

# Water: Outcomes and activities

## God is Provider Year 4

### Spiritual Awareness

Genesis 1:1-2 tells us that in the beginning, when God created the universe, a raging ocean covered everything and there was total darkness. The power of God was moving over the water and on the first day He created light.

According to the Bible, the earth was formed out of water, and was not a molten ball in the beginning, as we are told by evolutionists.

On the second day God divided the water in two. This was the water above, (the atmosphere), and the water below. The water vapour above was called 'sky'. This happened in the second 24-hour day of creation. No rain fell until the time of the Great Flood.

God's power is expressed in the greatness of the creation. We see this in the oceans, and powerful weather forces. This powerful God cares about me individually and provides for me. Without water there would be no life.

### 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
- **Responsibility** in using wisely all that God has provided
- **Contentment** – knowing the difference between our needs and our wants

### Outcomes: Students will

- understand that the earth was formed out of water, and was not originally a molten ball as the evolutionists tell us
- understand the importance of water to life
- explain the water cycle
- understand some of the properties of water
- compare how water reacts with different materials

### Bible stories and passages

Genesis 1 - The creation

1 Kings 17:2-6 - Elijah fed by ravens in time of drought.

2 Kings 4: 42-44 - Elijah multiplies bread.

Exodus - 16,17 - Provision for the Israelites in the desert.

Genesis 6-8 – The Great Flood

Psalms 104:5-18 – God's dealing with water during and after the Great Flood.

Matthew 14:22-32 Jesus walks on water. (Jesus' power over creation)

Mark 4:35-41 - Jesus calms the storm.

### Bible verses

Psalm 93:4 - The Lord rules... greater than the roar of the oceans, more powerful than the waves of the sea.

Job 36:22 – Remember how great is God’s power. He is the greatest teacher of all.

Job 36:27-28 – It is God who takes water from the earth and turns it into drops of rain. He lets the rain pour from the clouds in showers for all mankind.

Psalm 104:13 – From the sky you send rain on the hills, and the earth is filled with your blessings.

### **Key Questions**

What was the earth formed out of? (Genesis 1:1-2)

What did God do with the water on day 2 of the creation

Why did God create water?

What would the world be like without water?

How do we get water?

What is water made of?

What is a liquid?

What do we call water when it is solid?

What do we call water when it is a gas?

How can we thank God for all that He has made?

### **Activities**

- Discuss the basic needs of life, of which water is one. Make a list of our needs and our wants, (the things that are not necessary)
- Read Genesis 1:1-2 and discover how the earth was formed out of water.
- Make a chart showing our dependence on water, e.g. for drinking; for plant survival; for washing.
- Conduct experiments with plants to show their dependence on water.
- Measure rainfall.
- Conduct evaporation / condensation experiments.
- Observe water in three states of matter.
- Study and chart cloud cover and rainfall.
- Classify cloud types.
- Produce a poster that shows how the Water Cycle works. Make sure it has a glossary of terms used.
- Study the effects of drought experienced in different parts of the planet.
- Discuss ways of helping and supporting people who suffer from major disasters such as flood, drought and famine.
- Discuss water conservation. Make a table to record your use of water during a typical day. Compare your use with other areas around the world.
- Identify water catchments. Explain how water gets to our homes. Research the water collection and storage system in your area. Write a report on this.
- Conduct floating and sinking experiments.
- Conduct experiments to see how water soaks into different materials.
- Observe how long it takes for wet materials to dry. Where did the water go?

- Discuss the effects of pollution upon our water. Write a letter to the government about pollution in some waterways around Fiji. Suggest ways in which you think the damage can be repaired.
- Create a collage showing the various uses of water for recreation.
- Design something practical that will purify water.
- Research how humans have used water over history. Including how water has been used for power in the past and the future.
- Construct a fact sheet about water erosion and what is being done to solve the problem in various places.

### **Assessment**

1. Write up your experiments that show:
  - a) how water exists in the three states of matter
  - b) that plants depend on water
  - c) that water can make some objects float
  - d) that water will soak into some materials
2. What have I learned from the study of water...
  - about God?
  - about doing what God wants me to do?
  - about the Bible?

# Values education Year 4

## God is Provider

### Contentment

We feel peaceful and content knowing that God is our provider. We are thankful for all He provides and don't feel pressured to own lots of material things that we don't really need.

#### Contentment is...

- being thankful for all that God has done for me
- being thankful for all that God has provided for me
- feeling peaceful inside, knowing that God is taking care of me
- resting in God's care

#### Activities

1. When do you think people are most content? Choose from the list:

- when they have lots of money
- when they are having a good time
- when they are trusting in God
- when they know they are cared for

2. When do you feel content?

3. When have you felt the opposite?

4. It is not wrong to want to have material goods if .....

5. It is wrong to want material goods if .....

#### What does the Bible say about contentment?

Matthew 6:25-34 Do not worry about tomorrow.

John 14:1-3, 18, 25-27 *Do not let your hearts be troubled. Trust in Me.*

Phil 4:12-14 Paul says that he knows what it is to be content.

Hebrews 13:5 Be free from the love of money.

# Practical Science Year 4

## God is Provider

### Topic: Water

### Making a solution; evaporation

#### What you will need:

Some sugar

Some hot water from a kettle

Glass jars

A spoon

A saucepan and a hotplate

See how many teaspoons of sugar will dissolve in hot water.

*Note: Due to hot water involved, this experiment is for teacher demonstration only.*

#### What to do

1. Place a spoonful of sugar in the hot water and stir. The sugar melts. This is a *solution*.
2. Take another jar and place 4 teaspoons in hot water and stir.
3. Take another jar and place 6 teaspoons in hot water and stir.
4. Keep adding more and more sugar until it won't dissolve anymore. When this happens, the solution is *saturated*.
5. Now heat the sugar solution in a saucepan on the stove until boiling. Using oven gloves, place a large plate over the saucepan and collect some steam. Get someone to taste the water collected on the plate. Does it taste like sugar?

#### Record the experiment:

What did you do?

What did you see?

Why did this happen?

## Practical Science: Water

### Surface tension: make a paper clip float

<http://www.sciencebob.com/experiments/paperclip.php>

#### What you will need

- clean dry paper clips
- tissue paper
- a bowl of water
- pencil with eraser

#### What to do

1. Fill the bowl with water
2. Try to make the paper clip float...not much luck, huh?
3. Tear a piece of tissue paper about half the size of a dollar bill
4. GENTLY drop the tissue flat onto the surface of the water
5. GENTLY place a dry paper clip flat onto the tissue (try not to touch the water or the tissue)
6. Use the eraser end of the pencil to carefully poke the tissue (not the paper clip) until the tissue sinks. With some luck, the tissue will sink and leave the paper clip floating!

#### How does it work?

How is this possible? It is possible because of SURFACE TENSION. Basically, it means that there is a sort of skin on the surface of water where the water molecules hold on tight together. If the conditions are right, they can hold tight enough to support your paper clip. The paperclip is not truly floating, it is being held up by the surface tension. Many insects, such as water striders, use this "skin" to walk across the surface of a stream.

#### 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 many paperclips can the surface tension hold?
2. Does the shape of the paperclip affect its floating ability?
3. What liquids have the strongest surface tension?
4. Can the surface tension of water be made stronger? (try sprinkling baby powder on the surface)

## Practical Science: Water

### Make an Egg Float in Salt Water

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

An egg sinks to the bottom if you drop it into a glass of ordinary drinking water but what happens if you add salt? The results are very interesting and can teach you some fun facts about density.

#### What you'll need:

- One egg
- Water
- Salt
- A tall drinking glass

#### Instructions:

1. Pour water into the glass until it is about half full.
2. Stir in lots of salt (about 6 tablespoons).
3. Carefully pour in plain water until the glass is nearly full (be careful to not disturb or mix the salty water with the plain water).
4. Gently lower the egg into the water and watch what happens.

#### What's happening?

Salt water is denser than ordinary tap water, the denser the liquid the easier it is for an object to float in it. When you lower the egg into the liquid it drops through the normal tap water until it reaches the salty water, at this point the water is dense enough for the egg to float. If you were careful when you added the tap water to the salt water, they will not have mixed, enabling the egg to amazingly float in the middle of the glass.

# Art Year 4

## God is Provider

### Topic: Water

**Biblical connection:** God has provided water for life, through rainfall, rivers and lakes.

#### **Bible art as a wall display:**

Make a large display of the water cycle.

Psalm 136:1 Give thanks to the Lord for He is good

#### **1. Drawing, painting and collage**

Ask students to:

- Using oil pastel or crayon, make line drawings of patterns that water can make: swirls, waves, spray, bubbles. When finished, cover the page with a thin blue wash.
- Draw their favourite water experience.

#### **2. Painting**

- Experiment with adding water to paint. Try different techniques with thin paint, e.g. blowing with straws, merging colours
- Paint a scene: "a rainy day"

#### **3. Dying**

- Use water to make dyes, e.g. boil onion skins, water down food colourings. Try some tie dying with washed cotton fabric.

#### **4. Printing**

- Make bubble prints

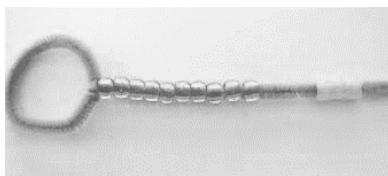
#### **Instructions for bubble prints:**

Pour 1 tablespoon of detergent plus water into a small, shallow bowl.

Add a few drops of food colouring to the bubble mix and stir well.

Place a bubble wand (shaped wire or pipe cleaner) in the coloured bubble mix, remove and blow bubbles towards your paper.

As the bubbles hit the paper and pop, they will leave interesting patterns.





**Water 1**  
**Water for life**

**Student activities**

All living things need water....the plants, the animals and us.  
God created water to keep us alive.

People can only live for about 4 days without water.

Did you know that two-thirds of your body is made of water?

Think about where the water might be inside your body.

Water gives life. But Jesus said that there is a special kind of living water that only He can give. The living water that Jesus gives is the Holy Spirit. You can read about it in John 7:37 – 39.

*Copy:*

Jesus said, "Let anyone who is thirsty come to me and  
-----"

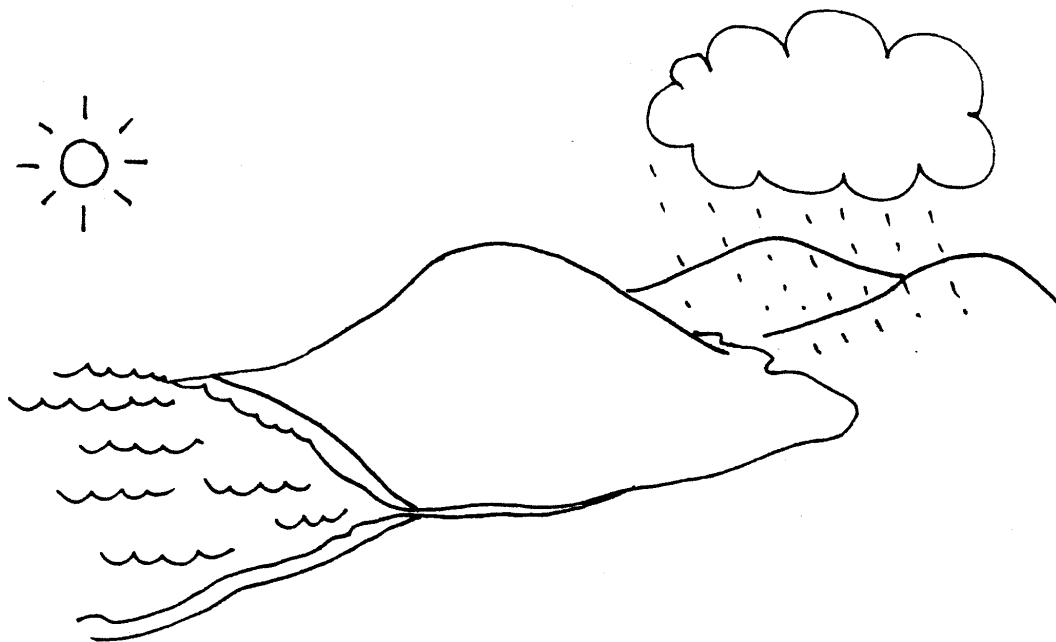
Water keeps all humans, plants and animals alive.  
What kind of life does the Holy Spirit give us?

## Water 2

### The Water Cycle

Heat from the **sun** causes water to evaporate from the **sea**.  
The **water vapour** rises and it becomes a **cloud**.  
The water vapour changes to tiny water droplets when it is cooled.  
These tiny droplets change to bigger droplets and it starts to **rain**.  
The water goes into rivers and goes to the sea.  
The water cycle starts over again.

Draw this diagram and use the words above in **BOLD** to label the diagram. Draw arrows to show how the water goes around.



### **Water 3**

#### **Water for life and health**

**Let's find out what happens to dirty water.**

We use a lot of water keeping ourselves and our homes clean. BUT where does that dirty water go?

All of our household wastes (dirty water) wash away through underground pipes called sewage pipes. The pipes go to sewage farms where the dirty water is treated with chemicals and made safe to use again. If the sewage or dirty water is not treated properly it can be very dangerous and unhealthy.

In the old days, sewage or dirty water ran down open drains in the streets and into town water and rivers. Many people got sick and died because of the germs.

Today the pipes are underground and do not go near our water. After the sewage has been treated, some water can be used for the garden, (but not for drinking!)

Write the heading "**SEWAGE**" and answer the following questions in full sentences:

1. Where does all the dirty water from our homes go to?
2. What happens to the sewage once it gets there?
3. Why is this important?
4. What happened to the sewage in the old days?
5. What was wrong with this? What happened to the people in the old days and why?
6. Can we use sewage again after it is treated? What is it used for?

### **Water 4**

**Are you a good detective?**

Add the correct vowels to complete this poem. It has to rhyme.

Clues: There are three As, one E, one I, three Os and one U.

**SPL\_\_SH, SPL\_\_SH, SPL\_\_SH,**

**Y\_\_ \_\_ H\_\_V\_\_ T\_\_ W\_\_SH!**

## Water 5

### How we use water

Copy the drawings and write a sentence for each.



## Water 6

### Search for the words

Find the following words in the grid below:

Chemicals

Dishes

Hair

Pipes

Soap

Clean

Drains

Hands

Sewage

Teeth

Clothes

Germs

Healthy

Sick

Wash

Water

C	H	E	M	I	C	A	L	S	G	H
L	S	I	C	K	L	A	H	O	E	E
O	D	I	S	H	E	S	T	A	R	A
T	R	B	Z	H	A	I	R	P	M	L
H	A	N	D	S	N	U	W	P	S	T
E	I	T	E	E	T	H	A	I	V	H
S	N	W	A	T	E	R	S	P	I	Y
H	S	E	W	A	G	E	H	E	J	D
A	N	Q	U	T	I	V	O	S	T	E

## Water 7

### Write a poem

#### Dishes, dishes, dishes

Dishes, dishes, dishes,  
Doing them is really against my wishes,  
But if we let them build up high,  
Nearly to reach the sky,  
All the germs would think it was a good trick  
And we would soon get very sick.

Dishes, dishes, dishes,  
Doing them is a pain.  
They keep coming round and round again.  
But I'll help Mum  
Because she doesn't have much fun  
When she's the only one  
Doing dishes, dishes, dishes

#### Now try writing your own poem about one of these:

1. dishes
2. showering
3. washing
4. water

Try to tell us something you think is important.



## Water 8 Keeping clean

Make a poster about the importance of keeping clean and the ways we need to keep clean. This poster is to teach young children about keeping clean.



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