to the town, marking in all the features on the way.</p>	<p>Trees and forests</p> <p>Explain the best way to climb a coconut tree.</p>