

# Mathematics

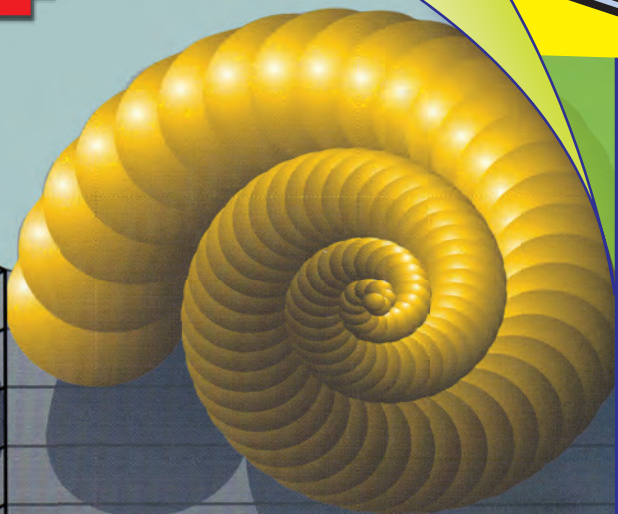
Activity Book 4

## Measurement in Mathematics Activities

**Teacher Edition**

GRADES 3-4

Book  
4



**NEWPATH**  
LEARNING®

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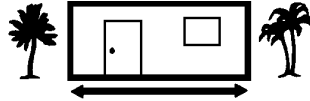
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Name .....

Length: Measurement in arbitrary units.

# How did they measure?

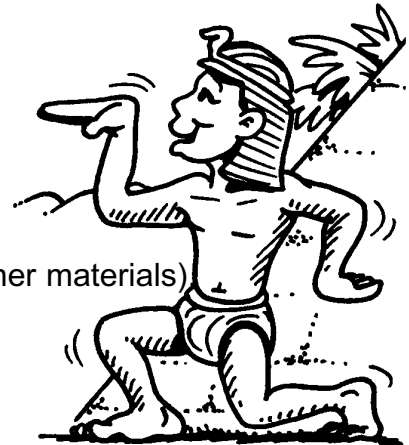
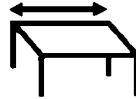
In ancient times, people used a number of ways to measure things. They could use hand spans to see how long something was.



They could use footsteps to see how long something was.



They could measure with long lengths of rope (or paper or other materials)



You will need:  
long lengths of rope  
or paper.

☐ Choose 2 of these units of measure.

Choose 6 objects around your room or school to measure. Record your results.

Compare your results to your partner's results.

How are they the same? How do they differ?

## Unit of measure

Items	1.....	2.....
1.		
2.		
3.		
4.		
5.		
6.		

My partner and I measured these items: .....

.....

We used these units to measure with: .....

.....

Our results are the same/different because: .....

.....

.....

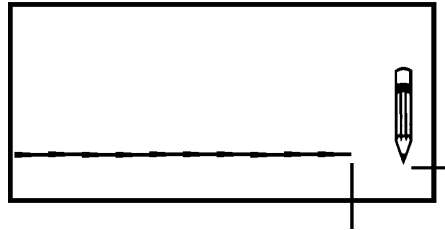
Name .....

Length: Measurement using arbitrary units.

# Toothpick measures

You will need:  
10 toothpicks, 10 paperclips,  
10 dried beans, 10 of an  
object of your choice.

Get out 10 toothpicks.  
Imagine the toothpicks laid out end to end on your table.  
Estimate how far they would reach. Put a pencil where you think they will end.



Your table

Where you think the  
toothpicks would end.

Where the toothpicks actually end.

Now lay out the toothpicks to see how close you came to your estimate.

- Try this activity again with 10 paperclips, 10 beans and 10 of an object of your choice. Find the length of items in your classroom using the toothpicks, example a set of shelves, your book, the cupboard etc. Repeat your measuring using your other measuring tools. Record your measurements in the table below:

Note: You can use half a toothpick as a measure if you need to.

Objects Measured

toothpick				
paperclips				
beans				
your choice .....				

- Now, measure your book using **only one** toothpick. What method will you use to make sure the start of the next toothpick lines up with the end of the first toothpick length (example mark where the toothpick ends, swing the toothpick around ...)? Measure some other objects this way.

Write your answers here:

Example: book

12 toothpicks long, 6 toothpicks wide

.....

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.....

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