

Science, Social Studies, Health

Teacher's Guide Year 5

A God-centred Curriculum

Based on the character and nature of God

Character theme	Topic	Page
<i>Term 1</i>		
God is Love (5 weeks)	Communication	2
God is Provider (5 weeks)	Trees and forests	7
<i>Term 2</i>		
God is our Saviour (3 weeks)	America	14
God is Pure & Holy (4 weeks)	Fitness & food choices	18
God is Creator Part 1 (3 weeks)	Animal classification	27
<i>Term 3</i>		
God is Creator Part 2 (2 weeks)	continued	
God is Wise (4 weeks)	Community Insects	31
God is a Servant (4 weeks)	Occupations	36
<i>Term 4</i>		
God is Protector (3 weeks)	Shelter	41
God is Truth (3 weeks)	Gravity & Pendulums	46
God is Lord & King (3 weeks)	Christmas	57



God is Love Teacher's Topic Guide Year 5

Topic: Communication

Duration: 5 weeks

Spiritual Awareness: God communicates with us and wants us to communicate with Him

God has provided for human communication through sound waves, which reach and vibrate the ear. God has provided us with a voice for making sound. Good communication requires patience. We need to learn to listen to others with patience, and not to dominate a conversation with our own viewpoint.

God is a personal God who expresses His love by communicating with us. As we open ourselves up to God's love we learn to hear His voice.

God speaks to us through the Bible, through wise counselors, through visions, dreams, angels, prophetic words, miracles, and of course, through the still small voice. In order to hear God's voice, we need to practice our listening skills. Listening for God to speak requires patience. It may mean setting aside time or withdrawing from our busy schedule, to the quiet place where we can hear God speak.

As we learn to hear God's voice we grow in our trust in Him, believing that He hears our prayers and acts upon them in His wisdom, not our own

Outcomes: Students will

- study the development of inventions that have facilitated communication
- explain how people and animals communicate
- appreciate the importance of communication
- research the history of communication
- compare inventions for communication
- gather data about inventions
- communication using a wide range of methods
- include others and appreciate the needs of the hearing impaired
- appreciate the importance of proper communication between people

Bible stories and passages

John 10:14-15 - The sheep know the shepherd's voice.

1 Kings 19 - God spoke to Elijah in a still small voice.

Matthew 14:23 - Jesus went to a quiet place to pray.

Luke 18:10-30 - The two men at the temple. Only one communicated with God.

Genesis 2-5 - God spoke face to face with Adam and Eve.

Genesis 37-40, Daniel 2 - God speaks through dreams.

Numbers 22 - God spoke through Balaam's donkey.

Exodus 19,20 - God spoke to Moses when He gave the Ten Commandments.

Exodus 3-17 - God speaks through signs and wonders.

Samuel 1 & 2 - Jeremiah and other prophets speak God's message.

John 1:6-13 – God sent John the Baptist to communicate the message that Jesus was coming. God sent Jesus to communicate a special message to the world.

Bible verses

Psalm 85:8 - I am listening to what the Lord God is saying. (GNB)

Revelation 3: 20 – “Listen! I stand at the door and knock; if anyone hears my voice and opens the door, I will come into his house and eat with him, and he will eat with me.” (GNB)

Psalm 100:1 – Sing to the Lord, all the world! Worship the Lord with joy; come before Him with happy songs. (GNB)

Psalm 98:4 – Shout joyfully to the Lord, all the earth; praise Him with songs and shouts of joy!

Psalm 98:5-6 – Sing praises to the Lord! Play music on the harps! Blow trumpets and horns, and shout for joy to the Lord our king. (GNB)

Key Questions

What is a good listener?

How do we hear?

How do we communicate? (include body language)

How does God communicate with us?

How do we know what God wants us to do?

How can we hear God's voice more clearly?

How does music help us to communicate with God and others?

Activities

- Describe communication skills of babies, toddlers and pre-school children.
- Investigate Braille and sign language.
- Read the story of Helen Keller
- List in chronological order the major developments in communication.
- Research in detail one means of communication, e.g. telephone.
- Research the works of inventors such as Braille, Morse, Bell, Marconi, Edison and Baird.
- Research the work of John Flynn and write about how he used communication to run the Flying Doctor service in outback Australia.
- Make a class newspaper.
- Examine newspapers and make a list of components, e.g. news, sport, weather, advertisement
- Discuss ways in which animals communicate with each other and with humans, e.g. dogs and cats
- Study the ways in which specific organisms communicate e.g. bees (dance), bats (radar), birds (song).
- Make a list of ways we communicate with our pets.
- Brainstorm all the different ways in which you could communicate with people around the world.
- Learn some of the rules and shortcuts about text messaging. Write them down and write 5 messages to a friend with translation
- Write one page about why it is important to communicate with other people.
- Find out how to introduce yourself in another language, e.g. “Hello” “How are you?” “My name is...”

Biography: John Flynn, Louis Braille, Martin Luther King

Values education Year 5

God is Love

Forgiveness

God wants us to forgive others as He has forgiven us.

Forgiveness is...

- giving a person another chance, even if they have hurt me
- not wanting to pay someone back for the wrong things they have done to me
- being kind to those who have hurt me
- not reminding myself or the other person of the wrong things they have done to me

Activities

1. When Jesus died, He said, "*Father forgive them, for they do not know what they are doing.*" What wrong things did people do to Jesus?
2. Sometimes we find it hardest to forgive people in our own family, because you see a lot of them and you might get tired of their actions. Why would Jesus want us to keep on forgiving them?
3. Write about a time when you forgave someone in your family.
4. Do you think you should forgive a person even when they don't say sorry? Why?
5. How can it help YOU when you forgive someone?

What does the Bible say about forgiveness?

Ephesians 4:32 Forgive one another as God has forgiven you.

Matthew 18:21-35 The parable of the king's servant.

Luke 15:11-32 The son who left home.

Our response to 'God is Love'

- **flexibility** when communicating with others, putting the needs of others before our own and listening to the opinions of others
- showing **compassion** and **empathy, patience, kindness** and **friendliness** in our communication with others

Art Year 5

God is Love

Communication

Biblical connection: God is a Father who loves us and communicates with us. We can share His love with others.

Illustrated Bible story: the life of Joseph

1. Sharing his dreams from God with his family members
2. Sold as a slave
3. In jail
4. Advisor to the Pharaoh
5. Ruler throughout the land; in charge of food distribution
6. Reunited with family

Communication through art

- Look at works of art and decide what the artist is trying to communicate
- Create works of art that communicate a message or emotion, e.g. excitement, happiness, energy, movement, peace

Painting activities

- Paint a scene that shows movement, e.g. a stormy sea.
- Paint an abstract pattern using free movement with the brush, swirls of colour.
- Paint to music, transferring the rhythm of the music to your painting.
- Paint a scene showing movement, e.g. fireworks; wind in the trees; a tornado.

Drawing activities

- Create a scene which shows movement, e.g. the waves of the sea.
- Draw a free moving design with black crayon. Paint over the design with a white wash.

Story: The Two Artists

Two artists were asked to paint a picture that would best show the idea of peace. One artist painted a crystal-clear lake in the mountains. There was not a breath of wind, and not a ripple on the lake. The lake, like a mirror, reflected the image of the surrounding trees and mountains.

The second artist painted a picture of a roaring waterfall. Hanging over the waterfall was a great tree branch. Hidden away in a secure part of the limb was a little bird's nest. Inside the nest was a tiny bird, sitting peacefully as the water rushed and swirled below her and the water sprayed around her. Amidst the tremendous roar of the waterfall the little bird sat as if she had not a worry in the world. Her nest was snug and warm, nestled in the strong branch. She knew she was safe.

- Which picture do you think gave the best idea of peace?
- Explain how the second painting reminds us of feeling safe and secure on God's care.

Practical Science Year 5

Communication

Make a telephone

What you'll need:

- 2 paper cups or two empty tin cans
- A sharp pencil or sewing needle to help poke holes, (or hammer and nail if you use cans)
- String (fishing line also works well)

Instructions:

- Cut a long piece of string. You can experiment with different lengths but perhaps 20 metres (66 feet) is a good place to start.
- Poke a small hole in the bottom of each cup.
- Thread the string through each cup and tie knots at each end to stop it pulling through the cup (alternatively you can use a paper clip, washer or similar small object to hold the string in place).
- Move into position with you and a friend holding the cups at a distance that makes the string tight (making sure the string isn't touching anything else).
- One person talks into the cup while the other puts the cup to their ear and listens; can you hear each other?

What's happening?

Speaking into the cup creates sound waves which are converted into vibrations at the bottom of the cup. The vibrations travel along the string and are converted back into sound waves at the other end so your friend can hear what you said. Sound travels through the air but it travels even better through solids such as your cup and string, allowing you to hear sounds that might be too far away when traveling through the air.

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

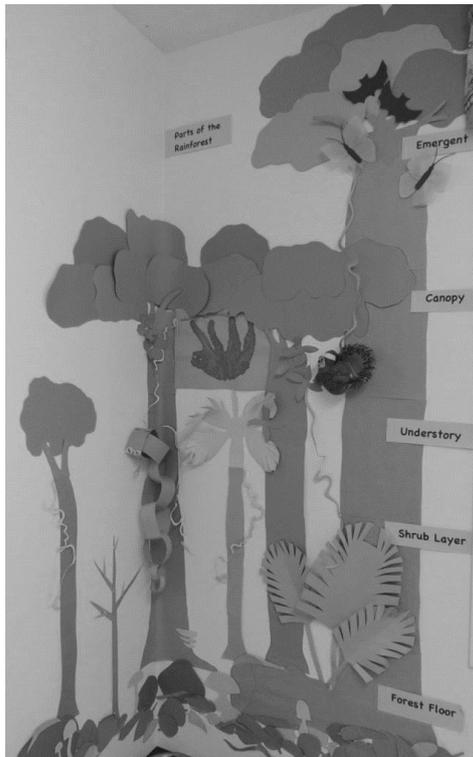
- Make something from wood.

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.



God is Our Saviour Teacher's Topic Guide Year 5

Topic: America

Duration: 3 weeks

Spiritual Awareness: God loves everyone equally

- God's love embraces all cultures. As Christians we are commanded to love our neighbour. This extends beyond the person living next door. As in the story of the Good Samaritan, kindness to our neighbour may mean showing compassion to someone culturally different.
- The true meaning of 'loving our neighbour' is to show personal interest and appreciation, and to extend God's love to them.

Values: Our response to 'God is our Saviour'

- **Cultural understanding** (John 3:16)
- **kindness, patience** and **gentleness** towards others
- **compassion** towards those who are hurting or in need
- **friendliness, forgiveness** and **faithfulness**

Outcomes: Students will:

- become familiar with some of the historical, cultural and geographical features of North and South America
- compare life in different parts of America with our own country
- realize that God loves everyone equally and wants everyone to come to know Him through His Son
- develop mapping skills

Bible stories and passages

- Luke 10:25-38 The Good Samaritan
- Mark 10:13-16 Jesus loves all the children of the world
- Luke 10:27; Matthew 22:39 Love the Lord with all your heart...and your neighbour as yourself.
- Romans 3:19-26 People could not be made right with God by following the law, so God made another way, so that all nations would have opportunity to come to Him.
- James 2:1-9 Warning against prejudice.
- Acts 10:34-36 The gospel for all nations
- Acts 16:6-10 Taking the gospel to the nations

Bible Verses

- John 3:16 For God so loved the world ...
- 1 Corinthians 13:14 Love is patient and kind.
- Acts 10:34 God treats everyone on the same basis.
- John 3:16 For God so loved the world...
- John 13:34 A new commandment...love one another.
- John 15:13 The greatest love
- 1 John 4:16 God is love.

Activities

- Become familiar with the world map. Identify the countries within the continent of America
- Devise a list of questions that the students would like to find out about America.
- Draw a map of the USA. Mark in the major landmarks, like capital city, rivers, mountains and seas. Locate the States of Hawaii and Alaska.
- Study the biography of Jim Eliot and his team who brought the Gospel to Ecuador, South America. Find out about Ecuador past and present.
- Study the biography of John Newton who brought about reform of the slave trade, USA
- Design a travel brochure for a country in North or South America.
- Are there any special celebrations that are unique to the countries you are studying? Describe what is special or different.
- Make a shopping list for a meal you have been asked to prepare that is typical of a country in North or South America.
- What technology is used in the countries you are studying? Do they have TV, mobile phones, computers? Compare their technology with that of your country.

Assessment

1. Present information on one country and its culture.
2. What have I learned from the study of different cultures...
 - about God?
 - about doing what God wants me to do?
 - about the Bible?

Biographies: Jim Eliot; John Newton, Lord of the volcano (Hawaii)

Facts about America

United States of America

Geography

Area: 9,529,063 sq km

The world's third largest nation in area and population.

Population: 317,641,087

Capital: Washington DC

Number of states: 52

People living in cities: 82%

Official language: English. The growing Spanish-speaking Hispanic population is 11.2% of the population and numbers 34 million

Religion

Christians: 77%

Prayer points:

Across the USA there is a rapid falling away from Christian values. The USA was once a strong Christian nation, but now there is a rise in the belief that we are all free to live as we please, and that the Bible has no authority.

The 38-million-strong African-American community suffered immensely due to its origins in slavery and to subsequent racial discrimination. The civil rights movement and the election of the first black president have achieved great change in attitudes and awareness, but for many the cycle of unemployment, poverty, family instability and crime is unbroken.

Pray for:

a) Young people at risk. Over half of inner-city black males fail to complete secondary school. Many are in prison or in gangs. Poverty, drugs and violence are rampant. Murder is the major cause of death for inner-city, African-American males ages 15 to 34. Pray for an expression of Christian faith that enables these men to leave their shackles and find meaning, belonging and fulfilment in Christ.

b) African-American Muslims, whose numbers have rapidly grown up to two million – most of these from a Christian background. Sunnis account for the largest proportion; some small but vocal minorities belong to Black nationalist groups and to the Nation of Islam organization. Most were drawn to Islam as a result of failings in the Church. Pray for effective and loving outreach to them.

c) Black churches. More than any other race in the USA, African-Americans are likely to be Christian. Many of the largest and most vigorous evangelical churches are Black, but they are often isolated from mainstream evangelical Christianity and from meaningful involvement in missions. Pray for a unity of believers that transcends ethnicity. Pray for a new move of the Spirit of God in these churches.

d) Community impact. African-American churches have always had a strong redemptive influence in their communities. This is increasing as congregations now join to effect deliberate and strategic transformation in the neediest areas.

Countries of South America:

Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Guyana, Paraguay, Peru, Suriname, Uruguay, Venezuela

Countries of Central America:

Guatemala, Honduras, El Salvador, Nicaragua, Costa Rica, Panama, Belize

Brazil is the largest country in South America, encompassing around half of the continent's land area and population.

The people of South and Central America are made up of indigenous people, and descendants of early Europeans: Spanish, Portuguese and French. There are also a number of African-Americans who are descendants were brought to South America as slaves. The major religion throughout South and Central America is Catholic.

South America home to many interesting and unique species of animals including the llama, anaconda, piranha, jaguar, vicuña, and tapir. The Amazon is South America's largest river. The Amazon rainforests contain a major proportion of the Earth's species.

The Andes or Andean Mountains are the longest continental mountain range in the world. They form a continuous highland along the western edge of South America. This range is about 7,000 km (4,300 mi) long, about 200 to 700 km (120 to 430 mi) wide, and of an average height of about 4,000 m (13,000 ft). The Andes extend from north to south through seven South American countries: Venezuela, Colombia, Ecuador, Peru, Bolivia, Argentina and Chile.

Values education God is our Saviour

Love for people of different nations

God created people differently. He loves all people, regardless of race, religion or ethnicity.

Our response to God is our Saviour

- understand that Jesus died for the whole world, every person of every nation
- recognize that God loves all people equally
- show kindness and consideration to all
- accept and love others

Activities and discussion

1. Compare cultural traditions of two different ethnic groups in the areas of: food, music, art.
2. The word “tolerance” means accepting other people’s differences. Most differences in culture, like foods, art and music are good differences, and we can all learn from each other about new foods and art forms. But some differences are not so good and should not be taken on if they hurt other people or go against what the Bible says.

Example: In India, a strong cultural practice over the centuries has been the Caste system. This is when some people in society are regarded as inferior to others, and do not get the benefits of people in the “higher” ranks. Would this be a good aspect of culture to accept, appreciate and take on? Why not?

What does the Bible say about accepting people of different cultures?

- Luke 10:25-38 The Good Samaritan
- John 3:16 God so loved the WHOLE world that He gave His son
- Revelation 7:9 After this I looked, and there before me was a great multitude that no one could count, from **every nation**, tribe, people and language, standing before the throne and before the Lamb. They were wearing white robes and were holding palm branches in their hands.
- Matthew 22:37-39 Love the Lord your God. Love your neighbour as yourself. (Neighbour refers to people of other nationalities)
- John 4:1-26 Jesus and the Samaritan woman.

God is Pure and Holy Teacher's Topic Guide Year 5

Topic: Fitness and Food Choices

Duration: 4 weeks

Spiritual Awareness

Our bodies are temples of the Holy Spirit. Each person is extremely valuable. It is therefore our responsibility to look after ourselves, to think ahead and act wisely for our own protection.

Just as we need to look after our bodies for physical health, loving and obeying God gives us spiritual health.

Bible stories and passages

Matthew 10:29-30; Luke 12:6-7 We are of more value than many sparrows.

Exodus 15:26; Deut 7:15 In obeying health laws, God promised to protect the Israelites from the diseases of the Egyptians.

Genesis ch 1 God rested on the Sabbath.

Exodus 34:21 Rest on the seventh day.

Exodus ch 20 the Ten Commandments: God's people had to obey rules.

Exodus ch 16 God provided manna in the wilderness. Verse 17 tells us what happened when the people didn't obey the rules about collecting the manna.

Matthew 22:37-39 Love your neighbour as yourself. (What is meant by love of *self*?)

Galatians 5:22 But the fruit of the Spirit produces love, joy, peace, patience, kindness, goodness, faithfulness, gentleness and self-control. (We can show self-control in eating the right foods, in spending less time in front of the TV or computer and doing adequate exercise.)

Philippians 3:14 I run straight towards the goal in order to win the prize, which is God's call through Jesus Christ (GNB). (Just as we should try our best for Jesus to live the Christian life, loving others and sharing the gospel, we should also try hard to look after our bodies.

Keeping fit can be like running towards the goal. It takes hard work.)

Bible verses:

1 Corinthians 6:19-20 Don't you know that your body is a temple of the Holy Spirit?

Proverbs 4:20 & 22 Listen to my words. Remember them and keep them in your heart. They will give life and health to anyone who understands them.

Proverbs 3:7-8 Never let yourself think you are wiser than what you are; simply obey the Lord and refuse to do wrong. If you do, it will be like good medicine, healing your wounds and easing your pains (GNB).

Luke 2:52 Jesus grew both in body and in wisdom (GNB).

Proverbs 13:13 If you refuse good advice you are asking for trouble; follow it and you are safe (GNB).

Key Questions

Why should we take care of our bodies?

How can we keep our bodies fit and healthy?

Which foods are the best foods?

Outcomes

Knowledge

- study the requirements for health and fitness
- know the requirements for spiritual health
- Understand the benefits of regular exercise
- Know the best foods to eat for a healthy body
- Understand the meaning of wisdom and self-control when caring for their bodies

Skills

- analyze their own lifestyle and identify strengths and weaknesses
- develop surveys and questionnaires around health issues
- collate, graph, summarize findings
- plan a personal health program and address areas of personal weakness
- Devise a personal exercise program

Values

- appreciate the body as the temple of the Holy Spirit
- care for self
- be responsible and accountable for one's own actions

Activities

- Make a list of rules for good health
- Discuss some of the Old Testament health laws.
- Discuss importance of exercise and rest.
- Test and measure personal fitness levels.
- Make a list of exercise options.
- Survey students regarding exercise habits.
- Survey the school community about types of food most commonly eaten.
- Discuss food requirements for a healthy body.
- Keep a diary of food consumed over a certain period of time. Suggest improvements / healthy substitutes for junk food.
- Devise a healthy meal plan.
- Collect, make and sample healthy food.
- Discuss the implications of wise or unwise choices that affect our health.

- **Devise an exercise plan**

Each child chooses favourite forms of exercise. They can draw up a weekly plan for out-of-school exercise. Example:

Monday 4 p.m. Play with the dog

Tuesday 4 p.m. Skipping

- **Conduct surveys and make graphs**

Children can take surveys on 'out-of-school' fitness activities that class members are involved in, and graph results, e.g. football, swimming, playing active games with friends.

Food additives

Food additives are chemicals added to the food for colour, flavour or as a preservative.

Name some foods that contain artificial colours. (Artificial means not from nature.)

Name some foods that contain artificial flavours.

Name some foods that contain preservatives (chemicals to make the food last longer).

We don't know exactly the bad effects of artificial food additives. But many children have allergies like asthma. Some people think that this is because there are too many different kinds of man-made chemicals around us.

We can avoid eating man-made chemicals by eating natural foods, such as vegetables, fruits, eggs, meat and fish..

Good fats, bad fats

Why are fats such as butter and coconut oil 'good' fats? (They are from nature.)

The fats in fried chips and crisps and other salty snacks are 'bad' fats? Margarine is an example of a 'bad fat'.

Too much sugar

List some reasons why sugar is not good for us, e.g. causes tooth decay, is a processed food (unless you suck on the natural sugar cane), makes our bodies weak and unable to fight off sicknesses like colds and flu. Too much sugar can cause diabetes.

Too much starchy food

What is starchy food? (potato, cassava, taro, flour, cake, bread, rice, pasta). This is food for energy. These foods are good to eat if we are active. When we run around the starchy foods get used up inside our bodies. But if we are not active, the starchy food turns to sugar inside us and gets stored as fat. We need to eat plenty of coloured vegetables as well the starchy foods. We also need foods for growth and developing our muscles. That means we need foods like meat, fish, milk, eggs and lentils. If most of our diet is white starchy food we will not get all the nutrients we need. People can also become overweight and may develop diabetes from eating too much starchy food.

Too much salt

Salt from the sea contains valuable nutrients.

But white salt that you buy in the shops has most of the nutrients taken away and too much of it can cause health problems.

Make a table of problem foods

Students can make a list of processed /junk foods and then write them in a table:

1. Foods with the wrong kind of fat
2. Foods with too much sugar
3. Foods with too much salt
4. Foods with artificial colourings and flavourings

My personal eating plan

Students can take a personal record of the food they might eat in a typical day. They can suggest how they may improve their diet.

They should include:

5 different types of coloured vegetables

2 different fruits

Foods for growth and building muscles: e.g. meat, chicken, fish, milk, eggs, lentils

Some good fats: e.g. butter, olive oil, coconuts

Some starches such as rice, potato, yams

A healthy breakfast

Why is it important to eat breakfast?

What are some unprocessed, natural foods that we can eat for breakfast?

Learning Connections

English: discussions on wise actions

Mathematics: Collate and graph results of surveys.

Art: safety posters; healthy food art, e.g. fruits and vegetable prints or drawings

History: What was food like 100 years ago? Compare with today.

Biography: Eric Liddell

Values education Year 5

God is Pure and Holy

Self-control

God has given us His Holy Spirit, who works in the lives of Christians, producing patience and self-control.

Self-control is...

- controlling *myself*
- being careful about what I do and say
- not doing the wrong thing when I *know* it is wrong
- being careful about the way I use my time
- not losing my temper
- not being greedy
- knowing when to stop
- saying 'no'
- being in charge of the things I do
- choosing to do the right thing

Activities

1. Self-control in the things I do

a) What are some things that you can say 'no' to?

b) What can you do when you are tempted to do wrong things?

2. Self-control with time

a) How do you like to spend time?

b) What would happen if you spent all your time just doing the things you liked?

Make up a list of ways you can spend your time outside of school hours.

Here is an example to show how to set it out:

How I use my time

<u>Date</u>	<u>Activity</u>	<u>Amount of time</u>

3. Self-control with food and things

- a) Why is it important to have self-control with food?
- b) Write down any material goods that you get tempted by. It is not wrong to have material things but it may be wrong to have too many. Why?

4. Self-control in what I say

What can happen when you lose your temper?
How can we hurt people with words?

What does the Bible say about self-control?

Galatians 5:22-23 Self-control is a fruit of the Spirit.
Ecclesiastes 7:9 Do not be quickly provoked.
Titus 2:6, 11 Be self-controlled. Say "no" to ungodliness.
Hebrews 13:5 Be content with what you have.
James 3 Controlling the tongue
Ephesians 4:26 Do not let your anger lead you into sin.

Year 5 Practical Science 1

Fitness

Check your pulse rate

<http://www.cyh.com/HealthTopics/HealthTopicDetailsKids.aspx?p=335&np=285&id=1467>

Your heart is a pump which pumps blood out around your body through your arteries. You can feel the blood pumping where the arteries are close to your skin. These are your pulse points, and if you feel gently with your fingertips, you can count how fast your heart is beating.

The idea of aerobic exercise is to get your heart pumping faster, which will exercise and strengthen your heart.

Learn how to take your pulse, and you will be able to see how well you are doing in your aerobic exercises.

How to take your pulse

You can find your pulse in several places. Here are two of the easiest places to find it.

To find your pulse:

1. in your neck

Put three fingers of your left hand onto your Adam's apple in your throat (that's the bit that sticks out and goes up and down when you swallow.) Feel gently to the side of it, and you will find your pulse beating (you can feel it going up and down).

2. in your wrist

Hold your hand in front of you. Stick your thumb up in the air and turn the palm towards you.

With the first two fingers of your other hand, stroke from the top of your thumb down the side until your fingers reach your wrist. Let your fingers slide downwards onto the inside of your wrist, and gently feel for your pulse.

When you have found a steady beat, count how many beats in 15 seconds (use a watch or clock with a second hand). Multiply your score by 4, and that will tell you your pulse rate per minute.

To see how well you are exercising, you need to:

- Take your pulse before you start - this is your 'starting pulse'.
- Take your pulse after you have been doing high level exercise. You should be aiming for over 150 beats a minute (if you are fit and well). Aim to keep it at the higher rate for 15 minutes.
- Take your pulse when you have finished your cooling down exercises. It should be the same as, or a bit lower than your starting pulse.
- To really improve your stamina and endurance, you should do 20-40 minutes of aerobic exercise at least three times a week.

Don't forget to do your warm up and stretching exercises before starting high energy exercise. You will notice that your recovery time (how quickly your pulse gets back to normal) gets shorter the fitter you get.

Practical Science 2

Kitchen chemistry

Lava in a cup

What you will need

- A clear drinking glass
- 1/4 cup vegetable oil
- 1 teaspoon salt
- Water
- Food coloring (optional)

What to do

1. Fill the glass about 3/4 full of water.
2. Add about 5 drops of food coloring (Red is good for giving a lava look.)
3. Slowly pour the vegetable oil into the glass. See how the oil floats on top.
4. Now sprinkle the salt on top of the oil.
5. Watch blobs of lava move up and down in your glass!
6. Add another teaspoon of salt to keep the effect going.

How does it work?

So what's going on? First of all, the oil floats on top of the water because it is lighter than the water. Since the salt is heavier than oil, it sinks down into the water and takes some oil with it, but then the salt dissolves and back up goes the oil!

Make it an experiment

The project above is a DEMONSTRATION. To make it a true experiment, you can try to answer these questions:

1. How long will the effect go on if you keep adding salt?
2. Do different kinds of food oil give different effects?
3. Will other substances (sand, sugar. etc.) work the same as salt?
4. Does the height or shape of the glass affect the experiment?

Practical Science 3

Kitchen chemistry

Mixing Oil and Water

<http://www.sciencekids.co.nz/experiments/oilandwater.html>

Oil and water do not normally mix. Find out how bringing oil and water together can help you do your dishes.

What you'll need:

- Small soft drink bottle
- Water
- Food colouring
- 2 tablespoons of cooking oil
- Dish washing liquid or detergent

Instructions:

1. Add a few drops of food colouring to the water.
2. Pour about 2 tablespoons of the coloured water along with the 2 tablespoons of cooking oil into the small soft drink bottle.
3. Screw the lid on tight and shake the bottle as hard as you can.
4. Put the bottle back down and have a look, it may have seemed as though the liquids were mixing together but the oil will float back to the top.

What's happening?

While water often mixes with other liquids to form solutions, oil and water does not. Water molecules are strongly attracted to each other, this is the same for oil, because they are more attracted to their own molecules they just don't mix together. They separate and the oil floats above the water because it has a lower density.

If you really think oil and water belong together then try adding some dish washing liquid or detergent. Detergent is attracted to both water and oil helping them all join together and form something called an emulsion. This is extra handy when washing greasy dishes. The detergent takes the oil and grime off the plates and into the water!

Year 5 Art

God is Pure and Holy

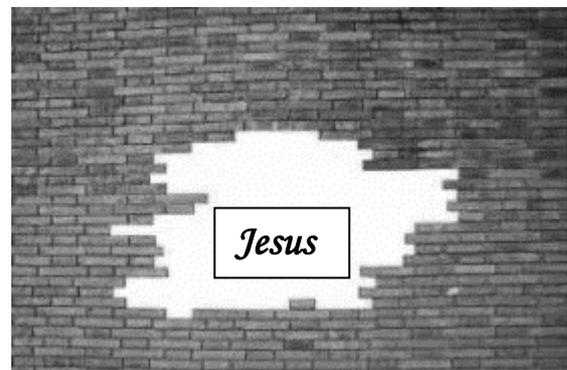
Fitness and Food choices

Bible verse and wall display: Ephesians 2:14 He is our peace. He has broken down the wall.

Students can make a display of large wall, and show how Jesus has broken that wall of sin.

EPHESIANS 2:14 ❤️

**FOR HE IS OUR PEACE,
WHO HATH MADE BOTH
ONE, AND HATH BROKEN
DOWN THE MIDDLE
WALL OF PARTITION
BETWEEN US;**



Fitness art

Students can draw figures of people in action, e.g. running, jumping, walking, climbing etc.

Food art

Students can

- draw still life fruits and vegetables
- design a menu
- make a healthy food collage



God is Creator Teacher's Topic Guide Year 5

Topic: Animal classification - Creation Day 6

Duration: 5 weeks

Spiritual Awareness

God created each animal according to its own kind. This meant that there were animal families (i.e. kinds), such as the dog family, the cat family, the horse family etc. Each of the animal families or kinds that were created in the Garden of Eden had a large genetic pool, giving rise to a great variety of animals within the particular animal family. For example, horses, ponies, donkeys, mules, zebras, are all of the same kind or family. However, there was no interbreeding between kinds. This meant that one species, (e.g. a horse), could not develop into another, (e.g. a dog). The genetic information for each kind was unique.

Values: Our response to 'God is Creator'

- **Thankfulness** to God for His supernatural ability to create and provide the things we need to live; thankfulness for His provision of animals.
- **Stewardship**: Care for the universe He has created; care for animals
- **Trust** in God's greatness and recognize that He is in control of all He has made.

Outcomes: Students will

- understand that living things grow, change and have offspring similar to themselves
- classify animals within the major groups, understanding that animals were created after their own kind
- understand that the variety of animals we see today developed from a large gene pool present in the animals aboard Noah's Ark

Bible stories and passages

- Genesis 1 The Creation story
- Genesis 1:29 In the perfect creation there was no killing. Animals ate plants. Permission to eat animals for food was only given after the Great Flood.
- Genesis 6-8 The animals were saved through Noah
- Romans 8:19-22 Creation waits to be freed from the curse.
- Isaiah 11:6-8 In the New Jerusalem the lion will lay down with the calf. Revelation 21:4 No more death or sorrow, crying or pain. Creation restored to perfection.

Bible verses

- Genesis 1:31 "God looked over all that He had made and He saw that it was very good."
- Luke 12:6 "Are not five sparrows sold for two cents? And yet not one of them is forgotten by God. Do not fear; you are of more value than many sparrows."
- Luke 12:24 "Consider the ravens, for they neither sow nor reap; and they have no store room or barn, and yet God feeds them. How much more valuable are you than the birds!"

Key questions

About God:

- Why does God say that humans are different to animals?
- Do animals have a personality?
- Who spoiled God's perfect creation?
- What is God's rescue plan?
- What was the world like before the fall?
- Were all animals once vegetarian? How do you know?
- What has God told us to do about caring for animals?
- How can we be God's caretakers?
- What can be done to help preserve endangered species of animals?
- How could we explain to someone that God did not create the world through evolution?
- What happened to the dinosaurs?

About animals:

- What are the main groups of animals?
- What makes an animal different to a plant?
- What colours are animals?
- How do animals move?
- Which animals lay eggs?
- Which animals do not have teeth?
- Which animals do not have legs?
- Does every animal have a mouth?
- Which animals have warm blood and which animals have cold blood?

Activities

- Classify animals: reptiles, mammals, marsupials, fish, birds, amphibians.
- Classify according: domestic animals and wild animals; pets and farm animals; pets and wild animals.
- Classify animals within their families e.g. different types of cats, dogs.
- Compare structural characteristics - eyes, ears, wings, limbs, teeth, beaks.
- Make collections of animal hair, fur, feathers, skin.
- Classify animals according to the way they move.
- Observe wildlife.
- Discuss the reasons for animal extinction.
- Find out what is being done to protect endangered species.
- Discuss importance of animals to man.
- Discuss the value of pets and responsibilities in caring for them.

Assessment

1. Make a fact sheet about your favourite animal. Include a picture.
2. What have I learned from the study of animals about God and the Bible and about doing what God wants me to do?

Values education Year 5

God is Creator

Environmental sustainability

God tells us that we are to care for His creation and the resources He has given us.

Environmental sustainability is ...

- looking after the plants, animals, soil and water in the environment
- thinking about the future and doing things that will keep the environment safe from destruction in the future
- acting responsibly when we use plants, animals, soil and water in our environment
- showing wisdom in using and preserving our nation's resources
- being wise stewards
- making wise use of the resources that God has provided
- recycling

What does the Bible say about environmental sustainability?

Genesis 1:28-31 God said, "Be fruitful, fill the earth and subdue it."

Genesis 1:29 "God said, Look I have given you all the plants that have grain for seeds in them. They will be food for you."

Genesis 2:15 God put man in charge of the creation

1 Cor 4:2 Stewards should be trustworthy

Proverbs 4:7 The beginning of wisdom is this: Get wisdom, and whatever you get, get insight.

Psalms 96:11-12 Let the heavens be glad and the earth rejoice, the sea and all that is in it...

Art year 5

God is Creator

Animal classification

Bible theme and Wall display: Then God said, “Let the earth bring forth living creatures after their kind: cattle and creeping things and beasts of the earth after their kind”; and it was so.

Drawing / Painting / Collage

Make a large mural of the creation. Students can create and add individual pieces, e.g. plants or animals.



Drawing: Patterns in nature

Students can draw animals, thinking about visual patterns. Once the shape of the animal is drawn, the shape can be filled with patterns. These patterns can be abstract.



God is Wise Teacher's Topic Guide Year 5

Topic: Community Insects

Duration: 4 weeks

Spiritual awareness

This unit is based on Proverbs 6:6-11. This proverb serves as a wakeup call against the dangers of laziness. Culturally, laziness is becoming more and more acceptable. But the Bible teaches us in this passage that laziness ultimately leads to destruction. We can look at the ant as an example of how we are to live. Ants work hard, even without supervision. They plan ahead for times when they will have less food. It would be wise for us to be the same way. We should not waste our time but work diligently at whatever task we are given.

Values: Our response to 'God is Wise'

Students will:

- Recognize that there is wisdom in applying ourselves to work; to work hard at whatever task we are given by God.
- Ask God what is the right thing to do, and do it.
- Listen to people who are wiser than me.
- Listen to my parents and teachers.
- Obey God's word.
- Do what Jesus would do.
- Ask Jesus to be the guide throughout my life.
- Show wisdom in caring for God's Creation.

Bible references:

Proverbs 6 The wisdom of the ant

Proverbs 30:24-25 There are four animals in the world that are small, but very, very clever: ants: they are weak, but they store up their food in the summer. (The other 3 animals are rock badgers, locusts and lizards, verses 26-28)

Matthew 25 the parable of the girls and their lamps – wisdom in being prepared for the future

Ecclesiastic 9:10 Whatever your hand finds to do, do it with all your might.

Phil 2:14 Do everything without grumbling or complaining.

Outcomes

Students will observe:

- the wisdom of the ant community in: preparing for the future, working hard and not being lazy.
- the instinct used by community insects, and relate this to God's gift of wisdom i.e. knowing the right thing to do.
- the wisdom displayed in the insect communities, and the ability to work together in an organized fashion.
- the serving qualities in the insect communities, with each member working to help other members.
- the intricate and elaborate systems of ant and bee communities, designed by the Creator.

Discussion

Begin by asking the class what they think 'work' means. Explain that work is when we are doing the things that we have to do in life. For children, work might be cleaning up their belongings doing their best at school. Explain that God wants us to work hard at whatever it is we need to do. He does not want us to be lazy.

Read Proverbs 6:6-11. Think about ants. Anytime you go outside and see ants they are working hard. They scavenge for food and work together to complete tasks that are hard.

How can you work hard like an ant when you are asked by our parents or teachers to do something?

The best way is to do the job without complaining. We can work with brothers or sisters at home, or with class members at school.

Ants work hard and plan ahead. As Christians, we should work hard and do our best to please God. On the other hand, when we are lazy we can get ourselves into a lot of trouble. Putting work off until later means that the work piles up and it is harder to do it later.

Activities

- Describe the habitat and community behaviour of ants, bees and wasps.
- Make regular observations of ants in the school ground.
- Set up sources of sugar or honey to attract the insects.
- Research community roles, mating, and egg laying.
- Record information.
- Draw and label community insects, including queen and workers.
- Observe the wisdom of the ant community in preparing for the future and discuss how this can be applied to our own lives.
- Observe the instinct used by community insects and relate this to God's gift of wisdom i.e. knowing the right thing to do.
- Observe the wisdom of insect communities in being able to work together in an organized fashion.
- Observe the serving nature of community insects, each member serving another.
- Mathematics: Work with hexagons and triangles; Work on the 6 times table, counting the legs of ants or bees.

Assessment

1. Present a report on valuable work that they have done over a week.
2. Present information on one species of community insects using drawings and text.
3. Submit a diary of your observations of community insects.
4. What have I learned from the study of community insects...
 - a. about God and the Bible?
 - b. about doing what God wants me to do?

God is Wise: Values education Year 5

Wisdom

Wisdom is ...

Knowing the right thing to do and doing it

Being wise is different than being smart. A smart person knows a lot of facts, but a wise person is able to apply those facts to the situation at hand. If you want to make wise decisions, you must realize that every decision is important. Just as it takes thousands of small bricks to construct a large building, your character is made up of thousands of small decisions.

Every decision we make has a consequence. It can be a good consequence or a bad consequence. Sometimes consequences affect just one person, and sometimes they affect many.

Whether the outcome is good or bad, a wise person learns from past decisions and makes better ones in the future. Even the worst mistakes can become the best lessons for those who are willing to learn!

How to become a wise person:

- listen to my parents and teachers.
- learn from mistakes.
- choose my friends carefully.
- consider the consequences.
- ask, "What is the right thing to do?"

Questions:

Who are some wise people you know? What can you learn from them?

Who are some friends that encourage you in the right direction?

What do you think the saying means, "You reap what you sow"?

What do you think happens if you don't learn from your mistakes?

Discussion: What is work?

- Work is when we are doing the things that we have to do in life. For young children, work might be cleaning up their toys. For older children it might be helping at home or doing school work. God wants us to work hard at whatever it is we need to do. He does not want us to be lazy.
- Read Proverbs 6:6-11. Think about ants. Anytime you go outside and see ants they are working hard. They scavenge for food and work together to complete tasks that are hard.

- How can you work hard like an ant when you are asked by our parents or teachers to do something?
- The best way is to do the job without complaining. We can work with brothers or sisters at home, or with class members at school.
- Ants work hard and plan ahead. As Christians, we should work hard and do our best to please God. On the other hand, when we are lazy we can get ourselves into a lot of trouble. Putting work off until later means that the work piles up and it is harder to do it later.

What does the Bible say about wisdom?

Prov 2:6 For the Lord gives wisdom; from his mouth come knowledge and understanding.

James 1:5 If any of you lacks wisdom, you should ask God, who gives generously to all without finding fault, and it will be given to you.

Matthew 7:24 Therefore everyone who hears these words of mine and puts them into practice is like a wise man who built his house on the rock.

Galatians 6:7 You reap what you sow.

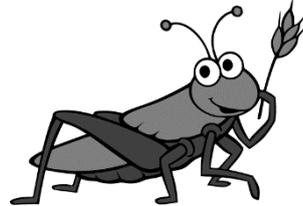
Art Year 5

God is Wise: Community insects

Biblical wall display: Students can illustrate the story of the ant and the grasshopper, with caption, "Consider the ways of the ant and be wise! It stores provisions in summer and gathers its food at harvest." Proverbs 6:6

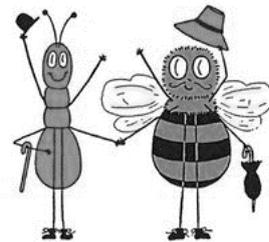
Drawing

Make a cartoon strip to tell the story of the ant and the grasshopper. They can invent cartoon characters and use speech bubbles to tell the story.



Make up stories using ant / bee characters and show this as a cartoon strip.

Examples:

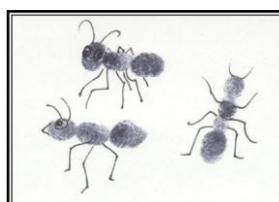


Construction

Make a giant beehive from cut-out hexagon shapes and add modelled paper mâché bees.



Make ant thumbprints: make a stamp pad from a damp kitchen sponge. Drop paint on the sponge and work it in. Use thumb prints make the ant's body. Use a marker or black pen to draw legs and feelers on the ant. Put the Bible verse, Proverbs 6:6, on the paper as well.



God is A Servant Teacher's Topic Guide Year 5

Topic: Occupations

Duration: 4 weeks

Spiritual Awareness: Be faithful in little things

God has given each one of us different gifts and talents. It is our responsibility to develop these gifts and talents so that we may use them to serve God and others. Using our gifts and talents for God is being faithful to the One who gave us these abilities in the first place. It is important to use our gifts and talents with humility. In this unit students can become aware of the ways in which people in the community serve us, and to start thinking about how they may serve God and others through a profession in the future.

Our response to 'God is a Servant'

- follow the example of Jesus, the greatest servant
- be willing to help others
- consider the needs of others
- put others before myself
- let others go first
- not boast
- not think of myself as being more important than everyone else
- admit when I am wrong
- allow others to help me

Bible stories and passages

Matthew 25:14-29 Parable of the talents

Luke 12:35-47 Be faithful in doing what Jesus wants us to do.

Acts 8:1-4 The disciples continued to be faithful in the face of danger

1 Corinthians 12:4-8 Our God-given gifts

Matthew 5:15 Don't hide your light under a bushel.

Luke 18:9-14 The rich man and the tax collector, (pride versus humility).

Luke 14:7-11 Don't make yourself important.

Matthew 20:20-28; Mark 10:35-45 A servant of all

Bible verses

Luke 6:10 Whoever is faithful in small matters will be faithful in large ones; whoever is dishonest in small matters will be dishonest in large ones.

Matthew 20:26 If someone wants to be great he must be the servant of the rest.

Luke 13:30 Those who are now last will be first, and those who are now first will be last.

Matthew 16:24 Jesus said, "If anyone wants to come with me, he must forget self, carry his cross and follow me."

Key Questions

What does it mean to serve?

How do people in the community serve us in the jobs they do?

What is a talent?

Can you think of a job that requires a talent?

What gifts has God given you?

What gifts and talents has God given your friends / family?

How can we use our gifts and talents for God?

How can we encourage others in using their gifts and talents?

What is humility?

Imagine a person who boasts about their achievements. Why would they do this? What might the consequences be?

Think of something you are not good at. How would you feel if a person put you down for not being good at it? When does this sort of thing happen? (e.g. in sports teams)

Outcomes

Knowledge

- identify occupations within the community and the way in which these occupations serve us
- identify particular skills and talents displayed by people working in professions
- identify personal strengths and weaknesses and to list ways of developing or improving these
- identify strengths in others and to encourage others in their abilities
- understand the importance of encouraging those who lack skills in certain areas
- identify ways of using personal gifts and talents for God, with humility

Skills

- questioning
- listening to speakers, collecting and recording information

Values

- appreciate ways in which people in the community use their talents to serve in work situations
- appreciate the gifts and talents of others
- understand the definition of humility
- be aware of putting others first

Activities

- Identify people in the community who use their gifts and talents in work situations.
- Interview visitors about their occupation.
- Use the “Inquiry-based learning” model. Students can compose a list of questions that they want to know about different occupations. These questions can be presented to visitors representing various occupations.
- Write a report on at least one occupation based on what they have found out.
- Write a report on “the day in the life of”, (occupation of choice)
- Take a survey to find out occupations of parents. Graph results.
- Make a list of businesses and services in the local community. Create a drawing or diagram to show the how the businesses or services serve the community.
- Work in pairs to mime or role play an occupation. Students can guess the occupation being mimed.

Assessment

Prepare a report on one occupation. This can be a written or oral presentation.

God is a Servant – Values education Year 5

Flexibility

To be a good servant, I need to be able to “fit in” with what my leader wants, and what other people want.

Flexibility is...

- being willing to change
- not getting upset when things change
- agreeing that other people's ideas might be better than my own, and learning from the ideas of others
- not always wanting my own way
- listening to what others have to say, and learning from the good ideas that other people may have
- saying, "Your ideas just might be better than my ideas. I will listen and try to see your point of view."

Question: How do I know which ideas are good ideas?

Answer: They are ideas that do not go against what God says.

Activities

1. Work with someone to design something together. It could be a playground, a new restaurant, a holiday resort, or something of your own choice. Work together and listen to each other's ideas. You have 15 minutes. At the end of that time, answer these questions:
 - Who had the most ideas?
 - Who had the best ideas?
 - Did you listen to everyone's ideas?
 - Were you flexible in accepting ideas other than your own?
2. See if you can find a creative way to solve this problem:
There is only one computer in the house and you need it to do your homework that is due in tomorrow. Dad says that he needs the computer for an important work project. Instead of throwing a tantrum, see if you can find a way out of your problem.
3. Here's a situation that will require flexibility:
You have invited some friends over to celebrate your birthday. You have either hired a movie or decided to watch TV. Suddenly there is a power failure. What will you do?

What does the Bible say about flexibility?

God wants us to change our own ways to His ways.

Proverbs 3:5-8 Trust in the Lord with all your heart and don't rely on your own good understanding.

Proverbs 21:2 A man's way seems right to him, but the Lord looks at the heart.

Romans 12:3 Do not think of yourself more highly than you ought.

Values in work

1. What happened to Adam and Eve, concerning work, after they sinned?
2. Read Gen2:2. What did God do? Does an omnipotent God need to do this?
3. Jn 6:27 John records Jesus as saying
4. What does this tell us about our attitude to work?
5. 1 Cor 3:13 God will test the quality of
6. Whatever you do at it with all your might Col 3:23
7. If a person is lazy and won't work 2 Th 3:10 says as a consequence....
8. What does that say to welfare payments for unemployed people?
9. Is it OK for a boss to pay less than the going rate in wages? Lk 10:7
10. Are we only working to please the boss? Col 3:23
11. How can the work of a bus driver, salesperson behind a counter, and a bricklayer be equal in the eyes of God and as important to the Kingdom of God as that of a missionary or minister?
12. What is a short-term ministry calling? What ministry activities could students undertake?
13. What work is involved in becoming a mother or a father?
14. There are many talents, not just one. See Matthew 25:1-30. Esther had exceptional beauty, Abraham was an entrepreneur of note, David a great military commander, Paul a teacher and a writer, Luke was a doctor with medical healing abilities. List talents that God gives people, e.g. gardening and growing, painting, cooking, mechanical, etc.
15. In the parable of the talents, how are those who receive a gift held accountable for its use?
16. Col 3: 23 means we don't just do homework and study to please our teachers, who else do we strive to please in our school activities?
17. Write a letter to offer your services to an organisation that could use your help. Describe your abilities and why you would be of use to them.

Art Year 5

God is a Servant

Occupations

Biblical wall display: For the Son of Man did not come to be served; he came to serve and to give his life to redeem many people. Mark 10:45 GNB

Students can illustrate Jesus washing the disciples' feet.



Serving through arts and crafts

Many arts and crafts require patience and diligence. Working hard at something is being diligent. The Bible speaks about two women who were very diligent in what they made. One was Dorcas who was very diligent in making clothes for the poor.

Dorcas was good at sewing. Sewing is a job that requires a lot of patience and diligence. In Bible times there were no sewing machines. Imagine how much patience you would need to make an entire garment by hand. Dorcas never gave up. She kept working because she knew that God wanted her to serve Him in this way. You can find out more about Dorcas in Acts 9:36-43.

Another person who showed diligence in his work was Noah. Think about the size of the ark. What a huge job for one man! God wanted Noah to be very exact in how he built the ark. Noah didn't just throw it together. He made it exactly according to the plans that God had given him. He took time to find special materials and also took time in making exact measurements. You can find out more about Noah in Genesis 6:14-16.

Being diligent means working at something even when we don't feel like it. It means finishing something we start, even if we are not so excited about it anymore.

Art or Craft projects that require diligence

Think about how you could use art or a craft to be of service to others. Choose a project to work on for the next few weeks. Maybe you can make a gift for someone as Dorcas did. Remember to be diligent about it. You may need to take some time to work on it at home. Make sure you choose something that requires diligence, and make sure that you finish it!

Here are some suggestions...

- a mosaic wall hanging. *Outline a shape and then fill it in with tiny pieces of coloured paper.*
- a fabric table mat, decorated it with stitching, or a woven mat
- weaving
- dot painting

God is Protector Teacher's Topic Guide Year 5

Topic: Shelter

Duration: 3 weeks

Spiritual Awareness: God is our shelter

For in the day of trouble He will keep me safe in His dwelling; He will hide me in the shelter of His tabernacle and set me high upon a rock. Psalm 27:5

A house is a shelter from wind and rain, from heat and cold. It provides protection from the elements. God is our shelter. He is our Heavenly Father who protects us against the storms of life. God's shelter is invisible. That is, the invisible shelter of His love and care.

Shelters can also provide protection from physical danger. The castle of the Middle Ages, was a refuge in times of attack. Forts and fortresses are also refuges. A refuge is a place where we can go when we are in trouble. God promises to be our refuge and strength. We can trust in God's amazing power and strength. God is stronger than any fortress. He can protect us from danger and evil. He provides us with weapons to fight evil. These weapons are found in the armour of God.

God is able to protect us because of His strength. He is not only great, strong and mighty, but also faithful in His care for us. The Psalms tell us that God is a rock. He is a refuge and our strength, and an ever-present help in the time of trouble. This picture of strength is linked with His omnipotence. He is Lord and King, the only true God, great and mighty and one in whom we can trust.

Our response to 'God is a Powerful Protector'

- Because God is a Powerful Protector I will...
- trust God
- have faith
- have peace
- not be afraid because He is with me
- give my worries to God
- do what God asks me to do
- believe that God will do as He says
- put on the armour of God to protect me against the enemy

Bible stories: God is our strength

Exodus 7-14 - God set the Israelites free, and by His strength He held back the Red Sea.

Judges 6-8 - Through His power God used Gideon to set the Israelites free.

Judges 13-16 – Samson could have used his God-given strength for the glory of God and the support of his nation, but his sin caused him to lose God's protection

Joshua 6 - The walls of Jericho. God's power is greater than man's strength.

Joshua 10 - By His strength and power God caused the sun to stand still.

Ephesians 6:10-18 The armour of God

Bible Verses

Psalm 46:1 - God is our refuge and our strength, an ever-present help in the time of trouble.
2 Samuel 22:2 & 32; Psalm 18:30-36; Psalm 31:3; Psalm 71:3; Psalm 89:26; Psalm 91:5 - God is a rock

2 Samuel 22:33 - It is God who arms me with strength

Proverbs 18:10; Psalm 61:13 - God is a strong tower

Luke 1:37 - Nothing is impossible with God.

Phil 4:13 – I can do all things through Christ who strengthens me.

Buildings in the Bible

Tower of Babel (Genesis 11)

Noah's Ark (Genesis 6-8)

The tabernacle (Exodus 26 & 27)

The temple (1 Kings 6 & 2 Chron. 3 & 4)

The house on the rock (Matt 7:26)

Image of Christ the cornerstone (Ephesians 2:20)

Image of the body of Christ as living stones (1 Peter 2:5)

Key Questions

Why does a rock remind us of strength?

What does the Bible tell us about God's power and strength?

Which miracles in the Bible show God's strength?

There is evidence that some early people groups lived in caves. How would you use Biblical evidence to explain to someone that early cave dwellers were not ape-like beings but intelligent people like you and I?

Outcomes

Knowledge

- study early shelters of traditional people groups around the world
- compare building techniques and materials
- identify some famous architectural structures around the world
- understand that the stability of a structure is affected by the type of force and where that force impacts the structure

Skills

- assess the strengths and weaknesses of different types of shelters
- design and build structures to produce maximum strength
- assess strength of bridge and tower construction, using engineering features such as arch, dome, cylinder, cantilever, buttress
- discover rigid and non-rigid shapes
- test materials and structures for strength and ability to support weight
- explain why some shapes will support weights better than others
- change the shape of a piece of paper or card to support a weight more successfully
- explain the two types of support used in buildings: tension and compression
- explain how laying patterns can affect the strength of a brick wall
- predict the ability of a beam to span between two supports

Values

- work as part of a team in construction work
- show patience in construction work
- trust in God as our strength through life

Activities

- Research the history of shelter.
- Make small bricks from various materials, e.g. mud or clay. Add reinforcements to some, e.g. stones, straw.
- Build model houses from different materials.
- Make model towers and bridges.
- Use a strip of cardboard to form a bridge between two pillars (or wooden blocks).
- Observe structural features in famous buildings around the world e.g. Egyptian pyramids, leaning tower of Pisa, Eiffel Tower, The Beehive (Wellington N.Z.).
- Explore the local environment comparing old and new buildings. Assess stability of buildings, taking into account building materials and methods.

Assessment: Work in a group to design and build a model of structure that is strong and stable. Explain why your model is a strong structure.

Mathematics:

Research strength of shapes and prisms; measure heights of structures; estimate, measure, and record length, height, and distance, using standard units (i.e., centimetre, metre, kilometre); estimate, measure and record the mass of the load that the structures can support.

Values education Year 5

God is Protector

Faith and Trust

Faith is complete trust or confidence in someone or something. Trust is being certain that the 'someone' or the 'something' will not let you down.

Having faith and trust means:

- we trust those who have proven themselves trustworthy.
- we feel safe with people we can trust.

Christians put their trust in God who is trustworthy. They have faith that God is in control of their life and whatever happens, He is still looking after them.

Discussion and activities

Tell your partner about a time when you felt afraid.

Tell your partner about something you might be afraid to do in the future.

What do people worry about mostly?

Finish this sentence: "When I am afraid I can have faith because ..."

Bible passages

- Isaiah 41:13 "I the Lord hold your right hand. Do not be afraid. I am the one who helps you."
- Romans 8:28 All things work together for good, in the lives of those who love and trust God.
- Psalm 23 The Lord is my shepherd
- Hebrews 11:6 Without faith it is impossible to please God.
- Ephesians 6:16 Put on the shield of faith.
- Matthew 17:20 Faith as a grain of mustard seed.
- Matthew 21:21-22 If you have faith, you can say to this mountain, 'move' and it will move.

Practical Science

Triangles and squares

What you need:

- Match sticks
- Lumps of blue tack or plasticine

Background information

The triangle is a strong shape and is used to support structures. Under a heavy load, a square distorts easily. If you put a brace diagonally across the square, you create two triangles and a much stronger shape. In fact, the triangle is the only shape that cannot be deformed without changing the length of one of its sides. Because it is not easily deformed, the triangle is an extremely popular building shape.

Questions

What shapes do you know?

Can you pick out any shapes in this room?

If you look at a bicycle (or a picture of one) can you pick out any shapes?

What shapes help the bicycle move? (Circles, wheels)

What shapes make the bicycle strong? (Triangles in the frame).

How would you make a corner stronger on a bench or a table?

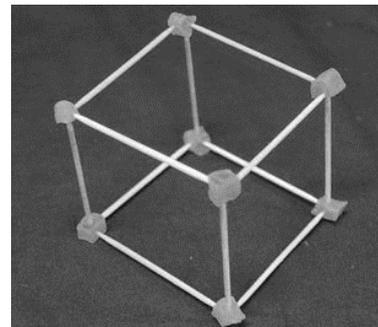
(Ans: Add a strut across the corners to make a triangle.)

Activities

1) Squares and Cubes

(This takes 8 lumps of Blue tack and 12 toothpicks.)

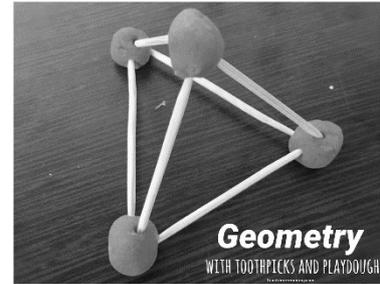
Make a cube.



2) Triangles and Pyramids

Make a triangular-based

Now make a square-based pyramid. Which shape is the strongest?



3) Construction challenge:

When you make a structure that uses both triangles and squares you can make large structures. Try to make a structure using both.

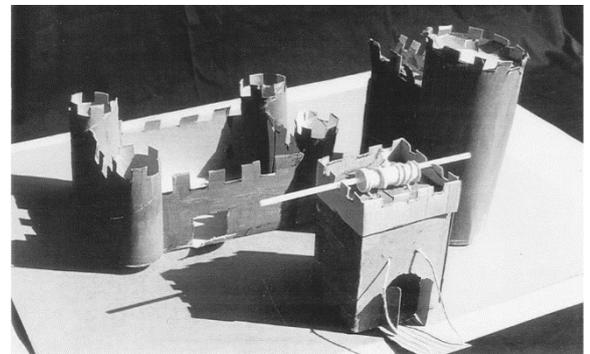
Art Year 5

God is Protector

Buildings of the world

Biblical wall display: The name of the Lord is a strong tower. The righteous will run into it and be safe.

Proverbs 18:10



Construction

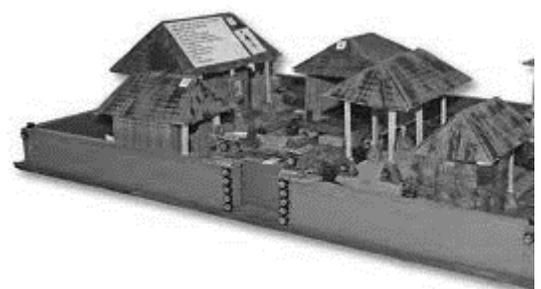
Design and build a model of structure that is strong and stable. Explain why your model is a strong structure.



Drawing and painting

Buildings past and present: Make a timeline in picture form of the history of buildings in your country.

Buildings rural and urban: draw the different buildings you might see in a village. Compare to buildings in a city.



God is Truth Teacher's Topic Guide Year 5

Topic: Gravity and Pendulums

Duration: 3 weeks

Spiritual Awareness: Seek the truth; Discern the truth

In order to understand truth, we need to weigh up and balance the things we hear and see. Through the creation we can see balance at work. This can be used as a symbol for balancing spiritual truth.

To be able to weigh up and measure truth correctly is an essential gift that God makes available to all Christians. This is the gift of discernment.

Throughout history there have been Christian scientists who relied on God for wisdom, and in doing so discovered scientific truth. This newly discovered truth was often unaccepted, and many scientists were persecuted for their beliefs. One such scientist was Galileo, who discovered the telescope and the laws relating to gravity and pendulums.

Our response to 'God is Truth'

- Speak the truth
- Be honest
- Never cheat or steal
- Never lie or exaggerate
- Be trustworthy
- Be true to my word and keep promises.
- Be myself and not try to be someone I am not.
- Search for the truth
- Ask God to show me the truth.
- Ask the Holy Spirit to lead and guide me into all truth.
- Believe that God's word is the truth.
- Believe that Jesus is the Way, the Truth and the Life.

Bible stories and passages

Matthew 16:13-20 Peter declared that Jesus was the Son of God, a truth given directly by the Father.

Acts 7:51-60 Stephen gives his life for believing the truth.

Luke 11:9-13 He that seeks finds.

Daniel ch 13 Shadrach, Meshach and Abednego stood up for the true God.

Daniel ch 6 Daniel also stood up for the true God.

Romans 1:20-25 The truth about God is evident in the Creation, but instead they worship idols. Verse 25 says, "They exchange the truth about God for a lie." (GNB)

Matthew 7:15-21 Wolves in sheep's clothing.

John 18:38 Everyone that is of the truth hears my voice.

John 10:1-8 The Good Shepherd. The sheep hear His voice.

Matthew 7:13-14 The broad and narrow way.

Exodus 20:3-4; Isaiah 42 verses 8 & 17 No other gods.

2 Peter ch 2 False teachers.

2 Corinthians 11:13-14 False apostles, and Satan as an angel of light.

1 Peter 5:8 Satan is a roaring lion.

Luke ch 4 Jesus knew how to deal with Satan

Bible verses

Proverbs 3:5 Trust in the Lord with all your heart. Never rely on what you think you know.

John 16:13 When the Spirit of truth comes, He will guide you into all truth.

Acts 14:7 God has always given evidence of His existence by the things He does. (GNB)

John 8:32 You shall know the truth and the truth shall set you free.

Proverbs 11:1 The Lord hates dishonest scales, but He is pleased with correct weights.

John 14:6-7 I am the way, the truth and the life.

Key Questions

about truth

Who do we believe?

How do we know what is true?

How do we weigh and measure solid objects?

How do we weigh and measure the things we see and hear?

How does Satan try to make us turn away from God?

What did Jesus do when He was tempted by Satan?

about science

How do scientists find truth?

How can we use the Bible as a guide to truth about the universe?

What were some of the discoveries made by Galileo about the universe?

What is gravity?

What did he discover about gravity?

How does the earth's gravity differ to that of the moon and other planets?

Why did many people disbelieve the new discoveries of Christian scientists such as Galileo?

Why do we need truth and accuracy in science and not just guess work?

Outcomes

Knowledge

- Study in detail the work of Galileo, and in particular, his discoveries concerning gravity and pendulums.
- Understand that gravity is a force that causes objects to fall
- Understand that air works against gravity to slow down the acceleration of a falling object.
- Understand that without air, all objects would fall with the same acceleration, regardless of mass.

Skills

- Experiment with pendulums and gravity
- Explain gravitational forces
- Use different kinds of scales for weighing objects
- Use drawings to record experiments and graph results
- Predict
- Manipulate, measure and assemble pendulums

Values

- seek truth
- show curiosity to explore the physics of gravity and pendulums
- show patience in experimenting
- show keenness for accuracy in results
- be willing to co-operate with others

Activities

a) Gravity

- Predict the ways in which the following things fall: a ball, a heavy weight, a light weight, rain.
- Study the work of Galileo Galilei (1564-1642) who performed a famous experiment, dropping two objects from the Tower of Pisa.
- Replicate his experiment. First predict whether a heavier or larger object, if dropped from a height, will fall to Earth faster than a lighter or smaller object. Use balls of different sizes, books, paper, cardboard etc. Do objects of different sizes and weights fall at the same rate of speed?
- Try comparing a sheet of paper with a ball of paper. Ask students to suggest why the sheet falls more slowly, (air resistance)
- Write a report explaining the results of the experiments and drawing conclusions regarding the effects of both gravity and air resistance on the speed of falling objects.
- Compare the difference in going uphill / upstairs with downhill / downstairs.
- Make your own weighing device from rubber bands. Measure weight by noting the extension of the bands supporting the object that is being pulled down by gravity.

Activities for 'centre of gravity'

- Discover centre of gravity by experimenting with:
 - mobiles
 - tower constructions
 - making model a see-saw
 - using a beam balance
- Use kitchen scales, bathroom scales and a beam balance.
- Set up see-saws, balancing objects on both ends.
- Move the fulcrum from the see-saw center to investigate how this influences results of above experiment.
- Experiment with cantilevers.
- Make miniature brick arches. Observe the function of the keystone in maintaining balance of forces.
- Examine photographs of ruins that show arches that have survived the centuries.
- Experiment with 'tug-of-war' games to examine balance of forces.
- Experiment with spinning tops.
- Play games with spinning tops. Try to knock opponent out of the circle.
- Play a balancing game, trying to balance on different body parts as directed, e.g. on one hand and one foot; on back or front with arms and legs off the ground.
- Balance bodies when blindfolded. Note effects of spinning, (dizziness).
- Walk while balancing a book on the head.

- Walk along a narrow beam.
- Relate the experience of walking along a narrow beam to the Biblical reference to the broad and narrow way.

b) Pendulums

One of Galileo's key experiments involved observing pendulums. Using a variety of different lengths and weights, he carefully noted each pendulum's period (the amount of time it takes for a pendulum to make one complete swing). Galileo's observations allowed him to determine that the period of a pendulum's swing is affected by its length but not its weight—an observation that may run counter to what students expect.

To begin the following activities, lead a class discussion about the fact that scientists cannot rely on intuition alone, but must perform experiments to test their hypotheses. Ask your students to replicate Galileo's pendulum experiments using varying lengths of string with different numbers of washers attached to the ends. Students should measure each pendulum's length, weight, and period, making sure that they keep the amplitude, or angle to which the pendulum is raised, consistent. When their observations are complete ask them to record their data in a chart.

Activities

- Free play with pendulums.
- Define a pendulum.
- Experiment using pendulums with the same mass bob but different lengths. Use the steps of the Scientific Method.
- Discuss applications of pendulums, e.g. clocks, demolition.
- Construct a giant pendulum several metres long. Students make predictions which can then be checked.
- Use pendulums of the same length, but attach a variety of different mass bobs. Use the same mass bob and the same length line, but vary angles of release. Does this affect the number of periods per unit time?
- Release pendulums from different heights and time the number of periods over 3 minutes. Does release height influence the number of periods?
- Release pendulum so that it follows different paths. Include a circular path. Does the path the bob follows influence the number of periods the pendulum swings through in 2 minutes?
- Graph results, infer from the graphs, test inferences.
- Set up a set of skittles and use the pendulum bob as the 'bowling ball'.
- Link pendulums together and explore the effect of releasing one pendulum on its partner.
- Discuss whether the evidence of design in the forces that control pendulums suggests the product of random forces, or God the designer.

Assessment: Students are to write a report on their experiments:

1. Describe what they did.
2. Record the results.
3. Illustrate and label diagrams.

Values education Year 5

God is Truth

Honesty

Honesty is...

- speaking the truth
- not cheating
- not stealing
- not exaggerating
- being trustworthy
- being yourself and not trying to be someone you are not.

Activities

1. Sometimes people think they are telling the truth by saying the right words, but the meaning of their words is not completely truthful. This is called a white lie. Here is an example:

John is asked to clean his room. He goes to his room and pushes all the things on the floor under the bed. The room looks neat and tidy but really it isn't.

Mum calls, "John, have you cleaned your room?"

John answers, "Yes."

Why would you say this is not telling the truth?

2. Why would you like your best friends to be honest?
3. Which of these are caused by dishonesty:
 - a) shop-lifting (stealing)
 - b) fighting
 - c) swearing
 - d) cheating in a test
 - e) riding on a bus without a ticket

What does the Bible say about honesty?

Acts 5 Ananias and Sapphira

James 1:22 Be doers of the word and not hearers only.

Proverbs 8:7 My mouth shall speak truth.

Proverbs 12:17 When you tell the truth, justice is done.

Practical Science 1: Gravity and Pendulums

Balancing Act (Gravity)

Balance a can on its bottom rim and amaze your friends. Suitable for kids aged 6+

What you will need:

- 2 empty 375ml cans
- 100mls of water approx

What to do:

1. Pour about 100mls of water secretly into one can.
2. Have someone try to balance the other empty can on its bottom rim. It is impossible.
3. Then amaze them, by easily balancing your 'magic' can on its bottom rim (they don't need to know it has water in it).

How does it work?

It works because the water adds weight to the bottom of the can, changing its centre of gravity and allowing it to balance in impossible ways.

Practical Science 2: Gravity and Pendulums

Raw or Boiled Egg? (Gravity)

Two eggs look and feel the same but there is a big difference, one is raw and the other hard boiled, find out which is which with this fun experiment.

What you'll need:

Two eggs, one hard boiled and one raw. Make sure the hard boiled egg has been in the fridge long enough to be the same temperature as the raw egg.

Instructions:

1. Spin the eggs and watch what happens, one egg should spin while the other wobbles.
2. You can also lightly touch each of the eggs while they are spinning, one should stop quickly while the other keeps moving after you have touched it.

What's happening?

The raw egg's centre of gravity changes as the white and yolk move around inside the shell, causing the wobbling motion. Even after you touch the shell it continues moving. This is because of inertia, the same type of force you feel when you change direction or stop suddenly in a car, your body wants to move one way while the car wants to do something different. Inertia causes the raw egg to spin even after you have stopped it, this contrasts with the solid white and yolk of the hardboiled egg, it responds much quicker if you touch it.

Practical Science 3: Gravity and Pendulums

Gravity as a pump – Make a siphon

Did you know that you can use the earth's gravity to help you pump water? This is very helpful if you have a flood!

What you will need:

- Approx 350 cm (10 feet) of transparent flexible tubing (2-4 cm in diameter (half inch)
- Kitchen sink
- Large bucket
- Food colouring
- Ladder or stack of books
- Chair

What to do

1. Coil the flexible tube and put it in your kitchen sink.
2. Put the plug in the sink, then start to fill the sink with water.
3. Put one end of the hose to the tap and the other end in the sink. Run the tap to get all the air out of the hose.
4. Put your thumbs over both ends of the hose, put one end in the sink and bring one end to the bucket on the floor.
5. Take your thumbs off and see what happens.
6. Let the water drain out of the sink completely.
7. Now repeat the experiment, this time draining the water from the bucket back into the sink.
8. Now put the bucket on a chair. Will your pump still work?
9. Now put the bucket even higher. e.g. on a ladder or a stack of books. How high does it have to be before the water will drain back into the sink?

Why does it work?

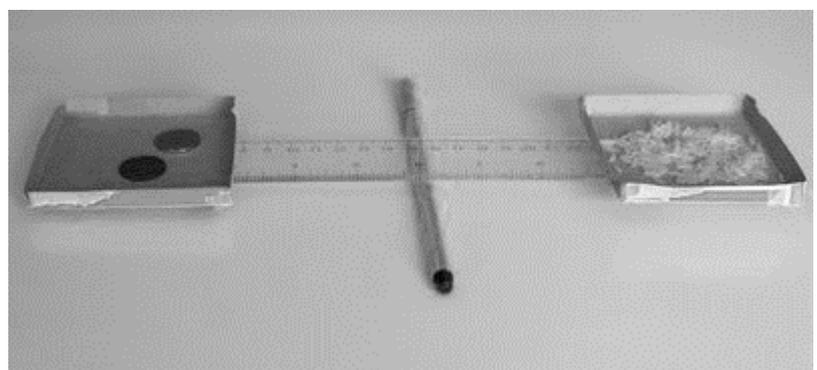
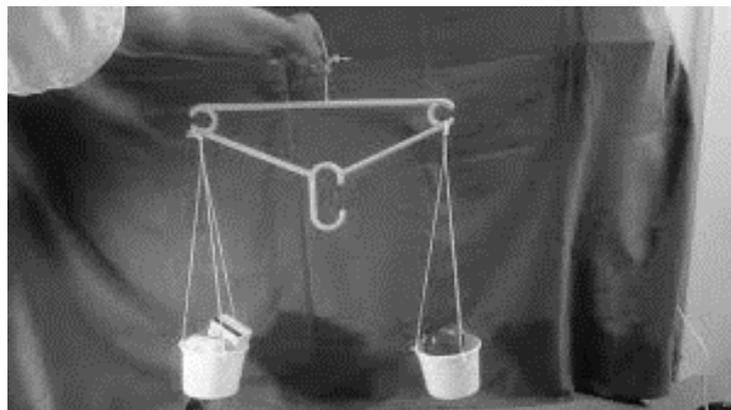
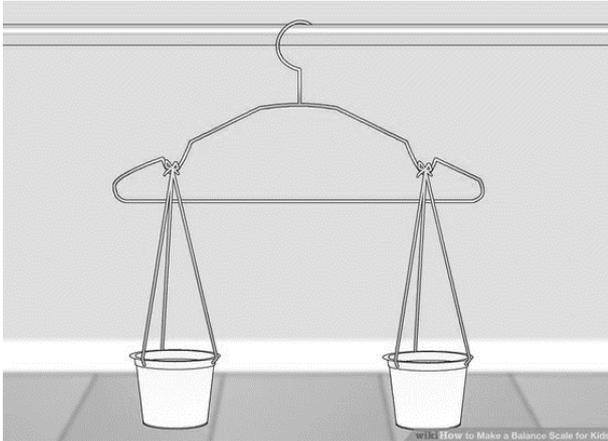
Why does the water drain out of the sink?

The water in the sink wants to come down seeing it is above ground level. This is due to the force of gravity.

Practical Science 4: Gravity and pendulums

Build your own beam balance (balance scale)

Live a life that **measures up** to the standard God set when He called you. *Ephesians 4:1 (GNB)*
The Bible is our measure that we use to weigh up what we see and hear.



Practical Science 5: Pendulums

Build a pendulum

Follow these steps to build a pendulum:

1. Take a ball (the 'bob'), some string, a ruler, and strong sticky tape.
2. Place the ruler on a desk so that 10 cm (4 inches) of the ruler is on the desk and 20 cm (8 inches) extends over the side. Tape it to the desk.
3. Wrap one end of the string around the ball once. Wrap a piece of tape around the ball, covering the string. Put two pieces of tape where the string hangs off the ball.
4. Tie or tape the other end of the string around the ruler.

Now you are ready to do the experiment.

1. Set the pendulum in motion by pulling it up and letting it go.
2. Predict what will happen.
3. Observe how the pendulum swings back and forth (periods), and time how long it takes to stop. (*Note – one swing back and forth makes one period*)
4. Write your results.
5. Why you think it happened.
6. Now repeat the experiment using different lengths of string.
7. Record any differences in results.

	Prediction	Results	Why do you think this happened?
Pendulum 1			
Pendulum 2 (longer string)			
Pendulum 3 (shorter string)			

Practical Science 6: Pendulums

Bobs of different mass

1. Make a pendulum using the same length of string as the last one, but a bob of different mass. (The ball was the 'bob' in the first experiment.) e.g. You could use a marble, a bigger ball, a rock, a pebble
2. Predict what might happen.
3. Set the pendulum in motion and count the number of periods it completes until it stops. Write your results and why you think this happened.
4. Repeat the experiment using different bobs of different mass.

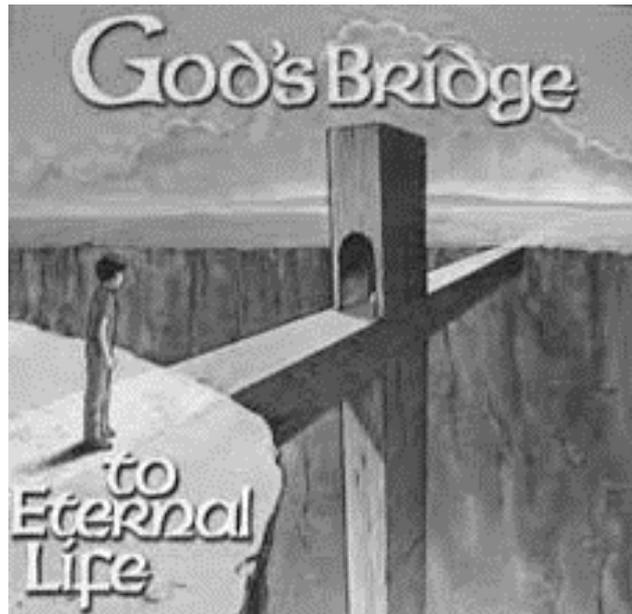
Type of bob	Prediction	Results	Why do you think this happened?

Art Year 5

God is Truth

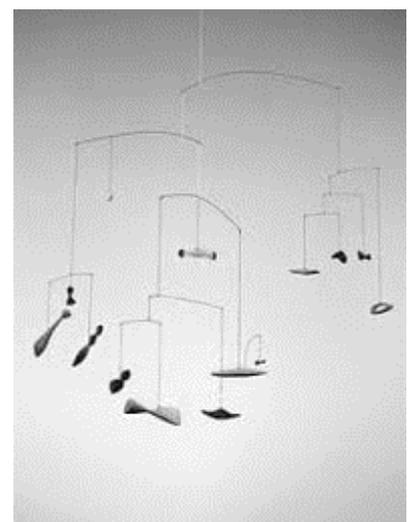
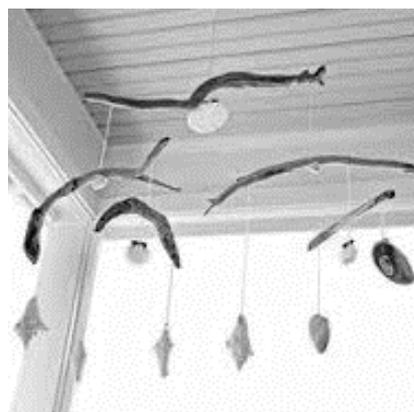
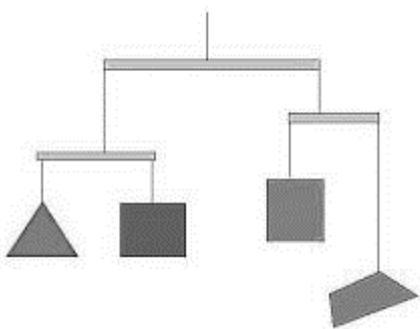
Pendulums and gravity

Biblical wall display: Jesus said, "I am the way, the truth and the life. No one comes to the Father except through me."



Construction

Students can make 3D mobiles. They can find the centre of gravity of each piece to make the parts balance.



God is Lord and King Teacher's Topic Guide Year 5

Topic: Christmas

Duration: 3 weeks

Spiritual Awareness

At Christmas we celebrate Jesus who God sent into the world to save us. Through His birth and death, we have eternal life and peace with God. He is our redeemer.

Our response to 'God is Lord and King'

Because God is Lord and King I will...

Ask Jesus to forgive me for my sin

Invite Him to live in my life

Make Jesus Lord of my life

Live with Him forever

Thank Him for what He did on the cross

Thank Him that I am His child

Tell others that they can have eternal life

Bible references:

Bible stories and passages

Matthew 1:18-25; Luke 2:1-40 – The Birth of Jesus

Matthew 2:1-12 – The Visit of the Magi

Luke 2: 8-20 – The shepherds and the angels

Matthew 1 – Descendants of David through Jesus Christ

Numbers 24:17 – Star of Jacob, Star of David

Memory verses

Luke 2:11 – For unto you is born this day, in the city of David, the Saviour, who is Christ the Lord.

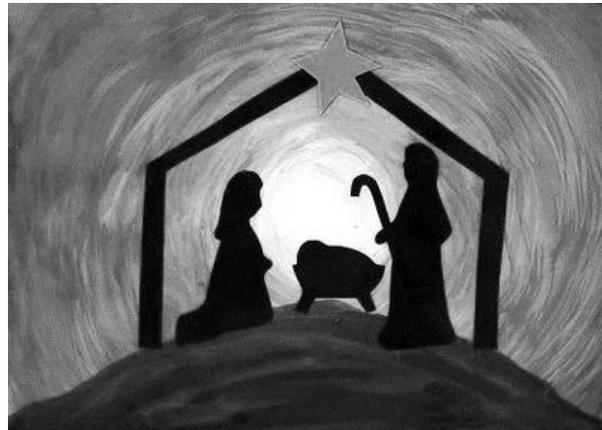
Matthew 1:21 – “Mary will give birth to a son, and you are to give Him the name Jesus, because He will save His people from their sins.”

Isaiah 9:6 – A child is born to us! A Son is given to us! And He will be our ruler. He will be called “Wonderful”, “Counselor”, “Mighty God”, “Eternal Father”, “Prince of Peace”.

Isaiah 26:3 You, Lord, give perfect peace to those who keep their purpose firm and put their trust in you.

Christmas Art Yr 5

Christmas cards

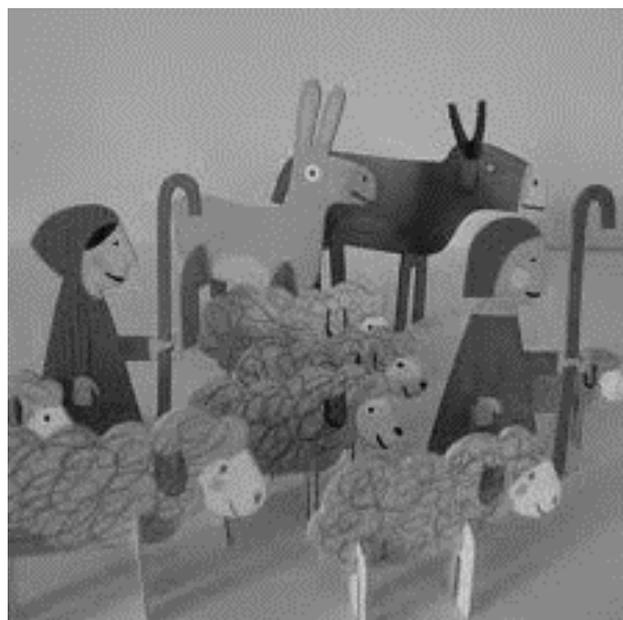


Framed wall-hangings

Choose old Christmas cards that depict the Christmas story. Stick pieces of white card. Leave space around the edge for a decorative top.



3D shepherds



Salt dough decorations

Recipe for salt dough

1 cup plain flour

½ cup salt

approx 1/3 cup water

Mix the flour and salt together. Add water a little at a time. Work the dough until it holds together. Knead.

Roll out the dough and cut out shapes. use a table knife or cookie cutters. Pierce a hole in the top of each shape using a knitting needle. Bake 2 minutes in a moderate oven. Cool.

Decorate the shapes. Use paint or glued sequins and glitter. You can also write a Christmas messages on small pieces of paper cut according to the dough shape. Glue these on to the shapes.

