

## The Perfect Fundraiser

### Investigation Brief:

At a community fundraiser the Maths Club set up a stall with the following sign:

**Yes and No Jackpot**

Pick any number between 1-1000.

Answer our 10 questions with  
"Yes" or "No".

If we guess your number - you donate \$2.

If we can't guess your number - we give you \$5.

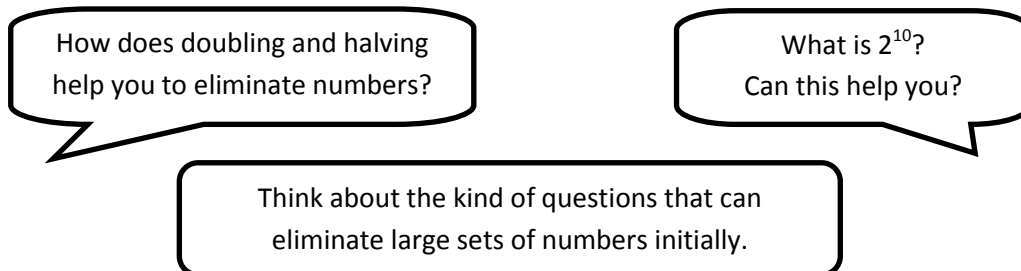
The principal was nervous at first thinking they may lose money rather than raise money!  
But after an hour she notices that no one has been able to pick a number that the club couldn't guess in 10 questions.

How did they do it?

### Resources:

- None required

### Prompts and Suggestions



### Extension

What would be the minimum number of questions to guess a number between?

- 1 – 10 ?
- 1 – 100 ?
- 1 – 10,000 ?
- 1 – 1,000,000 ?