

Lancashire Maths Week

Primary Maths

Measures



Estimation Activities



Measures Activities

Introduction

This pack of activities is designed to be used as part of the Lancashire Maths Week. It comes as two files:

-  **Teachers Notes – includes activity details and Pupil Estimate Record Sheet**
-  **Resource Pack – includes printable resources which can be used as ‘Question Prompts’ and displayed with each activity**



Estimation Activities



Included in this section is a selection of 9 activities to encourage estimation and investigation skills.



All the activities are suitable for KS1 and KS2 pupils. The initial activities can be carried out independently, with extension questions and activities where adult support is available. (What if...? Questions)



All activities link into the NNS Framework. Refer to Supplement of Examples Section 5&6 Y123p17, Y456p10-11 & 92-93.



Included in the resource section are a series of prompt sheets, which can be printed, laminated and displayed with the appropriate activity resources.



A photocopiable Estimate Record Sheet is included. This can be used for any activities which require the children to record estimates.







Apples in the Bowl

Ask the children to estimate, then find out how many apples can fit into a bowl, before the water overflows.

Resources:

- *A bowl, nearly full of water*
- *Apples of various sizes*
- *Estimate Record Sheet*
- *Useful Question prompts*
- *Adult support if available – see What if questions below*

What if?

-  ***You only put in big apples? Small ones?***
-  ***You used a smaller bowl?***
-  ***You chopped up the apples first? Could you fit more in then?***
-  ***You used stones or potatoes instead of apples?***



Bottles of Pop





Ask the children to....

Estimate how many glasses of pop the bottle holds, then check their estimate by pouring the pop into glasses.

Resources:

- *Bottles of coloured water*
- *Several identical clear plastic glasses*
- *Bowl*
- *Estimate Record Sheet*
- *Useful Question prompts*
- *Funnel*
- *Adult support if available – see useful questions below*

What if?

-  ***You poured the pop back into the bottle with a funnel?
Would it fit?***
-  ***You used a different bottle?***
-  ***You used smaller glasses? Or larger glasses?***
-  ***The bottle contained orange squash and you only needed a quarter of a glassful of it for each drink?***



Bucket




Ask the children to

Estimate how many jugfuls of water it would take to fill the bucket, then find out.

Resources

- *Jugs and other containers*
- *Bucket*
- *1 litre, ½ litre. ¼ litre containers*
- *funnel*
- *water*
- *sand*
- *mop or cloth*
- *Estimate Record Sheet*
- *Useful Question prompts*
- *Adult support – if available. See ‘What if’ questions below*

What if?

-  ***You found how many jugfuls you could get out of the bucket when full?***
-  ***You filled a bottle with an eggcup?***
-  ***You filled a jug with a glass? Or a bowl with a bottle?***



Cupfuls





Ask the children to

Mark on the containers where they think one cupful of water would come to, then check their estimates.

Resources:

- *A range of containers such as jugs, bottles and yoghurt pots*
- *A cup*
- *Waterproof pen*
- *Masking tape*
- *Water and/or Sand*
- *Funnel*
- *Mop or cloth*
- *Useful Question prompts*
- *Adult support if available – see ‘What if’ Questions below*

What if ...?

-  ***You used an eggcup and the same containers?***
-  ***You used a jug and the containers?***
-  ***You calibrated a jug by marking off each cupful as you poured it in?***
-  ***You used your calibrated jug for pouring out cupful and for measuring other containers in cupfuls?***



Marbles




Ask the children to

Say how many marble they think would fit in the jar without it overflowing. They should estimate before actually trying.

Resources:

- **A jar about $\frac{3}{4}$ full of water & a similar jar empty**
- **Large and small marbles**
- **Stones**
- **Rubber bands**
- **Sellotape or masking tape**
- **Waterproof pen**
- **Mop or cloth**
- **Estimate Record Sheet**
- **Useful Question prompts**
- **Adult support if available – see ‘What if ...’ questions below**

What if ...?

-  **You put the marble in first and estimated how much water would fit in?**
-  **You used stones/bricks/ ping pong balls instead of marbles?**
-  **You tried putting marbles in a jar then cubes, conkers or Lego bricks to see which left most space between the objects?**



Capacity Check

Ask the children to

Put a set of objects in order of estimated capacity, and record this. They should then find a way of checking their estimates.

Resources:

- *Square and round boxes*
- *Shampoo bottles*
- *Mugs*
- *Milk and juice tetra packs*
- *Cubes; Sand; Water; Lentils; Rice*
- *Calibrated measuring jugs or cylinders*
- *Calculators*
- *Mop or cloth*
- *Useful Question prompts*
- *Adult support if available – see ‘What if.....’ questions below.*

What if?



You made a deliberate error and asked a friend to spot it?



You put the same objects in order of height/width/weight?

Would it be the same order?



You investigated the capacities and prices of bottles of shampoo? Which is the best buy?



You collected some bottles and found the ‘half-full’ point on each one?



SeeSaw





Ask the children to.....

Put a melon or other largish object, on one side of the balance and something small such as a conker on the other. The children then estimate, and find out, how many conkers balance the melon.

Resources:

- *Bucket balances*
- *Pan balances and weights*
- *Pumpkins, melons, shoes or other large objects*
- *Conkers, cubes, beans, paper clips and other 'small' objects*
- *Estimate Record Sheet*
- *Useful Question prompts*
- *Adult support if available – see 'What if.....' questions below.*

What if?

-  ***You used other objects to balance the melon?***
-  ***You used a different large object instead of the melon?***
-  ***You found out how many potatoes balance a marrow?***
-  ***You found how many paper clips balance a 100g weight?***



Going Shopping

Ask the children to

Make a collection of groceries each weighing 1 kg – for example a kilo of apples, a kilo of carrots, a kilo of flour

Resources:

- ***Lentils; Vegetables; Cereal; Nuts; Fruit ; Other groceries***
- ***Pan or spring balances***
- ***Scales and weights***
- ***1 kg weight***
- ***Carrier bags***
- ***Measuring cylinders***
- ***Useful Question prompts***
- ***Adult support if available – see ‘What if.....’ questions below.***

What if

- 🏴‍☠️ ***You made a collection of groceries weighing 1 lb?***
- 🏴‍☠️ ***You found out which item is the most expensive per kilogram?***
- 🏴‍☠️ ***You made a collection of groceries of various weights and put them in order of weight?***
- 🏴‍☠️ ***You investigated which of your items is the least dense, i.e., how much space it takes up for its weight?***
- 🏴‍☠️ ***You recorded your work in graphical form?***



Check its weight!

Ask the children to

Measure a litre of something and estimate how much it will weigh, then check its weight.

Resources:

- **Lentils; Water; Polystyrene baubles; Conkers; Sand; Wooden cubes**
- **Bucket balances**
- **Weights**
- **Scales**
- **Measuring jugs**
- **Estimate Record Sheet**
- **Useful Question prompts**
- **Adult support if available – see ‘What if.....’ questions below.**

What if

- 📖 **You put litres of various substances in order according to how much they weigh?**
- 📖 **You recorded your findings in graphical form?**
- 📖 **You measured a pint of something and estimated its weight, then checked its weight?**



Estimate Record Sheet



How many.....?

Name	1 st Guess	2 nd Guess	Answer