

Be the balance

Activity 1

Focus of activity: Comparing weights by direct comparison.

Working together: conceptual understanding

- Show children a large potato and a ball of cotton wool of about the same size. *Which do you think is heavier?* Ask children to answer, then pass the potato and cotton wool round the group. Ask them to hold one in each hand and compare the weight.
- Show children a bucket balance. Put the cotton wool in one side and the potato in the other. Discuss what happens, i.e. the bucket with the heavier item goes down, and the bucket with the lighter item goes up. *The balance is a bit like a see-saw. If you get on one side and I get on the other side, my side will go down, and your side will go up because you are lighter.*
- Show children a stone a bit smaller than the cotton wool. Ask a child to stretch their arms out like a see saw. Put one item in each of their hands and ask them to 'be the balance' and act out what they think will happen. They should tilt their arms like a see-saw.
- Put the stone and the cotton wool in the bucket balance. Were they right? Point out that although the stone is smaller, it's heavier than the cotton wool.
- Repeat with a sponge and the potato.

Up for a challenge?

Challenge children to put three items in order of weight, by comparing their weights in pairs.

Now it's the children's turn:

- Give each pair a bucket balance, and a selection of items to weigh (e.g. toys of different sizes and weights, including small heavy and large light toys), for the group to share. Each pair of children choose two items. They guess which is heavier, and pretend to be the scales. They test out their thoughts by using the bucket balance to compare the weights.
- Go round the group and observe them as they estimate and weigh. As children are not recording, you may wish to make notes as a record of their work. Watch out for children who think that heavier items go up because 'up' is more.

S-t-r-e-t-c-h:

If children cope well, ask them to choose three items and arrange them in order, lightest first. They test out their ideas using the bucket balance.

Things to remember

Ask children to say whether the bucket with the heavier toy in goes up or down. *And the bucket with the lighter toy?*

You may want to add something that has emerged from the activity. This may refer to misconceptions or mistakes made.

| Resources | Outcomes |
|--|---|
| <ul style="list-style-type: none">• Cotton wool, larger potato, small heavy stone, a sponge• Bucket balances• A selection of items to weigh (e.g. toys of different sizes and weights, including small heavy and large light toys) | <ol style="list-style-type: none">1. Children can compare the weights of two items using a bucket balance.2. Children begin to compare the weights of three items. |

Be the balance

Activity 1

Work in pairs

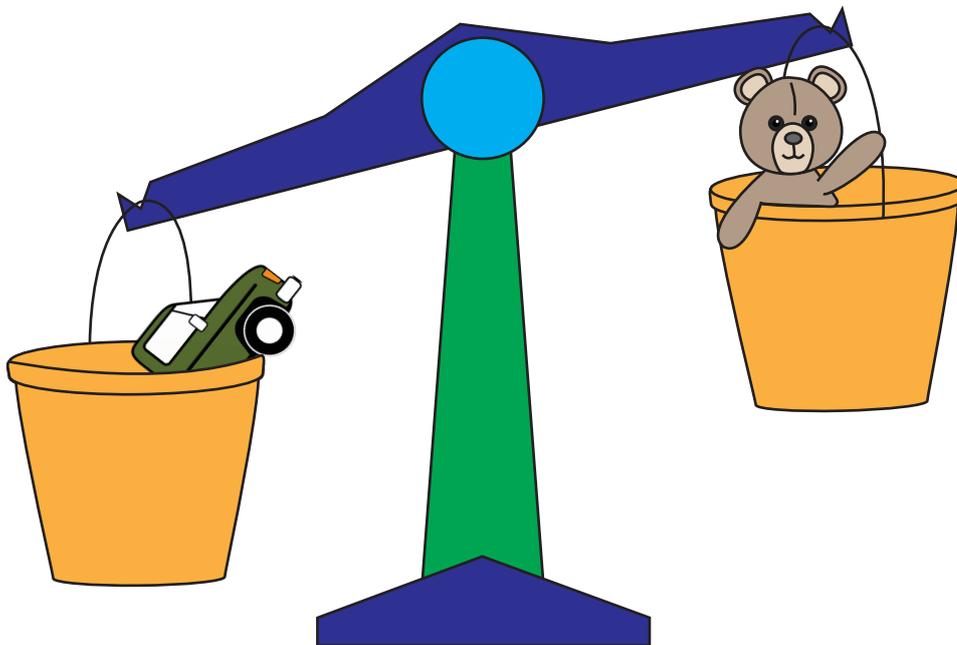
Things you will need:

- Toys
- A bucket balance



What to do:

- Choose two toys.
- Guess which is heavier. Hold a toy in each hand. Be the balance! Which arm needs to move up and which needs to move down?
- Put a toy in each bucket of the balance. What happens? Which toy is heavier? Were you right?
- Put the toys back.
- Repeat with other pairs of toys.



S-t-r-e-t-c-h:

Choose three toys. Put them in order lightest first. Now check by comparing them two at a time using the balance.

Learning outcomes:

- I can compare the weights of two items using a bucket balance.
- I am beginning to compare the weights of three items.