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| **What will we be learning?****Gravitational Fields**Uranus with solid fill | **Why this? Why now?**Previous Learning Stars, Cosmology, Newton’s Laws of Motion and MomentumFuture Learning Electric Fields, Magnetic Fields.Enquiry ProcessesIdentify Variables, Collect Data, Present Data, Analyse Patterns, Manipulate Equations, Draw Conclusions, Justify opinions and conclusions.  | **Key Words:**Gravitational potentialGravimetryNewton’s Law of GravitationRadial fieldsEllipsePerihelionEccentricityKepler’s LawsOrbitGeostationaryEscape velocity |
| **What will we learn?**Gravitational fields being due to mass.Modelling spherical objects as a point mass at its centreCalculation of gravitational field strength and gravitational potential at a point and at infinity.Application of Newton’s law of gravitationApplication of Keppler’s LawsGeostationary satellitesCalculating escape velocities**Misconceptions in this topic*** Confusion between gravitational potential and gravitational potential energy
* Giving positive values for gravitational potential
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| **What opportunities are there for wider study?**Careers - Aviation, Defence Specialist, Astrophysicist, Theoretical Physicist, Space Engineer, Rocket Scientist, Astronaut, Satellite Designer.STE(A)M – For details of courses and opportunities look at:<https://highcliffe.sharepoint.com/sites/LearnSTEM> |
| **How will I be assessed?**End of Topic Assessment, A2 Paper Assessments |