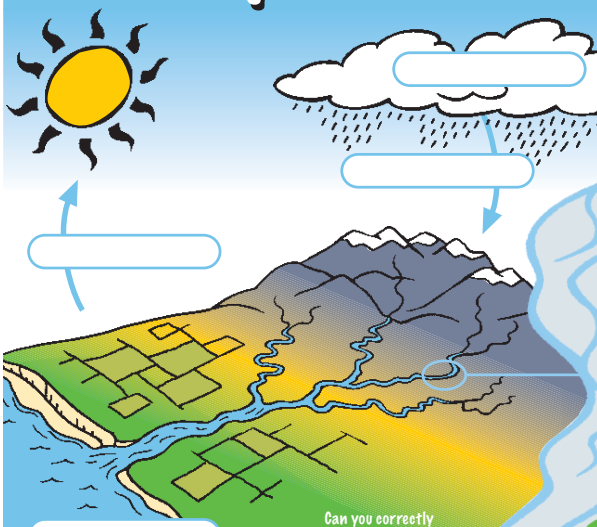
Water Water Everywhere?

kids Living Here

Just not a drop to spare!

Water! It seems like an endless natural resource. Two thirds of the world's surface is made up of water. However, 97% is salty or otherwise undrinkable. Another 2% is locked in icecaps and glaciers. That leaves only 1% for ALL our needs and the needs of a lot of animals.

In Canterbury, we are often reminded of its importance and limitations, especially during summer. The long, hot dry days are a wonderful time to be out and about enjoying the outdoors but they do cause problems for the availability of water. Everybody needs it but who gets what and how does taking it effect the natural environment.



Can you correctly label the water cycle by writing the right word in the spaces provided? Have a go!

The Water Cycle

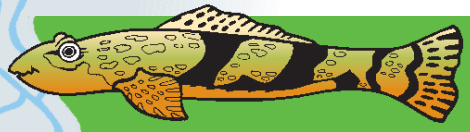
1 The sun warms the water from the oceans, lakes and rivers and changes them from a liquid into a gas called water vapour. This process is called **EVAPORATION**

2 The 'water vapour' rises into the sky, cools and joins together to form clouds. This is called **CONDENSATION**

3 The clouds get heavier and heavier as more and more water vapour turns into tiny droplets and join together. Finally the clouds become so heavy they lose their water as rain or snow. This is called **PRECIPITATION**

4 The rain and melted snow/ice is absorbed into the ground or runs downhill into rivers and lakes eventually flowing into the ocean. This is called **COLLECTION**

And the cycle continues!

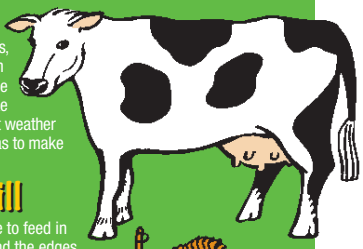


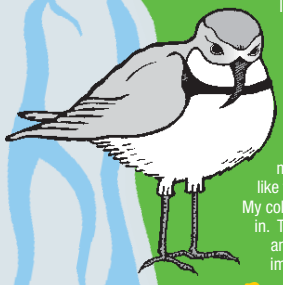
Tom the Torrent Fish

Hi! I'm Tom. I am a different fish because in the day I live in swift-flowing parts of streams and rivers. This means that I am found in the gravel, where my flattened head and large pectoral fins help me to stay in place in the fast-flowing water. My food is the insect larvae that live on the stones, and at night, I move to the quieter ponds to feed. The rivers and streams are my home.

Kate the Cow

My Name is Kate. I need to eat juicy, green grass. But sometimes, especially in the summer, the grass is dry and brown which means I don't produce as much milk. The farmer has to use big sprinklers called 'irrigators' to water the grass and make it green. They need a lot of water to work. In the hot weather I get really thirsty as well. The farmer has to make sure there is water for me to drink.





Ronnie the Wrybill

Hello there! My name is Ronnie. I like to feed in shallow waterways, shallow rapids and the edges of pools during summer. I am the only bird in the world whose bill curves to the right. This helps me to reach under stones for mayfly larvae. I like to nest on flat areas of gravel, bare of plants. My colouring is very similar to the gravel I nest in. This helps me protect my eggs, chicks and myself. Rivers and streams are important to me for food and habitat.

People

During summer when the days are long and hot we enjoy activities in and around the rivers. We like to fish, swim, tramp, watch the wildlife and have picnics just to name a few. It is thirsty work! Water is important to us.

TRY THIS...

HOW MUCH IS TOO MUCH?

Water is in hot demand. People want to use it for many different reasons. Because of this high demand water has to be 'allocated' – surface water from rivers and streams is taken and given to those that need it the most. The four main allocations of surface water in Canterbury during summer are irrigation, stockwater, domestic drinking water and industrial. I wonder how all this water being allocated would affect the rivers and streams?

You will need...

- A low sided tray e.g. a take-away container or cake slice tin
- Sand
- Stones
- 1 Cup of water (250mls)
- 1 Teaspoon

Method

- Place a layer of sand in the tray, about 1 cm thick
- Put stones in the tray leaving a space for the river, which will stretch from one end of the tray to the other. Put a few stones in the riverbed – Tom will like that!
- Pour the cup of water (250mls) into the riverbed.
- Using your teaspoon take out –
  - 18 tspn for Irrigation use
  - 12 tspn for Stockwater use
  - 7 tspn for Domestic drinking water use
  - 7 tspn for Industrial use

What is left? How has it affected the river and its environment?

Who needs what?

So what have you learnt?
Try this activity to test your knowledge.
Cut and paste these pictures on the dots where you think they best fit.

Kate the ○ uses the river and streams to water the ○ and to drink.

○ use the ○ and streams for activities and to drink.

Ronnie the ○ uses the rivers and streams for his ○ home.

Tom the Torrent ○ uses the ○ and streams for his ○ and food.