**KS3 Forces**

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| **Definitions** |  |
| 1 | Force | A force can change the speed, direction or shape of an object.  | 16 | Terminal velocity | Terminal velocity happens at the moment in time that the force, because of gravity, called weight, is the same as the opposite force of air resistance or friction. |
| 2 | Contact Force | A force that acts by direct contact e.g. friction, air resistance. | 17 | Compression | Being squashed. |
| 3 | Non- contact force | A force that does not need direct contact to act e.g. gravity, magnetism | 18 | Deformation | Changing shape as a result of forces being applied.  |
| 4 | Gravity | A force that attracts objects towards each other. | **Investigation skills** |
| 5 | Air resistance | A force that is caused by the frictional forces of the air hitting an object. | 19 | Directly proportional  | As one amount increase, so does the other, at equal rates. On a graph, this will pass through the origin.  |
| 6 | Magnetism | A force is exerted on a magnetic material brought into a magnetic field. | 20 | Gradient | The steepness of a line. The gradient of a line of best fir can be calculated.  |
| 7 | Up thrust | An upward force exerted by a liquid or gas on an objecting floating in it.  | 21 | Tangent  | A straight line that touches a curve at a point.  |
| 8 | Mass | The mass of an object is the amount of matter or 'stuff' it contains. Measure in grams (g) or kilograms (kg). | 22 | Hook’s law | The extension of an elastic object, such as a spring, is described by Hooke's law; the force applied to the spring is directly proportional to the extension of the spring.  |
| 9 | Weight | The weight of an object is how hard gravity pulls down on an object.  |  | **Gradient = change in y** **change in x****C:\Users\sttg01\AppData\Local\Microsoft\Windows\INetCache\Content.MSO\DD97C539.tmp** |
| 10 | Newtons | The unit of force (N). |
| 11 | Newton- meter | The equipment used to measure the force acting on an object.  |
| 12 | Friction | Objects, which rub against each other, have friction. Friction works against motion.  |
| 13 | Elastic | An object that will return to its original shape when the force is removed. |
| 14 | Plastic | A material that does not return to its original shape when the force is removed.  |
| 15 | Pressure | Pressure is the **force per unit area.** | **Diagram 1: Hook’s Law** | **Diagram 2: How to calculate a gradient** |