

Lesson: Scales

What is a Scale? - A scale is also a lever and it is used to measure weight.

Question: How many of you have scales at your house?

Example of other scales:

- Has anyone ever watched any pirate movies, or movies that took place a long time ago? Well, they would use scales to measure the weight of things, or to measure the amount of gold or money.

Pass out this weeks worksheets

- Pass out worksheet and read through it with the students.

-Their challenge is also on the worksheet.
-Students might not finish the whole worksheet and that is okay. Have them complete as much as they can.

Engineering with Legos : Catapults & Trebuchets



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LEVERS : Scales

A scale is a lever. You probably have scales around the house and they are used in everyday life. They are used to find the weight of objects. If you have seen scales at the doctors office, they use a counterweight to figure out how much you weigh. Weighing scales were used during 400 B.C. and can also be seen in pirate movies where they were used to measure the amount of gold or rubies.

Testing a Scale

After you have made your scale, your first task is to balance it. Make sure that your fulcrum point is exactly in the middle of the arms. Due to some imperfections in the blocks and from being used, the scale might tip to one side. If it does, add the small "correction weights" to center the scale. After you have it centered and balanced, now it's time to start testing.

Using the coins provided, try to find the weight of the blocks. HINT: try to keep the blocks centered in the basket.

Number of Blocks	Number of Coins		
	Pennies	Nickels	Dimes
1			
4			
6			
8			

Now try moving the fulcrum point two holes over towards the side of the blocks and record your data.

Number of Blocks	Number of Coins		
	Pennies	Nickels	Dimes
1			
4			
6			
8			

What did you discover when the fulcrum point was moved?

Students are to make a scale and balance 2x4 Lego bricks with coins and record their findings. In order for the scale to be balance, neither side should be touching the ground. It is okay if its not perfectly balanced in the center.

Challenge 1 - Team Build, teams of 2 or 3

-Build a scale and complete the first test on the worksheet.

Challenge 2 - Team Build, teams of 2 or 3

- Build a scale and complete the second part of the worksheet.

Ultimate Challenge- Team Build, teams of 2 or 3

- Have the students balance a very heavy object.