Impact Crater Experiment

SPACE HUB YORKSHIRE

1. **Make a hypothesis**

   What do you think will happen if you drop the marbles from different heights?

   What do you think will happen if you drop different sized marbles?

   What do you think will happen if you drop a marble straight down and then gently throw the marble at a slight angle?

   What happens if you drop marbles over previous craters?

2. **Test your hypothesis!**

   Fill in the tables.

3. **Analyse your results...**

   What test produced the largest craters?

   What test produced the smallest?

   What information can impacts tell you?

Dropping marbles from different heights

Height 1	Trial 1	Trial 2	Trial 3	Total	Average	Height
Crater diameter						
Average ray length						
Height 2	**Trial 1**	**Trial 2**	**Trial 3**	**Total**	**Average**	**Height**
Crater diameter						
Average ray length						
Height 3	**Trial 1**	**Trial 2**	**Trial 3**	**Total**	**Average**	**Height**
Crater diameter						
Average ray length						

Dropping marbles of different sizes

Small	Trial 1	Trial 2	Trial 3	Total	Average	Height
Crater diameter						
Average ray length						
Medium	**Trial 1**	**Trial 2**	**Trial 3**	**Total**	**Average**	**Height**
Crater diameter						
Average ray length						
Large	**Trial 1**	**Trial 2**	**Trial 3**	**Total**	**Average**	**Height**
Crater diameter						
Average ray length						

Sketch of crater

If marble falls at an angle

If marble falls straight down

Sketch some overlapping impact craters – can you tell which is youngest and oldest from the picture?