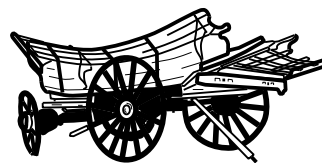


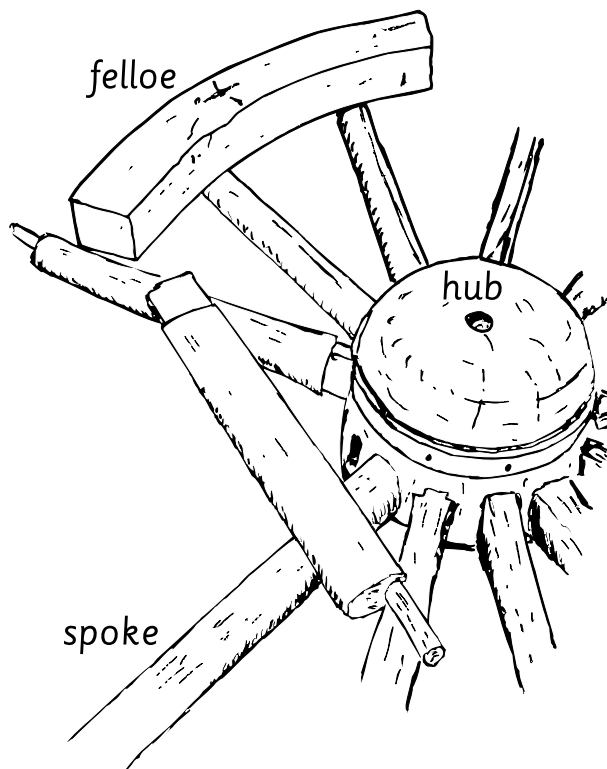
All About Measuring

Location: Tilford Building



**Rural
Life
Centre**

Look in George Sturt's shop



1. What is the wheelwright measuring?

2. How is the wheelwright's lathe powered?

3. How did they find the size of the felloes?

Look in Wakeford's shop

4. How much "Atona" would you need to make a good suet crust?

5a. How much is 1lb of turkey legs?

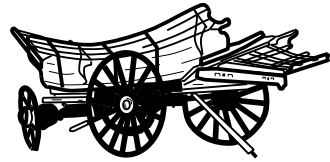
5b. Now convert this to "old" money.



6. Up to how much can a 'Young, Son and Marlow' weigh?

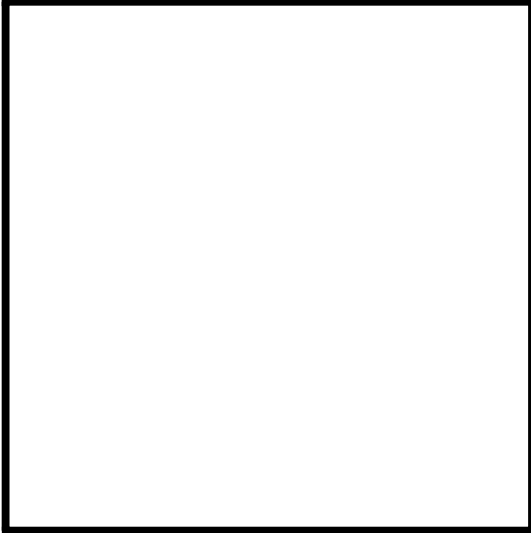
All About Measuring

Location: Tilford Building



**Rural
Life
Centre**

Look in the vet's display



7. What units would you use to measure the height of a horse?

8. Make a sketch of the tool used in the box on the left.

Look in the hop display

9. How much could it cost to kick a hop basket?

10. What was the size of the hop land at Weydon Hill and the Six Bells?

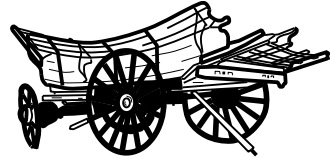


11. How much could A. P. Tice's hop pocket hold?

12. How old was Mr Caesar's hop bag in 2003?

All About Measuring

Location: Tilford Building



**Rural
Life
Centre**

Look in the heating and lighting display

13. What rotates 18 times in each direction?

14. What powers it?

15. How much nightlight can you get for 6d?

Look at the scales display

16. How much did it cost to send a letter weighing 5oz?

17. What are the capacities of the corn measures?

18. Draw some of the brass weights above.

Look at the egg machine

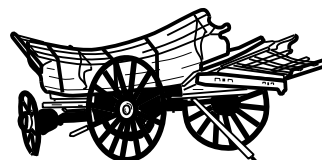
19. How much did two dozen eggs cost?

20. How many half-dozen boxes does the machine hold?

21. How much is this worth?

All About Measuring

Location: Outside the Smithy



**Rural
Life
Centre**



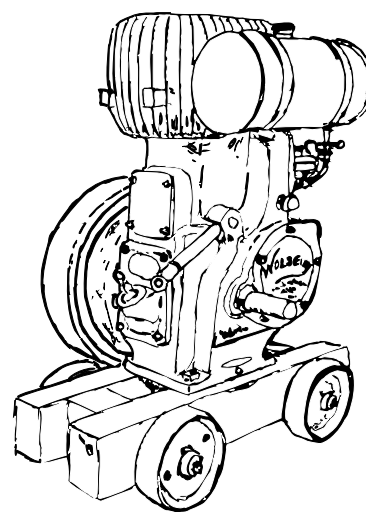
22. What units were used in the sale of paraffin?

23. What is the capacity of the tractor fuel drum?

24. If the red cabinet is half full, what and how much is in it?

Location: Outside the far end of the hand tool building

25. How much power does the Wolseley WD2 engine deliver at 700 rpm?



Location: In the Plough Gallery

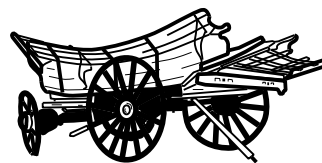


26. How many rods in a furlong?

27. Draw one of the ploughs in the box on the left.

All About Measuring

Location: Various



**Rural
Life
Centre**

Teachers' Notes

A brief history of measurement

Length

One of the earliest forms of measurement concerned that of length. The first units of length were based on parts of the body. The Romans introduced measures based on the body to Britain. A scale illustration of Leonardo da Vinci's Vitruvian man, suitably captioned, can be made available to schools (along with various other items to support the activities listed below) if pre-booked.

These lengths would have been based on the measurements for an adult man and would have varied widely from person to person. (Get the children to look at the size of feet of people standing near them.) But parts of the body are still useful today for finding approximate lengths, but are very inaccurate.

Weight and capacity

The measures used by farmers in England are probably amongst the oldest of our measures - possibly 2000 years old. The basic unit of weight in the early English system was the grain - based on the weight of a grain of barley. But money was based on the grain of wheat - and that three grains of barley weigh the same as four grains of wheat. Later units of weight came from commonly used containers. Bushel baskets, corn and other measures can be made available.

Throughout history, units of weight developed as people traded with each other. Goods being taken to market for sale were carried in containers of somewhat similar shape and size. These had reasonably consistent capacities, or did they?

Over the centuries many systems have been developed and refined as people and politicians have tried to find consistent measures for use in commerce and domestic life. The Imperial system was introduced in England in the Magna Carta of 1215. This was superseded by the metric system during the 1980s.

A lot of our traditional and historic character of recording measurement has been lost (including language) by the move to metrication, however much more practical it is.

Work sheet answers

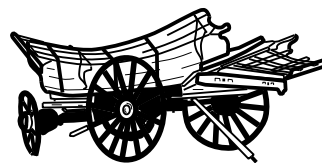
1. Nave or hub (centre of the wheel)
2. By a man or boy turning the handle
3. They used wooden felloe patterns

Activity: Measure the circumference of a wooden wheel using a full sized traveller or the circumference of a drawing using a made-up cardboard trundle wheel.

4. 3oz of shredded Atora
- 5a. 47p 5b. 9s 5d

All About Measuring

Location: Various



**Rural
Life
Centre**

6. 30lbs

Activity: Rubbings of old coins.

7. Hands

8. A drawing of the measuring stick used to measure the horse

Activity: Measure the height of the horse in the stable (in the Frensham building) using the tool, and then using adult's and child's hands.

Note: The only object still measured traditionally by parts of the human body is the horse. Horses are measured in hands, from the ground to the withers (shoulder blades just in front of where the saddle goes). Sizes of hands vary, but a hand was standardised as 4 inches (or 10 cm).

9. 1¼d

10. 13 acres

11. 1½ to 2 hundredweight

12. 94 years

Activity: Drawing of hop pocket.

13. The Dutch oven

19. 8/- (8 shillings)

14. Clockwork

20. 100 boxes

15. 64 hours

21. £10

16. 1½d

22. Gallons

17. ½pint to 1 bushel

23. 205 litres

18. A drawing

24. 25 gallons of oil

Activity: Containers may be available to allow measuring of fluid from one to another relating old and new measurement, and placing containers in order of capacity.

25. 1½ hp

26. 40 rods

27. A sketch Note: Furlong derived from a furrow-long - the length of a furrow that an ox-team could plough before needing a brief rest - see Language below.

Other suggested activities

Measurement of height: Hand-made clinometer, shadow lengths and rule of thumb - using trees in the arboretum or height of lamp post.

Measurement of length: Chains, travellers (trundle wheels).

Weight and capacity: A variety of scales, measures and weights will be available for children to work in groups. To demonstrate that 'change of size' does not affect weight we will be demonstrating a pop-corn maker.

Time: Human sundial, water clock.

Language: With the introduction of the metric system, many beautiful words used in old measuring systems (providing a wonderful picture of the landscape) have been lost.

A selection of tables of old measurement will be available to schools to illustrate this.