**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)
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| 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.
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| 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
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| 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
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| 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
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| 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.
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| 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.
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| Refraction  | * Be able to explain what happens when light passes from one medium to another.
* Explain what happens as the angle of incidences changes.
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| Colours | * Explain how using the primary colours of light we can make other colours
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| Lenses | * Ray diagrams for Concave and convex lenses
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| 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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