

Maths Outdoors

Measurement Scavenger Hunt

Skills

- **I can measure length or height in m and cm**
- **I can compare and order lengths, heights**

Measurement Hunt Find a twig exactly 20cm long.	Measurement Hunt Find three pebbles measuring a total of 250mm when laid in a row.	Measurement Hunt Find two trees spaced more than 4 metres apart.	Measurement Hunt Find a way of measuring your height without using a measuring stick, tape or standard unit.
Measurement Hunt Find something that can be squashed to less than 10cm.	Measurement Hunt Find something which can't be measured in terms of its length, width or height.	Measurement Hunt Find something which grows when being measured.	Measurement Hunt Find something which can be put together to make 1metre.

Natural Numbers

Find two natural treasures with your partner and decide which number each one represents. For example the leaf below has 16 pointy edges, and the twig has 3 buds.



Find different ways to change one of your numbers into the other number using different mathematical operations in a 'sentence'. For example:

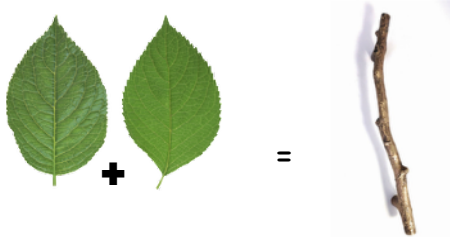
$$16 - 13 = 3 \text{ or } (3 + 1)^2 = 16$$

Which numbers give lots of number sentences?

Challenge

Find two treasures that can make a number sentence with fractions, or combine to make a prime number. This time choose the treasures carefully to be able to complete the task.

What's the rule?



What is the value of a leaf? What is the value of a stick?

Working with a partner choose two different types of natural treasures (eg stick and leaf) and find as many as you need to make lots of different equations. Remember the value for the items must stay the same for each equation. Once you have several equations ask another group to guess the value of your items.

Challenge

Introduce a third natural treasure to your equations.

Take Away Tournament

Skills:

I can subtract 1 or 2 away from a 2 digit number.

Divide the class into small groups and play against each other.

Place natural treasures e.g. acorns (or whatever natural material you choose) on the ground between the teams. 21 objects is a good number to start with.

Taking it in turns children may take away 1 or 2 acorns. Then it is the other team's turn. They can also choose whether to take away 1 or 2 acorns away. The winner is the team that can take away the last acorn.

Therefore the groups will have to work out strategies, planning and problem solving.

Playtime Investigation

Stick logic

Skills

- I can compare, describe and solve practical problems for lengths and heights (e.g. long/short, double/half)
- I can measure and begin to record lengths and heights
- I understand why it's important to use standardised measurements

Find 9 sticks/twigs of equal length.

The challenge: how many triangles is it possible to make using 9 sticks?



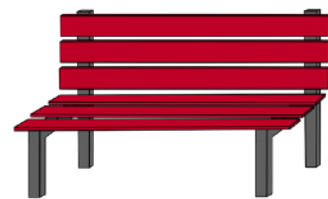
Playtime Investigation

Bench Investigation

Skills

- I can solve word problems

- Find a bench. How many legs has it got?
- How many slats have been used to make it?
- How many legs and slats would there be on 6 benches?
- If there were 44 legs how many benches would there be?
- If the bench is 2 metres long and the wood for the slats costs £2.00 per metre how much does it cost to make all the slats for the bench?
- How much for 6 benches?



Data Handling

Skills

- I can collect data and present it in a table
- I can explain what a table tells me
- I can use a simple scale e.g. 2, 5 or 10 units per cm and present my data in a bar chart or pictogram
- I can tell people what I have found out using my graph

We want to find out the types of objects most commonly found in our school grounds. What could we do to show this? How could we record our findings? Prepare your table to record your findings. Complete a tally chart and a graph to show your findings. Collect as many objects as possible in 5 minutes from the school grounds. Keep a record of the results and repeat the activity at different times throughout the year. Compare findings and discuss reasons the difference.

Below is an example of tally chart of the objects found.



You could then create a pictogram or a line graph to represent the data.



Human Scattergraph

Skills

-I can identify a correlation between two variables

Is there a correlation between shoe size and hand span?

- Use ropes and whiteboard to mark axis on the ground.
- Children to plot themselves on the chart by standing in the right position.

Rope

Whiteboards

W/b pens

Tape measures

No child left behind!

Skills

-I can I can add and subtract amounts of money using decimal notation

-Children split into 2 groups.

Set up a shop theme and explain how the challenge is for the each team to buy objects from the shop so they can cross the river. The winning team is the one that has spent the least amount of money. When crossing the river your feet can't touch the ground and extra points are given for team work

-objects given price tags

-team to keep total costs spent on w/boards

Calculation Marching

Skills

-I can quickly recall division facts corresponding to tables up to 10 x 10

'Army style' marching and chanting around the playground, which is teacher led to begin with. Teacher calls out division calculation with either correct or incorrect answer. Children repeat correcting answer if required. Children are then split into smaller groups. One child selected to be sergeant and repeat previous teacher led activity. In same group, children get into a circle with one child selected to be the leader in the centre. Centre child calls out a division question e.g. 'How many 3s make 24?' and throws beanbag towards a child who has to try and answer before catching. Rest of group also calculate answer and give thumbs up or down as to whether 'catcher' was correct.

Playtime Investigations

Introduce a maths problem of the week. Children can make up their own problems for others to solve during playtime. Don't forget to leave out the chalk!

Bench Investigation

Find a bench. How many legs has it got?

How many slats have been used to make it?

How many legs and slats would there be on 6 benches?

If there were 44 legs how many benches would there be?

If the bench is 2 metres long and the wood for the slats costs £2.00 per metre how much does it cost to make all the slats for the bench?

How much for 6 benches?