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| **Unit: Making a Fairground Ride** | **Year 3** | **Strand: KS2 - Structures** |

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| **Vocabulary:** |
| PulleyLeverTractionNewton’s LawGravity | a wheel with a grooved rim around which a cord passes, which acts to change the direction of a force applied to the cord and is used to raise heavy weightsa rigid bar resting on a pivot, used to move a heavy or firmly fixed load with one end when pressure is applied to the other.Pulling something across a surfaceEvery object in a state of uniform motion will remain in that state of motion unless an external [force](http://scienceworld.wolfram.com/physics/Force.html) acts on it.the force that attracts a body towards the centre of the earth, or towards any other physical body having mass. |



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| **What will be taught through the unit:** |
| Investigate: | * The history of fairground rides:
* Roundabouts were first invented in early 19th century.
* Rides developed quickly including the swinging yacht and the big wheel.
* In 1910, as electricity became more widespread, the rides became powered by electricity.
* Types of fairground ride:
* Big wheel, roundabout, swinging roundabout.
* All these work on a central mechanism which turns using a motor. The mechanism is either vertical or horizontal.
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| Design: | * Consider the design of the ride – children need to design seats as well as the actual mechanism so that a LEGO figure can be seated.
* Design needs to include which ride they have chosen: ferris, roundabout or swing.
* Use of electricity to either make the ride move.
* Children draw a labelled diagram (see TTS kit) for their ride.
* What design features are they going to use after construction?
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| Make: | * Children make the fairground ride (use TTS kits).
* Children select materials and tools for the design.
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| Evaluate: | * Does the design fit the brief?
* Does it move well?
* What improvements could be made?
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| TechnologicalKnowledge: | * A motor is used to power fairground rides.
* Levers and axles allow some rides to work.
* There are safety factors associated with fairground rides.
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 Ferris/ Big wheel carousel/roundabout Swing carousel

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| **Challenge: To make a moving fairground ride** |
| * To know about the history of fairground rides.
* To understand the structures used in different fairground rides.
* To know about the electrical circuits in a product.
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