Soil and crop farming
God is a Loving Provider

Spiritual Awareness: God is resourceful
God expects mankind to work responsibly with the resources he has been given, using wisely the dominion he has been given. The provision of soil for the growing of crops is an expression of God's love and kindness towards us. Provision is on-going, as God provides rain, sun and seeds, the elements for His provision. He wants His children to trust in Him daily, and thank Him for the food He provides.

Supporting devotional resource
Themes for Christian Studies 3, (Provider): God's provision never runs out
Themes for Christian Studies *4, (Provider): God is a caring Provider*
Themes for Christian Studies 5, (Provider): God is a faithful Provider

Biblical references
Bible stories and passages
Genesis 1:30; 2:5; 3:23 - Man was instructed by God to cultivate the soil.
Matthew 13:31 - The mustard seed: God provides when we have faith.
Matthew 26 - Do not worry about food and clothes.
Matthew 13:3 - The sower: God provides the seed.
Matthew 4:18; Mark 1:14; Luke 5:1; John 1:35 - The calling of the first disciples. They had to trust God to provide.
Exodus 15:22-27; Exodus 17 - God provided water for the Israelites when they trusted Him.
Exodus 23:10-11 – Work your crops for 6 years and in the 7th year let the land rest.

Memory verses
Job 36:28 and 31 – He lets the rain pour from the clouds in showers for all mankind. This is how He feeds the people and provides an abundance of food. (GNB)
Psalm 104:14 - God provides grass for the cattle and vegetables for man.
Psalm 119:86a - God's words can be trusted.
Psalm 56:3 - I put my trust in you.
Psalm 20:7 - We trust in the power of the Lord our God.

Key Questions
How does God provide my food?
How can I thank God for my food?
What did God mean when He asked man to cultivate the soil?
What things in God's creation provide for the growing of seeds?
What must we do if we want seeds to grow into food plants?
What problems can there be in trying to grow good crops?
Where did weeds and pests come from?
Were they in God's original perfect creation?

a) Soil

Outcomes

Students will

knowledge

- understand different soil types
- understand the difference between topsoil and subsoil
- suggest ways of improving the soil
- understand problems deriving from poor soil management (note Exodus 23: 10-11)
- understand the responsibility mankind faces in soil conservation

skills

- observe soil types using sight, smell and touch.
- making inferences about the relationship between soil type and plant growth
- Question and predict
- investigate and make predictions
- process and analyse information
- compare results with predictions

Values

- appreciate resources that God has provided
- show interest in gardening

Activities

- Collect samples of soil from a variety of sources and place in jars. Include sand, clay, loam, broken down compost.
- Study soil samples using sight, smell and touch. Use a magnifying glass.
- Classify / list soil types and explain how they were formed.
- Explain the difference between topsoil and subsoil.
- Conduct experiment to show the different types of soil particles. Place soil and water in a jar and shake. Allow soil to settle, and watch heavier particles settling first and lighter particle settling last.
- Conduct experiment to show that soil contains air. Place soil in glass jar and slowly pour water over it. Observe rising air bubbles.
- Make soil from rocks by scraping soft sandstone, shale or limestone.
- Make inferences about the relationship between soil type and plant growth. Predict performance of plant growth in different soil types e.g. fertile garden compost, clay, sand.
- Measure plant growth and graph results.
- Grow a vegetable garden. Add compost to one section and note difference in performance.
- Examine organic and inorganic fertilizers.
- Discuss the practice of allowing land to be fallow.
- List some of the reasons for soil erosion.
- List ways of preventing soil erosion e.g. planting trees.

b) crop farming

Outcomes

Students will

Knowledge

- understand that Living things, including plants, depend on the environment to survive
- understand in detail the farming methods of one crop from the local area and how it is marketed and transported
- appreciate some of the processes involved in getting food from farm to table
- appreciate the food value of food from the farm
- identify plant food sources of processed foods
- differentiate between local and imported crops
- understand the importance of seasons in crop farming

Skills

- measure growth rates of plants
- predict the expected performance of plants in certain soils
- make inferences about process and methods

Values

- be thankful to God for our food
- appreciate people who work to produce our food

Activities

- Visit a crop farm.
- Visit a market or supermarket.
- Make a list of local and imported crops.
- Classify food crops into those grown in warm and cool climates.
- Make a flow chart showing the way the crop begins as a seed and becomes a food plant.
- Make a flow chart showing passage of food from producer to consumer.
- Make a calendar showing the activities in the farmers' year.
- Make a list of processed foods and their food crop source.
- Classify food plants.
- Prepare healthy meals from plant foods.
- Discuss the difference between organic and non-organic fruit and vegetables.
- Compare farming methods of organic and non-organic.
- Discuss the problem of pests.
- Discuss the potential problems of genetic modification.
- Compare today's farming methods with earlier times.
- Discuss transport and marketing of farm products.
- Discuss economic and marketing factors - imports and exports.
- Discuss ways in which overproduction in the first-world could benefit countries where there is food shortage.

Assessment

1. Make a children's book to show how a particular plant food product is manufactured, showing the steps from farm to your table.
2. Draw, describe and graph the growth of your plant in different soil types. Keep a diary to record growth rates.
3. What have I learned from the study of soil and crop farming…
    a. about God?
    b. about doing what God wants me to do?
    c. about the Bible?

Link with Australian Curriculum:

Science Year 6: Biological science – the growth of living things is affected by the physical conditions of the environment

Learning Connections

English: make a book about farm to table; excursion reports; word banks
History: the history of crop farming; compare old farming methods with new
Social Studies/Geography: crop farming around the world; the life of a farmer
Health: the value of plant foods
Art: seed / pasta collage; drawing cross-sections of fruits and vegetables; fruit and vegetable prints
Mathematics: weighing plant foods, e.g. dried beans compared to fresh beans; work with volume – e.g. work out how many dried beans could fit into a cup, then work out how many dried beans you would need to fill 20 cups.
Thinking skills: See the *Creative Thinking Skills* section of this website – *"Agricultural Science" (Middle/Upper Primary).*

Additional Beacon Media resources

'Growing Things' – Units of Study – Student Workbook
Visual language Unit – *Farming* – See "Science and Social Studies student activities" on the Beacon Media website.