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| **What will we be learning?**Tennis racket and ball with solid fill**Contact Forces** | **Why this? Why now?**Previous Learning Key stage 2 Science Year 7 Course - Speed, Gravity, Current, Voltage and Resistance, Energy transfers and Energy costsYear 8 Course – Light, SoundFuture Learning Year 8 Course – Pressure, Magnetism, Wave effects, electromagnetismEnquiry ProcessesIdentify variables, Collect data, Present data, Analyse Patterns, Draw conclusions, Justify opinions and conclusions | **Key Words:**FrictionDragLeversDeformationProportion/ProportionalityEquilibriumDirectly proportionalRelationshipExtensionForceNewtonMomentCompressionExtension |
| **What will we learn?**Evaluate how well sports or vehicle technology reduces frictional or drag forces.Explain whether an object in an unfamiliar situation is in equilibriumDescribe how materials behave as they are stretched or squashedIdentify the motion of an object due to the forces acting on itExplain how turning forces are used in leversCalculate the turning effect on an objectIdentify situations where there are turning forcesDraw force diagrams including size and direction Compare the behaviour of different materials in deformation using the idea of proportionalityDescribe whether a relationship is directly proportionalDescribe what happens to the length of a spring when the force on it changesIdentify the relationship between force and extension**Misconceptions in this topic**Levers are balanced/unbalanced due to the weights being the same each side, rather than momentsIf an object is at rest, no forces are acting on the object. Force is a property of an object. An object has force, and when it runs out of force it stops moving. If a body is not moving, there is no force acting upon it.  |
| **What opportunities are there for wider study?**Careers – Geophysics, Physiotherapy, Aviation, Medical physics, Construction, Civil engineering, Architecture, Surveying, Dentistry, Renewable energy scienceSTE(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** |