

# Which Colour is the Hottest?

Different colours are better at absorbing the heat from the sun than others, so the colour of the roof and walls of a building can significantly effect how easy it is to keep your house naturally comfortable.

## Things to Get

5 clear plastic drink bottles  
Aluminium foil  
White paper  
Black material  
Red material  
5 Thermometers  
Plasticine

## Things to Do

1. Cover one of the clear plastic bottles with aluminium foil so that only the neck of the bottle is exposed.
2. Cover three of the remaining four bottles with the white paper, black material and the red material in the same way that you covered the first bottle.
3. Cover the tops of all of the bottles with plasticine so that the air inside the bottle cannot escape.
4. Carefully, insert a thermometer through the plasticine in each of the bottles so that the bottom of the bulb of the thermometer is about half way in the bottle.
5. Place the bottles out in the sun.
6. Record the temperatures inside each of the bottles every two minutes for about fifteen minutes.

## Results

Record your temperatures in the following table:

Colour	Temperature							
	Start	2	4	6	8	10	12	End

Which of the colours do you think is the best at absorbing the light from the sun? Why?

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Perth has a temperate climate with warm to hot summers and mild winters. Given the results from your table, what colour roof would be most suitable for a house in Perth? Why?

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You decide to build a holiday home in Antarctica. What colour bricks and roof would be most suitable to the cold, snowy climate of the Mawson base? Why?

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