**Y9 end of year test revision**

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| **Topic** | **Need to know** |
| Balanced and unbalanced forces | * Explain how pairs of forces act upon an object. * Be able to draw a force diagram. * Work out a resultant force * Use the equation F=ma ( Newton’s 2nd law) |
| Pressure | * Understand the relationship between force and area. * Be able to use the formula P=F/A, to find the pressure force or area * Explain how particles in a gas create pressure. * Explain how the pressure in liquid changes with the depth you are at. |
| Hydraulics | * Explain how we can use a fluid in a hydraulic system to help us lift or move large objects. * Be able to calculate the increase in force with a hydraulic system |
| Moments | * Be able to explain what a moment is and how to calculate one. * Be able to use the moment equation to calculate clockwise and anticlockwise moments, in a situation when moments are balanced |
| Motion | * Be able to calculate the speed of an object. Using distance and time. * Be able to calculate the acceleration of an object * Interpret D/T and V/t graphs |
| The Solar System | * Order of the planets * Relationship between position of a planet and the length of its year |

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| Introduction to Light | * Explain the terms luminous, non-luminous and shadow * Be able to draw light rays in a straight line with arrows to show direction. |
| Reflection | * Be able to draw a simple ray diagram to show how light is reflected * Be able to use a protractor to accurately measure angles and draw accurate ray diagrams from given information. |
| Refraction | * Be able to explain what happens when light passes from one medium to another. * Explain what happens as the angle of incidences changes. |
| Colours | * Explain how using the primary colours of light we can make other colours |
| Lenses | * Ray diagrams for Concave and convex lenses |
| Energy Resources | * Look at an overview of fossil fuels and renewable energy resources * Good and bad points of each. * Why are Renewable energy resources needed? |
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