

# NUMBER AND PLACE VALUE

## Objective

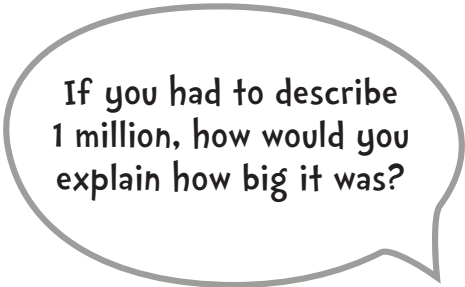
- To read, write, order and compare numbers to at least 1 000 000 and determine the value of each digit

## Before they tackle this problem, ensure children have...

- Mastered their understanding of Place Value to 1 000 000
- Developed an understanding of how to read and write numbers to 1 000 000

## SETTING THE SCENE

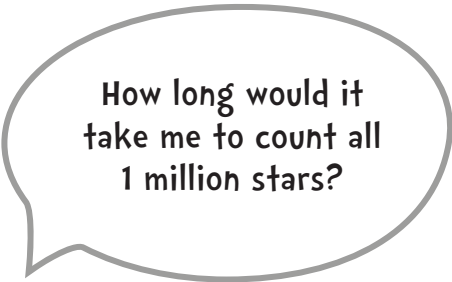
Show children a range of images to represent a million.  
Consider the size of 1 000 000.



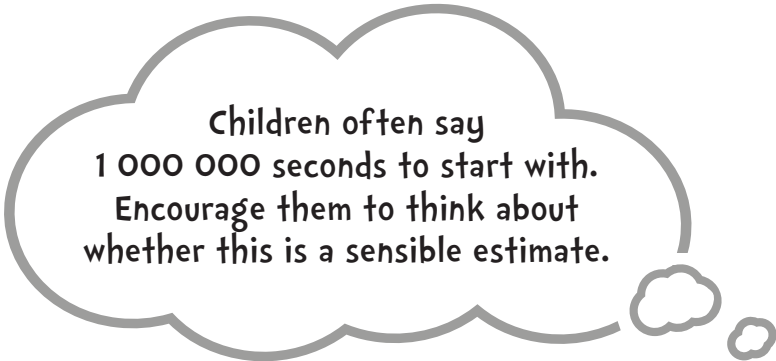
If you had to describe  
1 million, how would you  
explain how big it was?

## EXPLORE

Read the book – How big is a million? by Anna Milbourne. As you read the book tell the children that you have counted the 100 penguins but not the 1000 snowflakes. When you get to the poster representing 1 000 000 tell the children that you intend to count all of the 1 000 000 stars and begin to count the first 10 stars.



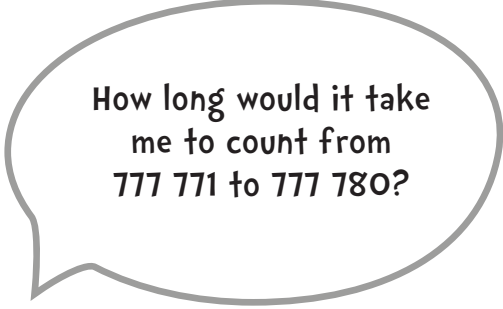
How long would it  
take me to count all  
1 million stars?



Children often say  
1 000 000 seconds to start with.  
Encourage them to think about  
whether this is a sensible estimate.

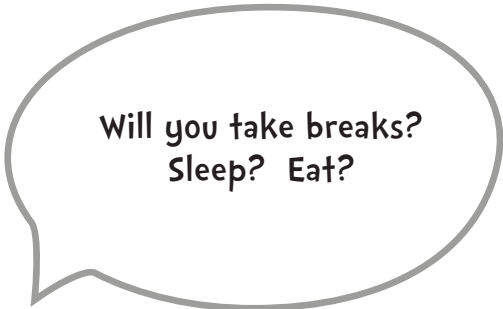
## TAKING IT FURTHER

Encourage the children to consider how long a set of 10 numbers take to say and make predictions based on the timings e.g. 1 – 10 may take 3 seconds – can you predict how long it will take to say 1 – 100. How close was your prediction? Will it take more or less time to say 771 – 780 than it took to say 1 – 10?



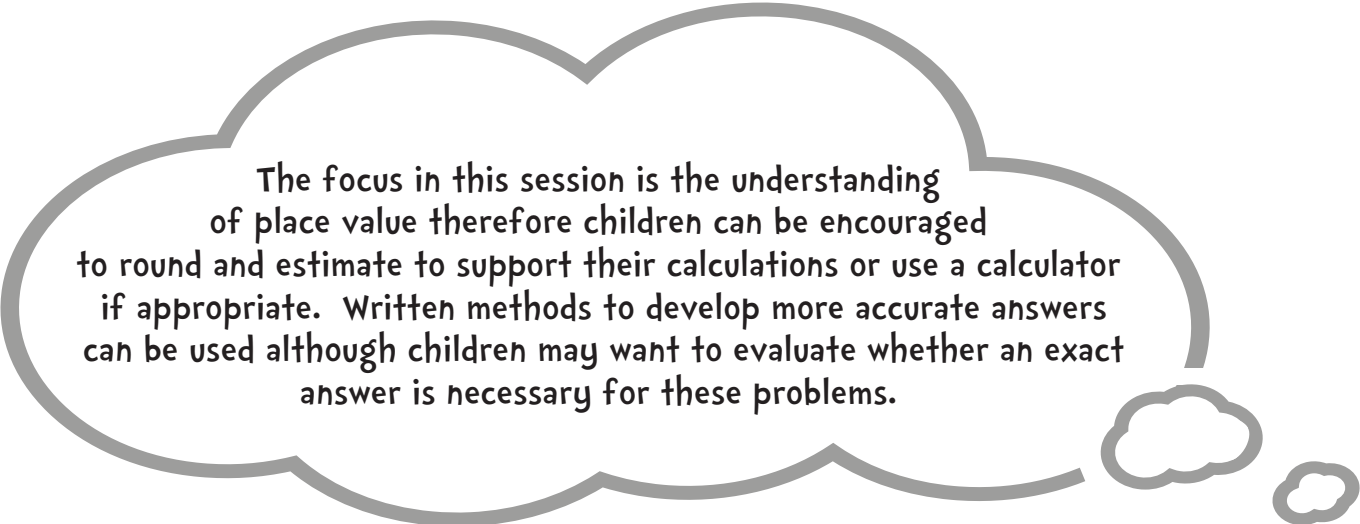
How long would it take  
me to count from  
777 771 to 777 780?

Can children consider how many 1, 2, 3, 4, 5 and 6 digit numbers there are and how long it will take to say different sets of numbers?



Will you take breaks?  
Sleep? Eat?

Ask the children what other ways they can think of to explore 1 000 000. E.g. Will my teacher ever mark 1 000 000 books in their lifetime? Will the school cook prepare 1 000 000 meals? Will I sleep for 1 000 000 hours? How far is 1 000 000 miles?



The focus in this session is the understanding of place value therefore children can be encouraged to round and estimate to support their calculations or use a calculator if appropriate. Written methods to develop more accurate answers can be used although children may want to evaluate whether an exact answer is necessary for these problems.

## **OUTCOME**

Children have fully explored 1 000 000 in a range of contexts including time and distance. They understand the relative size of 1 000 000 in comparison to other numbers.