

## Hibernating Hedgehogs



**Investigation:** To find the best insulating material to keep a hedgehog warm when it hibernates.

### **You need:**

2 plastic cups, measuring cylinder, 200ml warm water, stopwatch, insulating material, e.g. wool, bubble wrap, tin foil.

### **Method:**

1. Wrap a “hedgehog” (plastic cup) in insulating material and place it inside a small bucket.
2. Keep a second “hedgehog” unwrapped and place inside a different bucket.
3. Pour 100ml of warm water into each plastic cup.
4. Record the temperature of each “hedgehog” and start the stopwatch.
5. Leave the “hedgehogs” outside for 5 minutes.
6. Measure the temperature of each hedgehog every minute.

What are you changing in this investigation? .....

What are you keeping the same in this investigation? .....

What is being measured and in which units? .....

Why is one “hedgehog” being left without any insulating material?

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### **Prediction**

What do you think will happen to the temperature of each “hedgehog”? Give a reason for your answer.

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### **Results**

No insulating material		Insulating material =	
Time (minutes)	Temperature (°C)	Time (minutes)	Temperature (°C)
0		0	
2		2	
4		4	
6		6	
8		8	
10		10	
Change in temperature (°C)		Change in temperature (°C)	

What did you find out in this investigation?

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