**Introduction**

The year is 2025. You are on a camping trip in the Northern Territory. You have been trekking for the last 3 days and have not seen another person.

Unfortunately, you have just fallen over and sprained your ankle. To make matters worse you have landed on your water bottle. It has cracked and spilt all of your water.

Your mobile phone is not receiving a signal and you cannot walk further than a few meters. You know that the chances of anyone stumbling across you are incredibly slim.

The temperature is 42°C and rising, and it is only 10am. If you don’t have any clean drinking water you will not survive more than a few days.

You have managed to find an old creek bed that has a small amount of water in the bottom unfortunately there is a dead kangaroo rotting in it.

If you can boil the water it should be drinkable and might just save your life until you are strong enough to walk.

You can build a fire but all of your containers will melt if you put them over an open flame. Your only hope is to make a kettle to boil the water.

Luckily in year 9, you completed an investigation into heat and electricity which taught you everything you needed to know to design and build a kettle!