Section 1

Water in our World

Gold Coast City Council

Section 1

Water in our World

Activity A
Introduction to water as a resource

Objective

To provide a broad introduction to water as a resource, as well as the basic components and concepts of the water cycle.

How

- Children will explore (through brainstorming) where water is found in our world.

Focus questions

- Where do we find water?
- Where does water come from?
- Where does all the water go after it rains?

What you'll need

- Large paper or black board
- Pen/chalk

Instruction

1. Initiate a brainstorm and discussion on the focus questions: Where do we find water? Where does water come from? Where does all the water go after it rains?
2. Create a visual board by drawing a cloud with the word 'water' in it.
3. Ask the children to make suggestions on suitable words or pictures that can be placed as rain drops falling out of the cloud. These drops can represent other things that remind them of water, for example swimming, a hose or a shower.

Activity B

Sand play: Build a catchment

Objective

To raise awareness of the effects water has on the environment.

How

- In the sand pit, allow children to construct hills, dams, rivers, moats.

Focus questions

- What would happen if there was no water for the animals?
- What happens to the water when you pour it over the hills?
- What happens to the sand when you use a watering can instead of a bucket to fill up the dam?

What you'll need

- A sand pit area.
- Sand pit spades.
- Toy animals.
- Bucket of water.
- Watering can.

Instruction

1. Ask the children to place the toy animals on the hill and near the river.
2. Then ask the focus questions during play and construction - so as to encourage a better understanding of what effects water has on the environment.

Activity C
Cloud watching and making

Objective

To explore the role clouds play in the water cycle.

How

- Children will watch, observe and discuss clouds.

Focus questions

- What are clouds made of?
- How do clouds provide water?
- How does the water get into the clouds?
- What colours do clouds turn as they get more water in them?

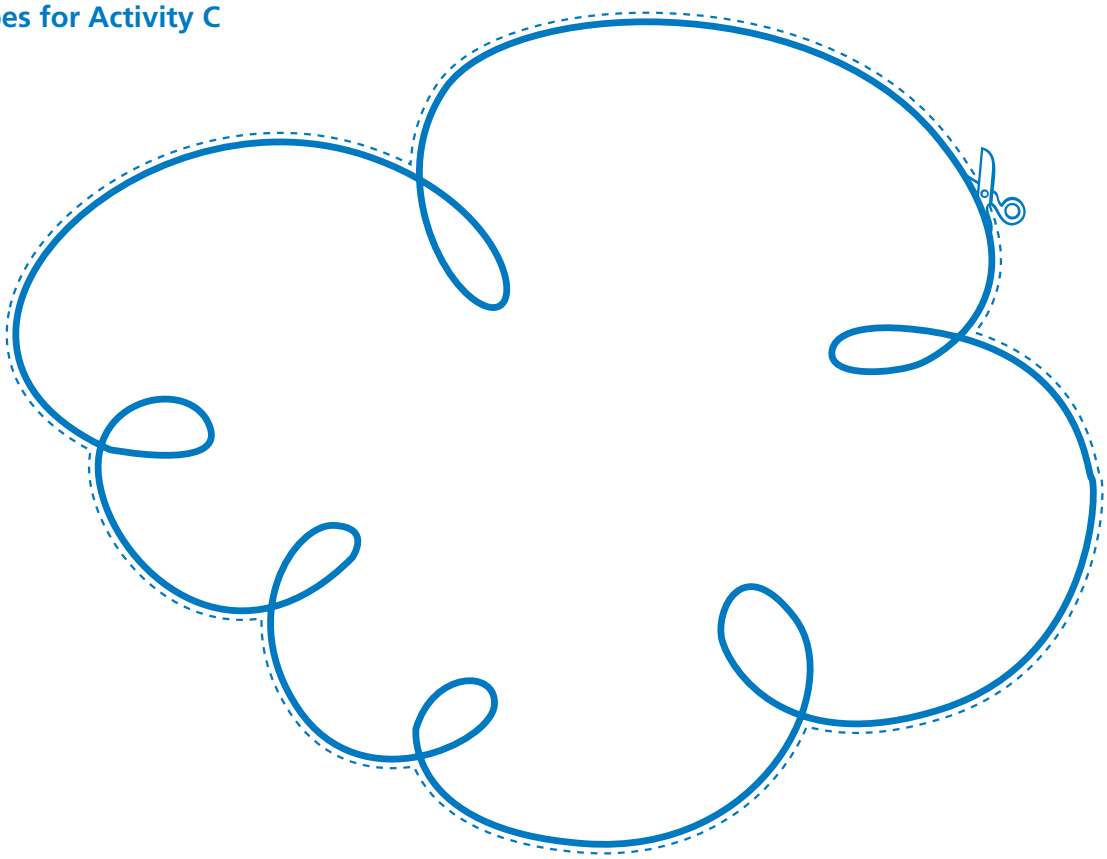
What you'll need

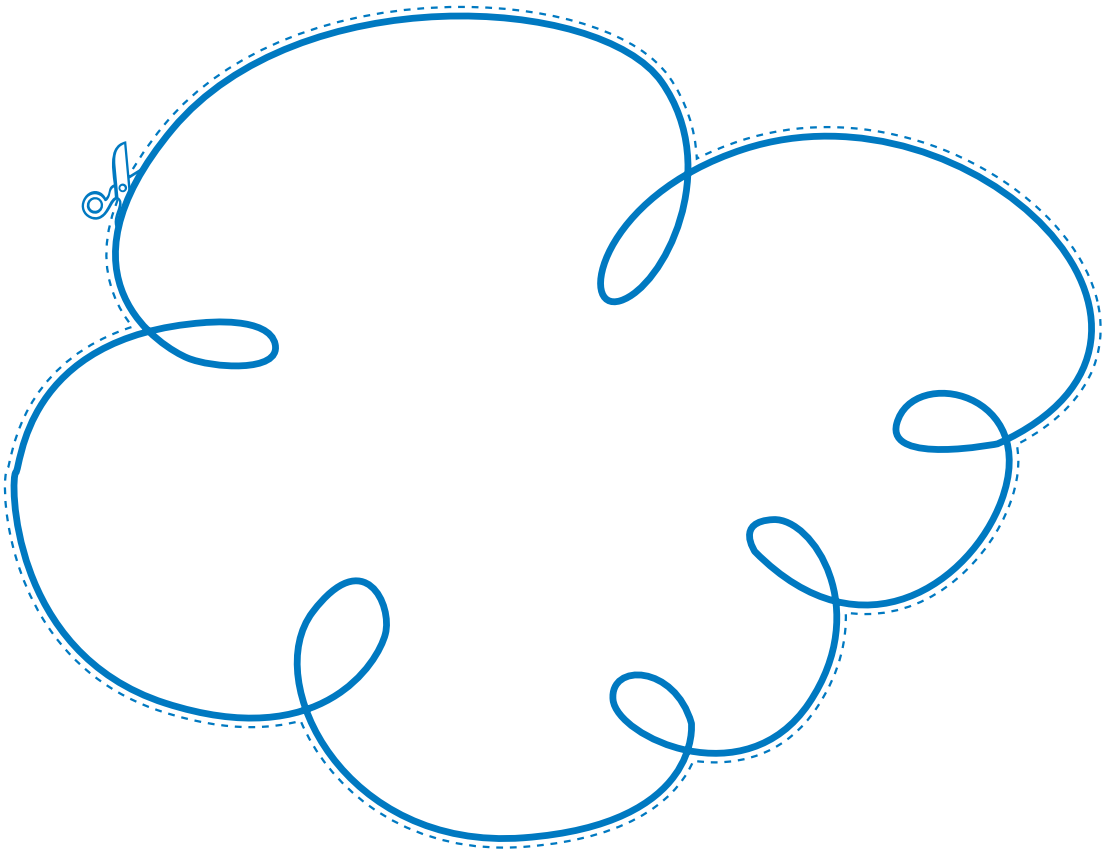
- Cloud shapes (see next page).
- Cotton wool balls or glitter.
- Scissors.
- Glue.

Instruction

1. Ask the children to observe the clouds and reflect on what a cloud might feel like or how a cloud moves through the sky.
2. Get the children to count how many clouds they can see.
3. Children tell stories of their experiences with clouds i.e. clouds can provide shade when it's a hot day or the feeling of flying through clouds on an aeroplane.
4. Children cut out cloud shapes and paint, collage or stick cotton wool balls or glitter onto them.
5. Using descriptive words, discuss with the children their choice of materials and the type of cloud produced i.e. 'Is your cloud a storm cloud, why?'
6. The completed clouds can then be displayed throughout the room.
7. The clouds can also be used to make a weekly weather chart showing: 'What types of clouds do we see in the sky today?'
8. The teacher can then organise this on a whiteboard/corkboard or develop a specific wall space for the activity.
9. Use the above focus questions to promote further discussion.

Cloud shapes for Activity C





Activity D
Water experiments

Objective

To explore the properties of water.

How

Children will learn through the investigative way of thinking – who, what, where and why.

What you'll need

- Ice cubes.
- Plastic cups.
- Kettle.
- Tongs.
- Foil.

Instruction

1. Take a number of ice cubes and ask the children to predict what will happen if they are left out of the freezer.
2. Children can place a number of ice cubes in a cup to observe what happens.

Suggestion: make this activity more visually exciting by placing some colouring into the ice cubes before they freeze. That way, the children will be able to see them melt easier.

3. Ask the children to explain what happened.
4. Collect the water from the cups and then place in a kettle.

   * Please ensure the kettle is kept away from the children at all times.
5. Ask the question: 'What will happen to the water in the kettle?'
6. The children observe the steam rising from the kettle.
7. Place a piece of foil (using tongs) over the steam coming from the kettle – this will allow the water vapour to be captured in the foil.

Suggestion: Step 8 needs to be done very quickly after step 7.

8. As the vapour cools the children will observe it turn back into water - show this by holding the foil over a cup.
9. Show the children that there is now water back in the cup. A discussion can then take place to explain what happened.
10. Ask the children 'What will happen if we place some water in the freezer?'
11. The song 'Incy Wincy Spider' can also be used to provide context and further questioning.

Note: This activity provides valuable links to the water cycle (Activity E).

Activity E

Learning about our water cycle

Section 1

Water in our World

Objective

To bring the learnings from Activity D all together.

How

- Show the children a visual representation of the water cycle

Focus questions

- How does water move around?
- Why does it move in that direction?

What you will need

- Water cycle diagram (see next page)

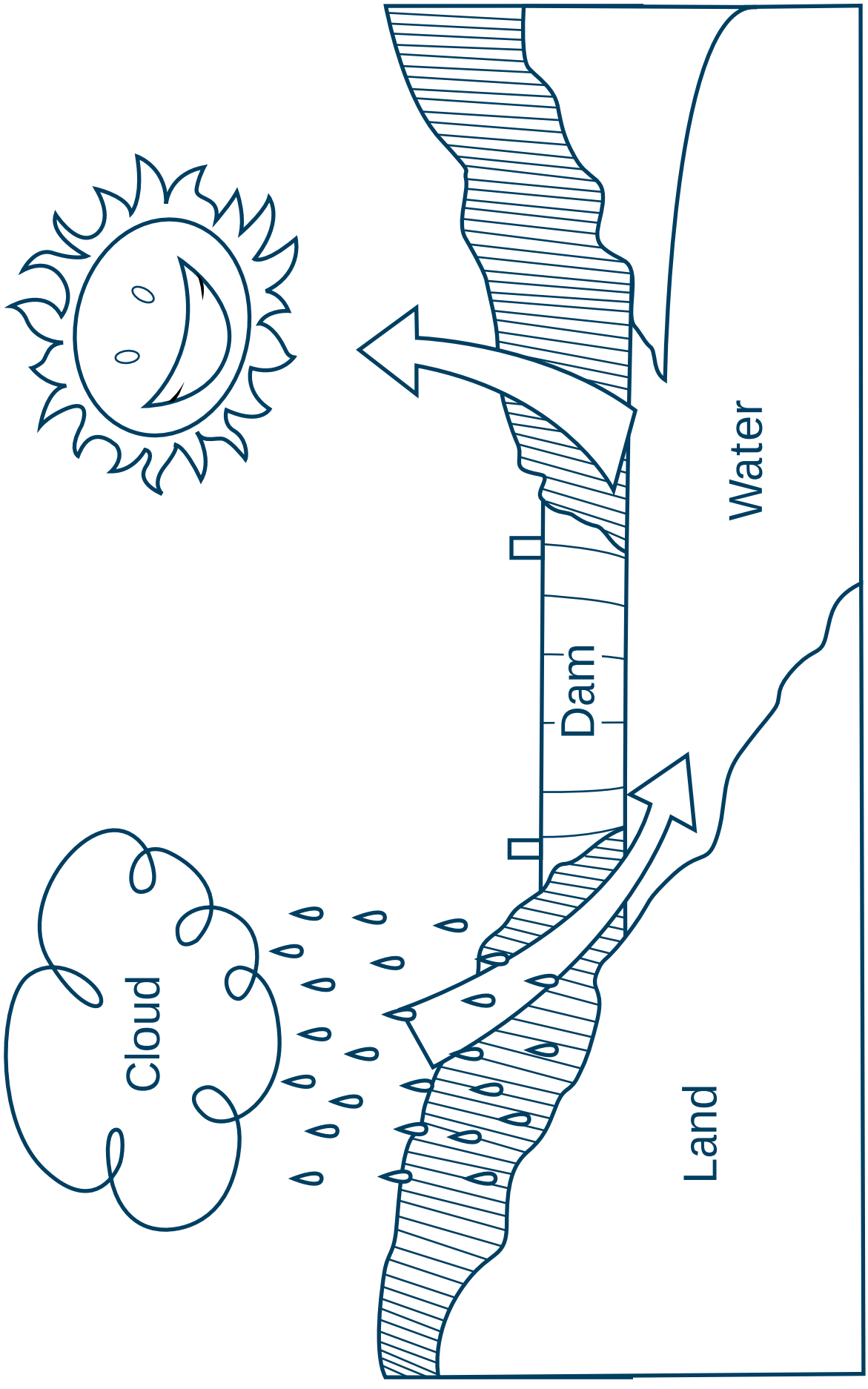
Instruction

1. Ask the students to predict what occurs at each stage of the cycle. For example, the rain cloud becomes heavy, moves over the mountain and begins to rain.
2. Have the children follow the arrows with their fingers, identify features and the red dots. Ask: 'What happens at this red dot'?

Information for the teacher on the water cycle:

The water cycle can be easily observed in your suburb. The sun evaporates water from the dam (or ocean, or puddles, creeks and swimming pools), and changes the water from a liquid to a gas (water vapour). As the water vapour rises it forms clouds.

The clouds are blown toward the hinterland. As they rise over the hills the water vapour cools and changes back to liquid, which falls as rain. Some of the rain is collected back in dams, while some flows back to the sea, along creeks and streets, to begin the water cycle again.


Water
Dam
Cloud
Land