**P2.1 Balanced and Unbalanced Forces Foundation**

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| This duck is not moving.  Draw and label the arrows showing the gravitational force and upthrust. |  |  |
| The bauble is being pulled down by weight at 1N and the tension force in the string is also 1N.  Draw the force arrows on and say whether the bauble is moving or not |  | Not moving |
| The picture hanging on the wall has balanced forces acting on it.  Draw the arrows for gravity and tension in the string. |  |  |
| This can is being crushed. Draw a force diagram to show this.  Are these forces balanced or unbalanced? |  | Unbalanced |
| Upward force = air resistance  Downward force = weight or gravity.  Forces are balanced because the arrows are the same size | | |
| balanced , the car will not move | | |

1. **i** 0 N – car remains stationary
2. 1600 N to the right – car starts to move (accelerates to the right)
3. 600 N to the left – car starts to move backwards
4. 0 N – car remains at steady speed
5. 1200 N to the right – car gets faster
6. 600 N to the left – car slows down