ES	TECHNOLOGY	Knowledge & understanding	Needs	Resources	Processes
	TECHNOLOGY	Skills in designing & making	Preparing	Carrying out	Reviewing
	SCIENCE	K & U - Energy and forces	Properties of energy	Conversion of energy	Forces *unbalanced, levers, gravity,*
	SCIENCE	K & U - Earth & space	Materials from Earth	Changing materials	

The weighing machine on the opposite page should be ideal for weighing 100 gram bags of treats and the like.
If you were to set the mark for 100 grams against the edge of the slider and the bag of treats being weighed swung up and the counterweight down what could you tell?

That's right, the bag is too light (not enough sweets!).

If the bag goes down and the weight goes up then you have more that 100 grams in the bag.

So here is the design challenge:
Design and make a piece of table-top equipment that can sort objects by weight. From a collection of assorted items you need to be able to sort out those that are heavier than weight A but lighter than weight B.

- The items could be stones, potatoes, bags of sand - anything convenient.
- The sorted items should be tipped off (or fall off) the machine automatically.
- The items can be weighed twice, but the same machine has to be used each time. This will mean that the machine must be able to be reset so that it can discover the 'more than's' as well as the 'less than's'.
- Decide on the weight limits, don't be too ambitious. I would suggest something like "more than 100g but less than 200g." If you are weighing about 1Kg your machine would need to be very strongly built.

Of course, the 'Ultimate' machine might be something like this :-
A small potato is dropped down a chute. Depending on its weight it either
1. rolls right along to the end.(just perfect),
2. Falls off to the right (too heavy), or
3. Falls off to the left (too light). Now this is probably too ambitious - but how close to this ideal can you get?