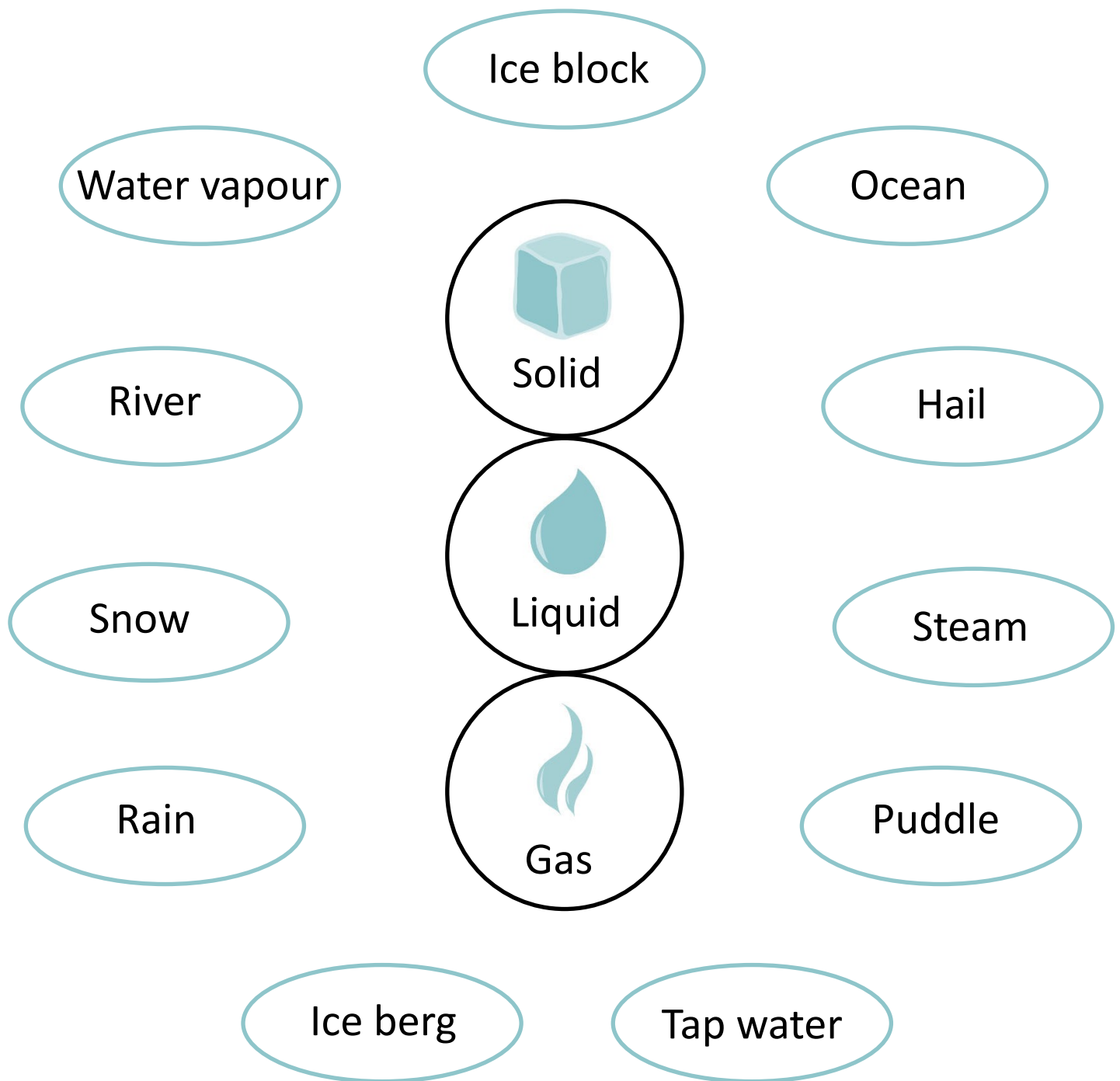


Name: _____

Did you know that everything on earth is in a different state? The common states in science are solids, liquids and gases. A solid is hard and keeps its shape, a liquid is wet and runny, and a gas can float and move around us.

Water is the only thing that can be a solid, liquid or gas.

Can you draw a line between the different types of water and the state that they are in?



Rain Gauge



EQUIPMENT

- Plastic bottle
- Ruler
- Permanent marker
- Scissors

Rain Gauge

People have been using rain gauges for thousands of years and they tell us how much rain has fallen over a period of time.

Knowing how much rain we have had is important for things like letting farmers know when to plant or harvest crops, for understanding weather patterns, for knowing when we might have a drought which is when there is not enough rain or a flood when there is too much.

AIM OF ACTIVITY:

Students will increase understanding of:

1. Weather patterns
2. Recording real life data (rainfall)

PREPARATION:

1. Gather all equipment

ACTIVITY OUTLINE:

1. Cut top off bottle
2. Mark the bottle every 1cm from the base of the bottle
3. Number marks starting with 1 at the first mark from the base
4. Remove lid from top and place upside down in the bottle
5. Place rain gauge in garden, selecting a place with nothing overhead to block rainfall
6. Ensure rain gauge can't blow over. Surround with dirt or rocks if needed.
7. Record daily rainfall, discarding collected water after recording the number.

Rain Gauge



Name: _____

Day	Weather	Rainfall
		Total

EQUIPMENT

- Zip lock sandwich bags
- Water
- Blue food dye (optional)
- Attached worksheet
- Sticky tape, scissors, pencils or textas.

Lesson Plan

Our Earth's water cycle has been continuously recycling our water supply for over 4 billion years. The process begins with the heat from the sun causing water to turn into a gas called vapour which evaporates into the sky. Condensation then occurs when the vapour cools and returns to a liquid. When the liquid becomes too heavy for the clouds to hold, precipitation occurs, with the water returning to the Earth's surface in the form of rain, hail or snow.

AIM OF ACTIVITY:

Students will increase understanding of:

1. Evaporation and condensation, being able to observe water droplets forming in the bag.
2. Precipitation, being able to observe the water droplets fall back down.

PREPARATION:

Photocopy worksheet and gather needed equipment.

If needing a lesson introduction, there are many examples of the water cycle available online that could be viewed and discussed by the class.

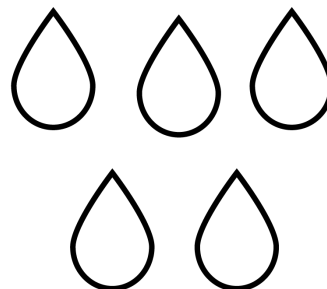
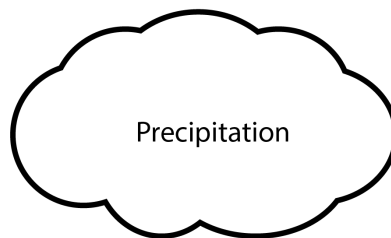
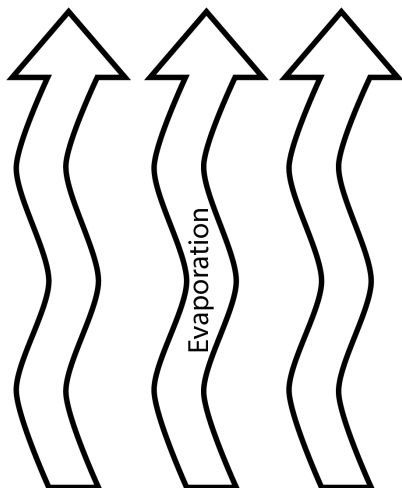
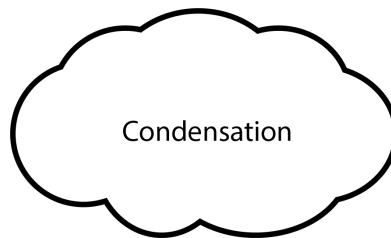
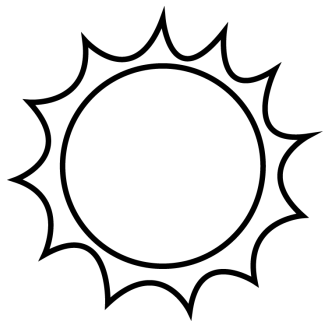
ACTIVITY OUTLINE:

1. Colour and cut out the worksheet labels.
2. Sticky tape the labels in the correct positions on the zip lock bag (see example on worksheet).
3. Carefully fill approximately one quarter of the bag with water and add a drop of blue food dye (optional).
4. Zip the bag securely closed and place in a warm spot e.g. window sill.
5. Observe (depending on the temperature it shouldn't take long to be able to see water droplets begin to form).

The Water Cycle in a Bag

Colour and cut out the labels below.

Look at the bag in the photo to check where you need to stick the labels.



EQUIPMENT

- 7 clear cups or glasses
- Paper towel
- Red, blue and yellow food dye
- Water
- Scissors

Walking Water

Did you know that water can move against gravity? In this experiment we are going to make water move upwards using pieces of paper towel.

Water is made up of water molecules. These molecules stick to each other and also to the fibres in the paper towel. Using a process called capillary action, the water is pulled up the paper towel. This is similar to how water moves up a plants roots and throughout the leaves and branches.

AIM OF ACTIVITY:

Students will increase understanding of:

1. Water movement
2. Primary and secondary colours

PREPARATION:

1. Gather all equipment

ACTIVITY OUTLINE:

1. Set up seven glasses or cups in a row
2. Add water to cups 1, 3, 5 and 7 to approximately 3/4 full
3. Fold paper towel and trim to length (see photo below)
4. Place paper towel into glasses
5. Add food dye to cups:
 - Cup 1: 4 drops red food dye
 - Cup 3: 4 drops yellow food dye
 - Cup 5: 4 drops blue food dye
 - Cup 7: 4 drops red food dye
6. Discuss primary colours and have students predict what colours will be created in the empty glasses.
7. Discuss how water has moved up the paper towel and how this is similar in the movement of water through plants.



