BALANCING ACT

Go to Go to <https://phet.colorado.edu>

If necessary register…its free.

Go to PHYSICS, HTML 5, BALANCING ACT

Once in the programme you need to click on INTRO

**INTRO**

Turn on Forces from Objects

LEVEL

And RULER

When adding masses to your see saw have this button to the LHS. When ready to test your hypothesis move the button to the RHS



**Over the page is a table to fill in.**

If you are unsure, use the programme to help you fill in the table.

If you think you have got it, work out the answers to put in the table with a calculator and then check your answers by either:

* Looking at the answers at the front
* Trying out your calculations on the see saw.

|  |  |
| --- | --- |
| Moment 1 (Nm) | Moment 2 (Nm) |
| FORCE (N) | DISTANCE (m) | FORCE (N) | DISTANCE (m) |
| 50 | 2 | 100 |  |
| 50 |  | 100 | 0.25 |
| 100 | 0.5 | 50 |  |

**BALANCE LAB**

**Same instructions as previous lab, but now you’re using bricks, people and mystery objects.**

|  |  |
| --- | --- |
| Moment 1 (Nm) | Moment 2 (Nm) |
| FORCE (N) | DISTANCE (m) | FORCE (N) | DISTANCE (m) |
| 200 |  | 150 | 2 |
| 200N Boy | 2 |  | 0.5 |
| 200 | 1 |  | 2 |
| 150 |  | 50 | 1.5 |

**BALANCE LAB**

**Now go through the mystery objects and work through the masses and distances that you need to place an object.**

|  |  |
| --- | --- |
| Moment 1 (Nm) | Moment 2 (Nm) |
| FORCE (N) | DISTANCE (m) | FORCE (N) | DISTANCE (m) |
| A | 0.5 | E |  |
| B | 1.25 | G |  |
| C | 0.75 | H |  |
| G | 2 | F |  |

**CHALLENGE**

PLAY THE GAME

WRITE YOUR SCORE FOR EACH LEVEL ON THE BOARD

**LEVEL 1\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**LEVEL 2\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**LEVEL 3\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**LEVEL 4\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**