

Push and Pull

God is a Powerful Creator

Spiritual Overview

God has placed powerful forces in the creation that can cause things to move. People, animals and objects are able to move because of these forces. The earth moves around the sun because of the powerful forces of creation. However God is in charge of all creation and has control over all the forces of creation.

Supporting devotional resource

Themes for Christian Studies 3, (Powerful) God is great, strong and mighty

Our response to 'God is a Powerful Creator'

Because God is a Powerful Creator, I will...

- Appreciate God's ability to supernaturally create.
- Ask God to help me create new things, so that I can bless others.
- Trust in a mighty, supernatural God.
- Care for the universe He has created.
- Appreciate the greatness of God and recognize that He is in control of all He has made.
- Thank Him for His provision of forces which cause things to move.
- Recognize that God is Lord and King of the universe and has everything in control.
- Recognize that in order to be the person God wants me to be, I must make Jesus Lord and King of my own life.

Bible references

Bible Stories and passages

Joshua 6 – Joshua and the walls of Jericho

Joshua 10 – the day the sun stood still.

Mark 4:35-41 – Jesus calmed the storm

Mark 11:22-25 – Faith is a powerful force that can move a mountain.

Memory verses

Acts 17:28 – In Him we live and move and exist

Psalm 62:11 – The power belongs to Him.

Psalm 147:5 – Great and mighty is our Lord; His wisdom cannot be measured.

Jeremiah 10:12 – The Lord made the earth by His power; by His wisdom He created the world and stretched out the heavens.

Outcomes

Children will

Knowledge

- Recognize and describe the movement of a range of familiar objects using words and phrases such as quick, slow, backwards, forwards, round, swing, turn, slide.
- Begin to understand that things do not move by themselves - everything needs a push or a pull to make it move.
- Understand that pushes and pulls are called forces. Some are big and some are small. Some actions, such as turning are both a push and a pull. Once something is moving it will keep going until a force stops it. Heavy things are difficult to stop - a ship can take several kilometres to stop moving. Fast things are more difficult to stop than slow things.
- Understand that movement can be a change of direction as well as physically moving from place to place.
- Explore the ways in which their bodies can move and name the parts of the body they need to make that movement. Children will be able to name some of the ways animals can move - including flight.
- Learn that pushes and pulls are examples of forces and that pushing and pulling things can make objects start moving, change direction or stop moving.
- Discuss what happens when things move and recognise risks and hazards to themselves in moving objects.
- Understand that twists and turns are a combination of pushes and pulls and that levers are used in many toys to make them move.

Skills

- Question and predict
- Participate in different types of guided investigations to explore and answer questions, such as manipulating materials, testing ideas, and accessing information sources
- Use informal measurements in the collection and recording of observations, with the assistance of digital technologies as appropriate
- Use a range of methods to sort information, including drawings and provided tables
- Through discussion, compare observations with predictions
- Compare observations with those of others
- Communicate using writing, drawing, speaking and ITC skills

Values

- Share toys
- Work with co-operatively others
- Recognize that the forces responsible for movement have been created by a powerful creator

Key Questions

How do things move?

Can you think of anything that moves on its own?

How does a car move?. Does it just move on its own? (Cars and lorries do not move unless they are given a big push or pull by their engines)

How does a car start?

How fast does it go?

What does the driver do to make it go faster?

What happens when you go down a hill?

What does the driver do to slow down or stop?
How does he make it change direction?

Activities

MOVEMENT ACTIVITIES

- Make a short visit to a school adventure playground or local park with swings, slide etc. and look for examples of things that move both on the journey and while at the park.
- Explore the range of equipment and describe what they are doing; how they are making the object move, speed up, slow down and stop.
- Name the things they saw that moved. Describe how the things moved - the direction in which they moved (up, down, forwards, backwards, around etc) and the speed.
- Think of other things that would move more quickly or more slowly than those already named.
- Order the pictures of objects from the fastest to the slowest
- Explore the ways in which the human body can move and name the parts of the body needed to make that movement.
- Name some of the ways animals can move and identify the features that God has given them for movement, e.g. kangaroos have large back legs in order to jump, birds need wings in order to fly.
- Make lists of animals that move slowly and fast.
- Use the gym or gym equipment to experience moving slowly and quickly, stopping and changing direction. Suggest different ways of moving.
- Describe what the body part actually had to do to move.
- Work with a partner giving each other instructions about which part of the body to use and how to move.
- Mime and everyday action that involves a push or pull while the others have to guess the action and the type of movement.

TOYS

- Mime opening a door, pulling a cracker, kicking a ball, riding a bike and identify the force used. Include other actions that include dropping, lifting, twisting, turning, stretching, squeezing, spinning.
- Unscrew the tops from the bottles and tubs and describe what they are doing.
- Mime driving a car.
- Divide the children into small groups with three different weighted toy vehicles. Children could experiment by pushing them along the floor or letting them go at the top of a ramp - discuss how to make this a fair test.
- Children can predict which vehicle they think will travel fastest and furthest. Allow time for children to test out their prediction.
- Report findings to the rest of the class. Were the results as predicted?
- Discuss the dangers in moving objects. Ask children to explain why it would be dangerous to try and stop some moving objects.

- Make a collection of different toys that move. Include a scooter, spinner and toys that twist, turn, twirl, screw and work by clockwork
- Children can identify differences between the movement of different objects and make suggestions about how objects can be made to move.
- Investigate to see if their predictions are right.
- Sort objects into different groups.
- Make some labels together to label the sets when the toys are sorted - electricity, batteries, clockwork, moving air, pull, push.
- Share the toys. Ask children to guess how they will move then ask the owners to demonstrate what they do and get the others to identify how they move. Were they right?
- Let children observe toys, such as spinners that need to be twisted or turned to make them work, or spinning tops where a pushing down and pulling up movement makes the toy spin. Try to include a toy that has a spring - children should watch what you need to do to make the toy work, watch what happens and then discuss what happens to the spring.
- Sort the toys into sets that match the labels made earlier.

Assessment

1. Create a rubric:

- Can children make predictions?
- Do children know the different forces that make toys move?
- Can children sort toys according to how they move?

2. What have I learned from looking at the way things move...

- about God?
- about doing what God wants me to do?
- about the Bible?

Link with Australian Curriculum

Science Foundation Year and Year 1: Physical sciences - The way objects move depends on a variety of factors, including their size and shape.

Science Year 2: Physical Sciences - A push or a pull affects how an object moves or changes shape

Learning Connections

English: Children could make a class book of toys that move in different ways. Pictures cut from catalogues could be used, with simple labels and description of movement added by the children. Poems and stories about transport vehicles.

Social Studies: transport

Art: Make a peg toy such as a crocodile that opens its mouth when the peg is pushed together, or a paper bird that moves its wings when the string attached to its wings is pulled down. Design and make a toy car. Design and make a paper helicopter or plane.

Thinking Skills: Design a 'crazy machine'.