GOD IS PROVIDER

Air, wind & flight

Year 7

Term 1

Thinking Skills Provider Yr 7

Air / wind 1 Design a machine to measure the force of wind.	**Air / wind 2** What if there was no wind? Write down 10 possible consequences.
Air / wind 3 Write down 10 things you could NEVER take a photograph of.	**Air / wind 4** Use you imagination. Work out 5 different things that this picture could be. It has to have something to do with air or wind. 
Air / wind 5 Make a pin wheel. Write down 10 different uses for it.	**Air / wind 6** Create something new with: a paper plane and a ping pong ball

Corrie Ten Boom

Biography

This is a true story about someone who used their faith to trust God when things were very difficult. It took place in Europe during the Second World War where the Jews who lived there were being captured and taken to prison camps.

The story is told by a lady called Corrie ten Boom who was not Jewish, but Dutch. She and her family decided to risk their own lives in order to help the Jews at that time. They took Jews into their own home for protection and hid them in a secret room. However, finally the day came when they were discovered.
Corrie ten Boom and her sister Betsie were placed into a prison camp along with the Jews they had tried to hide.

Women were crammed into dirty, cold, damp barracks. Food was little more than watery turnip soup. During the day, they were forced to do extremely hard labour. Despite their dreadful circumstances, Corrie and Betsie did not stop trusting God.
Betsie found it particularly difficult because she was not well. She was suffering from a vitamin deficiency for which she needed vitamin drops. Corrie and Betsie had managed to bring some of their things with them to the first prison camp, including the vitamin drops and a Bible. However, when they were moved to a second camp they were not allowed to take anything in with them. Each woman was searched thoroughly as she passed in line through the gates. All Corrie and Betsie could do was to pray desperately to their Heavenly Father.

Corrie stood in the queue, trying to hide behind her back, a jumper with vitamin drops and Bible wrapped inside. When it was Corrie's turn to pass the guard, instead of searching her, he just pushed her through the gate with the words, "Move along! You're holding up the queue."

And so Corrie and Betsie arrived inside the barracks bringing not only the Bible and vitamins, but the knowledge of God's power to work a miracle. Soon Corrie discovered that there were twenty-five other women with the same vitamin deficiency. They too need the precious vitamin drops.

"What should I do, Lord?" asked Corrie. "If I give the drops to all these women there will only be enough to last a day! Even if I save the drops for Betsie there will be only enough to last a month."

Corrie knew what she must do. She lined up all the women who were ill and gave them the drops. Strangely enough, she lined the women up again the next day and there were still enough drops for everyone. She tried it again the next day, and the next. Still there were enough. Every time she tilted the bottle a drop appeared at the tip of the glass stopper.

"It just couldn't be!" said Corrie. She held it up to the light, trying to see how much was left, but the dark brown glass was too thick to see through.

"There was a woman in the Bible," said Betsie, "whose oil jar was never empty." She turned to the story in the book of 1st Kings. They read about the poor widow of

Zarephath who had cared for Elijah. She continued to have oil in her jar and flour in her flour bin no matter how much she used.

It was one thing to believe that such things happened thousands of years ago, but another thing to believe that it could happen today. And yet it happened.

"Don't try to explain it." said Corrie to Betsie. "Just accept it as a surprise from a Father who loves you."

Then one day a young Dutch woman, also in the prison camp, came to Corrie.
"Look what I've got for you!" she said. "Vitamins!"
Somehow, she had stolen them from the staff-room. There were several huge containers of vitamins and yeast compound.
"We'll finish the drops first," thought Corrie. But that night, no matter how long she held the bottle upside-down, or how hard she shook it, not another drop appeared.

Activities

1. What nationality was Corrie ten Boom?
2. Why do you think Corrie's family tried to help Jews?
3. Why do you think the enemy wanted to kill Jews?
4. What happened to Corrie and Betsie for their efforts in trying to protect the Jews?
5. How was Corrie able to get the vitamins and her Bible into the prison?
6. Why do you think most of the ladies, including Betsie, needed vitamins?
7. Corrie decided to share the vitamins. What does this show us about her?
8. Do you think Corrie expected the Lord to keep on filling the vitamin bottle?
9. Which miracle in the Bible is similar to this one?

There are several miracles recorded in the Bible where God did a miracle of provision. This means that He didn't just provide in the usual way. God usually provides food through the sun, rain and soil, which are part of His Creation. There are three times in the Bible where God did amazing miracles to provide food. The miracle of loaves and the fish is one of these. Two more miracles from the Old Testament: God provided flour and oil when Elijah and Elisha prayed. Sometimes God provides in unusual ways. God can still provide in unusual ways today, just as He did for Corrie ten Boom.

Ruth Pfau

Biography

Ruth Pfau (pronounced Fow), was born in 1929 in Leipzig, in the eastern part of Germany. She died in 2017.

Ruth's father was a book seller and her mother was busy at home looking after six children. Ruth was the fourth of five daughters. Her only brother died as a boy.

When she was thirteen her peaceful childhood was interrupted by the Second World War. Her home and her school were destroyed when Leipzig was bombed. She had always wanted to be a doctor, and during the war she helped to look after children, the sick and the elderly.

Ruth did very well at school and received distinctions in her final school exams in 1947. Ruth moved to Western Germany to study medicine at university.

Having seen the destruction and unhappiness caused by the war, Ruth hoped that by her work as a doctor, she could give something of her life to helping others. In 1956, she travelled to Paris and became a Catholic nun and joined the "daughters of the heart of Mary". What is special about this order of nuns is that members do not wear uniforms or live in a convent. Instead they express their faith through their work. They have many different jobs. Some like Ruth Pfau, are doctors, some are teachers and some work by helping the poor. Today there are over two thousand members working in many countries around the world.

After training in midwifery, Ruth decided that she would go to India, where her order had been waiting for a doctor to help run a maternity home. Before she set off Ruth wondered what good she, just one person, could do. "It will be a drop in the ocean," she told herself, but she was encouraged by the six cases of medical supplies she was given to take with her.

In 1947, when India became independent from Britain, the country was divided up by the government. This decision was made to stop the fighting between Hindus and Muslims. Indian Muslims were given the area that is now called Pakistan and Bangladesh. The Hindus and Sikhs were given what we know as India today. This meant that millions of people had to move from their homes and relocate. Some six million Muslim refugees travelled to Pakistan and some five million Hindu and Sikh refuges left Pakistan and went to India.

Because of the new borders, Ruth now worked in Pakistan, (previously India.) Thousands of Muslim refugees were living in the slums that sprang up on the outskirts of Karachi. One of the biggest cities in Pakistan, on the coast of the Arabian Sea. One day a social worker took Ruth to see the leprosy sufferers of McLeod Road. These were people who were even poorer and more neglected than the refugees. Ruth and her helpers set to work at once. They collected money from friends. UNICEF, (the United Nations International Children's Emergency Fund),

gave them wood from packing cases to build a hut and the Red Cross supplied bandages, medicines and milk powder. In England in 1940, medicine had been discovered to fight leprosy, and this was sent.

Leprosy is a contagious disease that affects the skin, mucous membranes, and nerves, causing the skin to go white, or pink blotches can appear. Lumps the size of a bean can form on the face, under the skin and in the muscles. Sometimes the blotches and lumps break open into sores. Because leprosy affects the nerves under the skin, the victim loses all sense of taste, heat and pain. You could step on a nail or a piece of broken glass, or drink some boiling water, and not notice. If you lived in a slum, a rat might start chewing your toes during the night, but because you felt no pain you would not wake up and chase the rat away. The real problem is that leprosy victims do not realize they have hurt themselves and therefore do not treat themselves. The wounds fester, dirt gets in and infection develops swiftly. It is the infection that lead to fingers, hands, feet and noses gradually 'rotting' away. The other effect of leprosy on the nerves is paralysis. The muscles and tendons of the hands, fingers and feet stiffen and sufferers can no longer blink or close their eyelids. This usually leads to blindness. If leprosy is detected early enough the person can be cured, and the symptoms will not develop.

Ruth and her helpers built a dispensary hut on a patch of waste land in the slum, and soon leprosy sufferers from all over the city began to arrive for treatment. Some people who came to help did not want anyone to know they were working among leprosy sufferers. This was because people of all backgrounds were still very frightened of the disease. They thought that anyone who went near leprosy sufferers would carry the disease and be infectious. That was why the moment someone in a village showed signs of having leprosy they were thrown out of their family and out of the village. These "leper outcasts" had to beg for food to survive and soon drifted into slums like the McLeod Road slum where they stayed until they died.

Ruth and the other nuns worked for sixteen hours a day at the dispensary, cleaning and dressing wounds and giving medicine. They also treated patients with many different diseases besides leprosy. For every sufferer Ruth treated, another two would arrive outside the dispensary the next day. Some of her patients had such bad infections that they needed amputations to stop the infection spreading.

Ruth had to spend a lot of time trying to get hold of medicines, bandages, sterilizing equipment, food and other essential supplies. Every morning she went around Karachi calling on everyone she thought could help. She needed a water supply and a better draining system for the slums. It took time, patience and perseverance. One day she wrote in her diary, "What a wretched country this is. If it isn't pouring raining, it's the sandstorms, and when it isn't sandstorms, it's the locusts."

As the news of the work spread, there were some doctors who came forward and offered their voluntary services at regular intervals. Since that time the work grew fast and small treatment centres were established in Karachi and all over Pakistan.

Training was conducted for paramedics and social workers. The trainees were given and health education and started to get over prejudices and fear.

Later on, Dr. Pfau went to the far-off areas of Pakistan where there were no medical facilities for leprosy patients. She collected donations in Germany and Pakistan and cooperated with hospitals in Rawalpindi and Karachi. In 1968, Dr. Pfau persuaded the Government of Pakistan to undertake a National Leprosy Control Program in partnership with MALC (Marie Adelaide leprosy center) and began setting up Leprosy-control centers across the country.
Today, Marie Adelaide Leprosy Centre is the hub of 157 Leprosy control centers, with over eight hundred staff members. Thanks to the efforts of Dr Ruth Pfau and the MALC, Pakistan was declared leprosy in 1996.

Dr Ruth was very active in taking part in the relief activities in the aftermath of 2005 earthquake and 2010 floods. Dr Ruth Pfau identifies herself as a Pakistani, wears Pakistani dress shalwar kameez only. Says that if she were to be born again, she would be born in Pakistan.

On 8th March 2010, she completed her 50 years in Pakistan. She has been honoured for her dedicated services and commitment to eradicate Leprosy and help the poor in Pakistan.

Birds and Flight 1
About birds

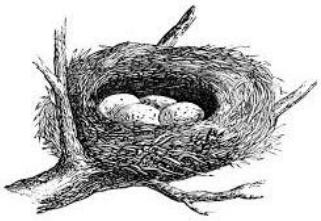
Student activities

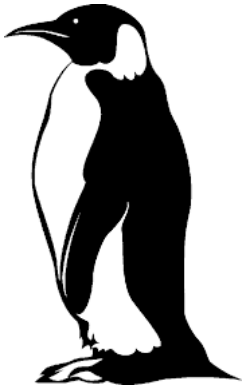
All birds have wings, although not all birds can fly. Kiwis, penguins, emus and ostriches are birds which have wings but do not fly.

A bird's blood is warm. Even penguins have warm blood.

All birds lay eggs. Some birds make their nests in trees. Some birds make their nests on the ground. Some birds make their nests
in holes in banks.

Eggs can be white, coloured or speckled. All birds keep their eggs warm.



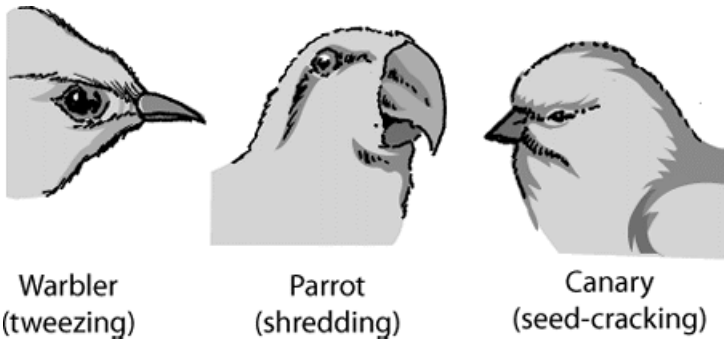


Some birds eat insects. Some birds eat seeds. Some birds eat worms, some birds eat fish. Some birds eat small animals.

1. Draw a picture of a bird that cannot fly.
2. Name a bird that builds a nest in a tree.
3. Name a bird that makes a nest on the ground.
4. Why do birds keep their eggs warm?
5. Name a bird that eats fish or small animals.

Birds and Flight 2
Food and beaks

Birds have no teeth but have beaks. There are many different kinds of beaks.



All birds have backbones.

Birds are not mammals. They do not feed their young on milk but find food to feed their babies.

1. Name a bird that eats seeds.
2. Name a bird that eats insects.
3. Name a bird that eats worms.
4. What do mother birds feed their babies?
5. Draw some birds showing different kinds of beaks.

Birds and flight 3
Types of birds

Perching birds
More than half of the different types of birds in the world are perching birds, for example, hens, finches and wrens. They have special feet for gripping the branches. Three toes point forward and one points backwards. This means that the bird can sleep without falling off its perch.

Birds of prey
With their sharp talons, hooked beak, excellent eye-sight and powerful wings, birds of prey are designed for hunting. Many birds of prey, such as eagle and hawks, spot their prey from the air. It may be a fish, a mouse or a snake. Then they swoop down and scoop it up with their feet.

Water birds
Many birds live near rivers, lakes or the sea. Ducks, swans and geese have waterproof feathers and webbed feet for swimming. Flamingoes have long legs for wading through shallow water. To feed, they stick their heads upside-down in the water and catch tiny water animals with their beaks.

Flightless birds
Not all birds can fly but they have other ways of getting about. Penguins are fast swimmers, using their wings and flippers. Ostriches and emus have long legs and are very fast runners.

Name and draw one bird from each group above. Write a sentence or two about each bird.

Birds and flight 4
Long journeys

Some birds make long journeys to find warmer places to live. In places with cold winters, there is less food for the birds, so they fly together in a group to a warmer place that has more food. Then they fly back again for the summer. This is called migration.

Birds find their way by watching the sun during the day and following the stars by night. Something inside them acts like a clock. It tells them when to set off.

Before they set off birds eat plenty of food to store up energy for their long journey.

Migrating birds travel over oceans, deserts, mountains and arctic regions.

1. Why do birds migrate?
2. How do they find their way?
3. Who do you think gave them the ability to know when it is time to set off?

Birds and flight 5
A bird's body

To help birds fly, God made their bodies very light and streamlined. This means they have a smooth shape so they can slip through the air easily.

Feathers
Birds are the only animals that have feathers. Small birds have about 1,000 feathers. Large birds can have as many as 25,000.

Eggs
All birds lay eggs. God planned this so that they would not have to carry their young around inside them before they are born.

Wings
Birds have wings instead of arms. They are strong and light enough to make a bird fly when it flaps them. This makes the air pass through.

Necks
Birds have very flexible necks. They can turn their heads backwards to clean themselves.

Ears
A bird's ears are hard to see. But they can hear very quiet sounds.

1. What is special about a bird's body?
2. What would happen if birds carried their babies around in their bodies?
3. What happens when a bird flaps its wings?

Birds and flight 6
Feathers

Feathers keep birds warm, stop their bodies from getting wet and help them to fly.

Here are some different types of feathers on a bird's body:

Down feathers

These are the very soft ones next to the bird's skin. They help keep the bird warm.

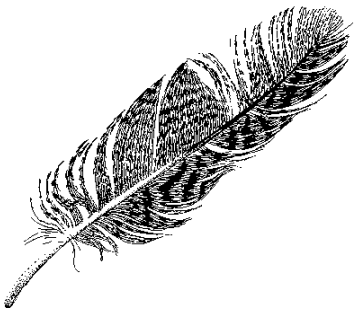
Tail feathers

Birds use their tail feathers to steer themselves in the air and to balance on the ground.

Body feathers

Body feather lie smoothly over the down feathers. They are oily so that they are waterproof. This stops the bird getting cold and wet.

1. What type of feathers keep a bird warm?
2. What type of feathers stop the bird from getting wet?
3. How do these feathers stop the bird from getting wet?
4. What do birds use their tail feathers for?



Birds and flight 7

About the Kakapo

Read the following and write three facts about the Kakapo

The kakapo is a parrot of New Zealand. It almost became extinct. Although the kakapo has wings it does not fly. It climbs trees using its claws and beak. It hunts by night and sleeps during the day. The kakapo is a friendly bird, quite happy to be up close to humans. To attract the females, the males make a booming sound at night which sounds like distant thunder. He does this by inflating air into special sacs in his body, a bit like blowing up a balloon, and then releasing the air.

Why did the kakapo almost become extinct?

When Maori people arrived in New Zealand about 1000 years ago, the kakapo was an easily hunted because it was asleep during the day. When Europeans came to New Zealand about 200 years ago they brought with them animals like cats, foxes and weasels, so by the late 19th century kakapos were almost extinct. In 1970 it was thought that the kakapo was extinct, but in 1977 a colony of about 200 kakapos was found on Stewart Island, an island just off the southern most point of New Zealand. The kakapos were moved to another island that had no cats and dogs. That is how the kakapo has survived.

Birds and Flight 8

The Kakapo: a parrot from New Zealand that does not fly.

What can we learn from the kakapo? Write three points.

- When parrots were released from Noah's ark, they could ALL fly.
- The flying parrots reached New Zealand from the ark, but one day in New Zealand, a flightless parrot hatched from an egg of a flying parrot. This was not meant to be. It was an example of something that went wrong. The Bible tells us that because of Adam and Eve's sin back in the Garden of Eden, things in the creation started going wrong. (Romans 8:19-22)
- The flightless parrot had flightless babies, and they grew up and produced flightless babies. These flightless birds were able to survive in New Zealand because there were no animals there that would eat them. They had not made the sea crossing.
- When humans came, and brought with them predators like cats and weasels, the kakapo almost became extinct.
- When something goes wrong in the process of animals producing their young, we call it a mutation.
- Mutations are when living things go from being perfect to less perfect.
- God's original creation was perfect, but things have gone wrong over the years, and now the creation is not so perfect.
- People who believe in evolution would say that things go from nothing into something fantastic, like slime that turns into a more complex animal, and that animals turns into an ape that turns into a human.

But we can see from the kakapo that our creation is not getting better. God made it perfect in the beginning.

Birds and flight 9

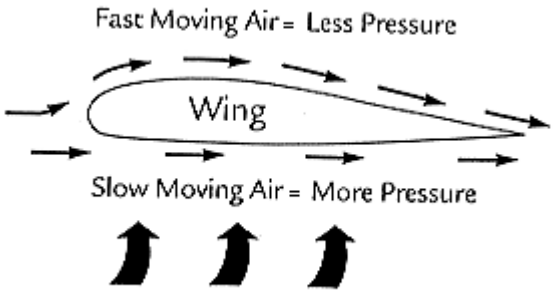
How do birds fly?
How do aeroplanes fly?

Birds and aeroplanes fly using the same principle.
An aeroplane's wing is designed so that the air moving under the wing travels a shorter distance than the air moving over the wing. This creates a high pressure under the wing and a low pressure above the wing, which forces the plane up.

The wings of birds and planes have what is called an aerofoil shape. This aerofoil shape helps us overcome weight which is the effect of gravity pulling down on the mass of the aircraft.

The aerofoil shape gives us something called **lift**. This is the upward force required to overcome gravity, being produced by a wing as it moves through the air. This action allows the object to lift up and push forward.

Try this experiment:
Blow over a narrow strip of paper held to your lips. The moving air above the paper has lower pressure than the air beneath it, which is not moving. This causes the paper to lift up. It is called the principle of LIFT.

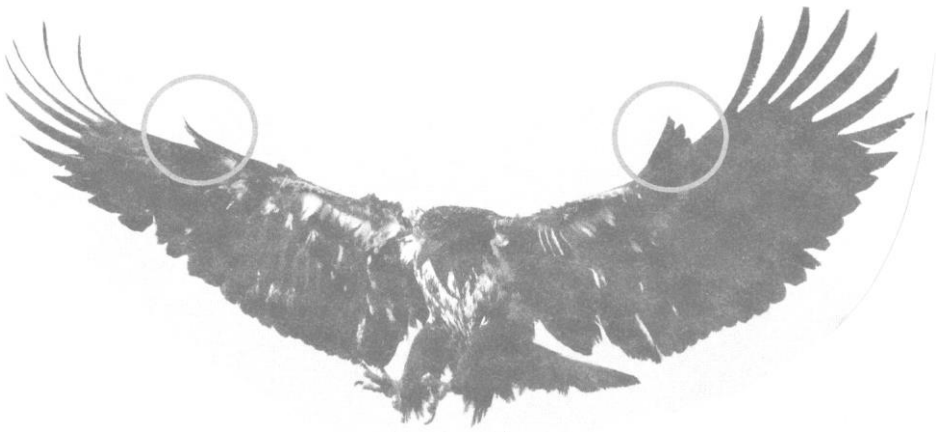


Birds and flight 10

What do jumbo jets and eagles have in common?

When a jumbo jet approaches an airport to land, the pilot deploys flaps on the leading edges of the wings. This allows the plane to fly at a low speed without stalling. Leading edge flaps were unknown in birds until now. A study of the Steppe eagle, at the Oxford University of England, shows that this bird has special leading edge feathers that it uses during takeoff and landing. These special feathers have been captured on video footage. The eagle deploys a wing flap on the front edge of the wing, just as a jumbo jet does. This flap helps the eagle to lift off when flying at low speeds and high angles of attack. It stabilizes the wing during unsteady flying movements.

Such wonderful design features did not come about by chance, but were designed by the Great Designer.



What does the eagle use its leading-edge feathers for?