

ATTACHMENT 8A

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Worksheet 2:**Activity 1:** Let us read to find out about measuring.**Before you start reading talk about these questions with your friend.**

1. Look at the **title**. What do you think it tells you about what you are going to read?
2. Look at the **pictures**. What do they tell you about what you are going to read?
3. What do the **bold headings and words** tell you about what you are going to read?
4. When we have finished reading tell your friend what you have learnt.

Now read this:

MEASURING THINGS**Early ways of measuring things:**

In the beginning people used to guess when they measured. Then people used to measure things with parts of their bodies. The width of the **hand** is still used to measure the height of a horse. The **foot** was also used to measure things. The **cubit** was the distance from the fingertips to the elbow. The step of a soldier was called a **pace**. The **span** was the distance from the little finger of a stretched hand to the tip of the thumb. These ways of measuring were not very good because the sizes of peoples' body parts were not the same.

Measuring instruments

To make an accurate measurement you need two things - a measuring **instrument** and a **unit** in which to measure. Some instruments like the ruler, tape measure and metre stick measure **length**. Others like the watch, clock and calender measure **time**. The kitchen and bathroom scale measure **mass** and the thermometer measures **temperature**. A measuring jug and a syringe measure how much space (**capacity**) liquids fill.

Activity 2: Is guessing a good (accurate) way of measuring things? Let us see. Guess these

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What you must guess.	My guess	Real measurement.
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What is the length of the line on the board?		
How long did the music play?		
What is the mass of this cold drink can?		

Activity 3: Using parts of your body measure the following things. Write your answer down by using the foot, cubit, span, pace or your own unit.

What I measured	What I used to measure it.	Length
My desk		
The length of the room.		
The length of a match box		

What have you learnt about guessing measurements?

Practical measurement and recording of data:

Worksheet 3: Measurement of length.

Activity 4: Can you measure things accurately? Measure the length of the following things and fill in the table below.

Object	Instrument	Unit	Length
Desk			
Classroom			
Match box			
Outside diameter of a pipe.			

Estimation:

Worksheet 2: Measuring things.

Activity: Is guessing a good (accurate) way of measuring things?

See the example above.

Problem solving:

Worksheet: 3: Measuring length.

Activity 3: Can you solve this problem? How long is this line?

Categorization:**Worksheet 1: Matter and measurement.**

Activity 2: What things make up matter? Here is a list of things we can find around us. Think of two groups into which we can separate them. At the top of each column write down why you have grouped them in this way.

Girl, iron, glass, dog, water, tree, bird, air, plastic, petrol, grass, rock, spider

Write the name of one of your groups here	Write the name of you other group here.

Deduction:**Worksheet 5: Volume**

Activity 3: How can we find the volume of cubes and rectangular blocks? Take each of the cubes and rectangular blocks I have given you and build ones just like them out of the little cubic centimetres. Then fill in the table below.

Name of shape	How many cm long?	How many cm wide?	How many cm high?	Total number of cubic cm's
1				
2				
3				

1. What do the total number of cubic centimetres you used tell you?

2.

Write

e



down the volume of each of the above shapes here: 1..... 2. 3.

3. How could you find the volume of another cube or rectangular block without having to build it first with little cubes?

At the end of each worksheet we collected a list of new words from the lesson and the reading exercise. For example the words we assembled after the reading and lesson on length were as follows:

New words: 1. Diameter 2. Perimeter 3. Length 4. Metre 5. Symbol 6. Centimetre
7. Millimetre 8. Odometer 9. Callipers 10. Trundle wheel 11. Error of parallax