

# Black Hole Inquiries Instructions

To understand Stephen Hawking's theories about black holes.



Follow these instructions to set up two inquiries to demonstrate how black holes are formed and how they behave.

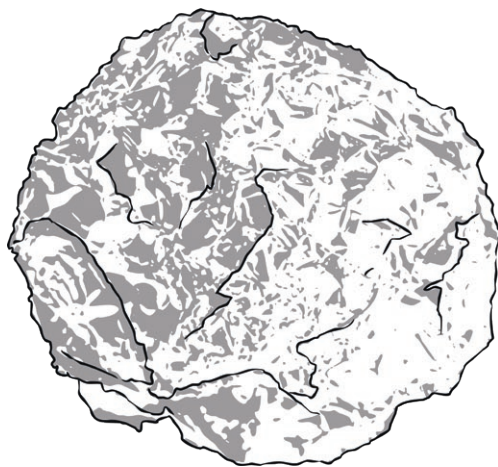
## Black Hole Inquiry 1: How They Are Formed

Inflate a balloon so that it is approximately 10cm in diameter.

Wrap the balloon in several layers of tinfoil.

Carefully pop the balloon with a pin.

Squash and squeeze the foil layers around the popped balloon.



## Black Hole Inquiry 2: How They Behave

Two or three members of your group should hold the edges of a piece of stretchy fabric so that it is stretched taut horizontally.

Another member of your group should roll a marble across the fabric. Observe how it travels.

Now place a heavy ball in the centre of the fabric. How does it alter the shape of the fabric?

Roll the marble across the fabric again, and observe how it travels differently now that the heavy ball is there. Experiment with rolling it slowly and quickly.

