



Seesaws

Purpose:

You can help your child to make and compare objects of different weights, and to use appropriate maths language to describe these.

What you need:

- Play dough
- A ruler
- An eraser, or small block

What to do:

Have your child explore the play dough, making and talking about different shapes.

Suggest your child uses the dough to make two different sized creatures, for example a big cat and a small cat. Have them suggest which one is heavier.

Create a seesaw by resting the ruler on the eraser. Have your child predict what will happen if a cat sits on one end of the seesaw, and then one on each end. Try and see. Have your child explain what happens and why using comparative language, lighter, heavier.

Have them create more animals of different sizes. Have them compare the weights of these on the seesaw, and then see if they can order their animals from the lightest to the heaviest, using the language of weight as they do so.

Encourage your child to use the logic of indirect comparison, so, if animal A is heavier than animal B, and animal B is heavier than animal C, then we know, without comparing A and C on the seesaw, that A will be heavier than C.

Challenge your child to make two animals that weigh the same, recognizing that the seesaw should balance. Encourage them to see that if they begin by making two play dough balls that weigh exactly the same amount, they can then shape these into animals that will also weigh the same.

This helps to develop an understanding of the conservation of mass – that is, the mass or weight remains the same even if we change the form.

NB. Mass and weight do not have exactly the same meaning, but in the early years at primary school the words tend to be used interchangeably.

What to expect your child to do:

- Correctly use the specific language associated with weight (mass) instead of using 'bigger or smaller', as this is not necessarily specific to mass.
- Correctly order their animals from lightest to heaviest, describing their actions as they do so.
- Recognize that changing the shape of a ball of dough does not change its weight.

He Kupu Māori:

seesaw	tīemiemi
play dough	poikere
heavy	taumaha
heavier	he taumaha ake
light	māmā
lighter	he māmā ake

He Whakawhitinga Kōrero:

- Hangaia tētahi ngeru iti me tētahi ngeru nui i te poikere. *(Make a small cat and a big cat from the play dough.)*
- Ko tēhea te ngeru taumaha ake? *(Which is the heavier cat?)*
- Whakatakotoria te rūri ki runga i te rapa. Ko waenganui o te rūri ki runga pū i te rapa. *(Place the ruler on the eraser. The middle of the ruler is directly above the eraser.)*
- He tīemiemi tēnei. Ka aha mēnā ka whakanōhia tētahi o ngā ngeru ki tētahi pito o te rūri? *(This is a seesaw. What happens if we put one of the cats on one end of the ruler?)*
- Ka aha mēnā ka whakanōhia he ngaru ki ia pito o te rūri? *(What happens if we put a cat on each end of the ruler?)*
- He aha tāua i mōhio ai ko tēhea o ēnei ngeru te ngeru taumaha ake? *(How do we know which of these cats is heavier?)*
- Ko te ngeru taumaha ki raro, ko te ngeru māmā ki runga. *(The heavy cat goes down, the light cat goes up.)*
- Tēnā, hangaia he ngeru taumaha ake i ēnei. *(Well then, make a cat that is heavier than these ones.)*
- Hangaia he ngeru kia ōrite tōna taumaha ki tēnei ngeru. *(Make a cat which has the same weight as this one.)*
- Whakamātauria. Whakamahia te tīemiemi kia kitea ai mēnā he taumaha ake tēnei ngeru i tēnā. *(Test it out. Use the seesaw to see if this cat is heavier than that one.)*
- Hangaia kia toru ngā ngeru, kia pātata te taumaha o tētahi ki te taumaha o tētahi. Whakamahia te tīemiemi, ka whakarārangi ai i ngā ngeru mai i te māmā ki te taumaha.