

 Notes for parents.**The purpose of the activity is to help your child to:**

- Compare objects by weight
- Establish equality as a balance
- Use language associated with weight, such as “lightest”, “heaviest”, “heavier than”, “lighter than”
- Apply logic to put objects in order by weight

Here is what to do:

Look at the activity page together. Ask your child to describe what the person has made. Look for them to say that the person is finding out which object is heaviest using a balance. Children often relate balance to a seesaw at the playground. Ask, “*How do you know that the right object is heaviest?*” Children usually describe how it feels when one object is heavier, e.g. “*It pushes down harder.*” That is a good way to talk about weight since it is the force of gravity acting on an object.

Let your child create a **Coat Hanger Balance** from material you have. Don’t give them too much help. It is good for them to solve the construction problems themselves.

Task One:

Be with them as they test their balance to find three items from around the house that weigh the same. This task should raise some important issues such as: “*How do you know the objects weight the same?*” (Coat hanger stays level) “*Are bigger objects always heavier?*” “*Are smaller objects always lighter?*” “*Does how you hold the coat hanger affect the balance?*” “*How might you improve your device?*” “*Is your balance sensitive enough?*” (detects small differences)

Task Two:

Next ask your child to find five objects of different weight and arrange them in order. Let them attempt that task with minimal input from you. Look for some important skills and ideas.

Can they use their Coat Hanger Balance to decide which of two objects is heaviest?



➤ Notes for parents cont...

What can they say about the object that is not heaviest? (Negation is an important idea).

Can they order the five objects from lightest to heaviest?

What statements can they make about the set of objects? Particularly look for comparison statements, such as, "The apple is lighter than the orange, but heavier than the banana."

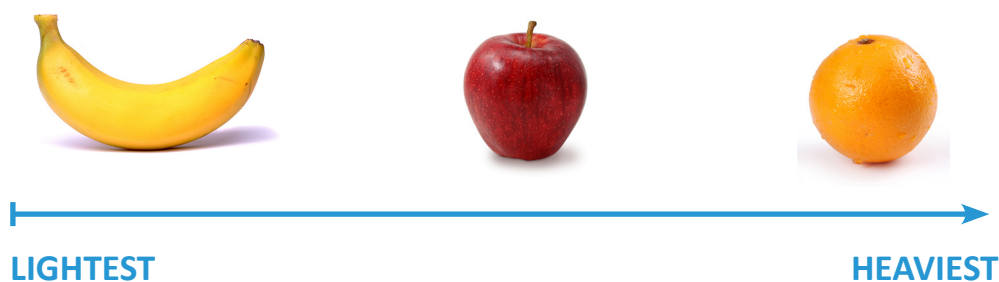
Points to note:

Weight is an attribute, that is, it is a characteristic that objects have. Weight is a tangible attribute because we can feel it. However, the appearance of objects can be deceiving as sometime objects look bigger than others but they are actually lighter. At this stage we want our children to be able to compare objects using that attribute, weight. So we are not worried about units of measure now.

Ordering three objects by weight is logically more challenging than it first looks. That is because only two comparisons can be made at one time. This opens up nice possibilities for inference. Suppose your child has worked out this:

Apple is heavier than banana; orange is heavier than apple. *"Can you predict which is heavier, banana or oranges?"*

Putting five objects in order takes co-ordination of a lot of information. Support your child to organise the data. Placing the objects on a line can help. That can help them hold the order relationships while they gather more results.



Of course the more objects your child has to place in order by weight the greater the co-ordination required. So you might start with ordering three objects at first. Each time a new object is measured ask your child to predict where the new object fits in the order.



Activity | Coat hanger balance

Y2

Look at what this person has made.

How did they make their measurement device?

Which object looks the heaviest, left or right?

How do you know it is the heaviest?

Make you own *Coat Hanger Balance*.

You can use plastic supermarket bags and pegs instead of cups and string if that is easier.



Task One

Look around you house to find three objects that weigh the same. The objects might be cans or packets from the kitchen, toys from your bedroom, or objects from the garage. Try to find objects that look different but have equal weight.

Task Two

Find five objects from around your house that are different weights. You may have found that out in *Task One*.

Can you put all five objects in order of weight from lightest to heaviest?

