

KNOWLEDGE ORGANISER – St Gregory’s RC Primary School

Topic: Design Technology

Year Group: 5 Summer

Strand: Mechanical Systems – Pulleys/Gears

What I should already know	Sticky knowledge	Key skills
<ul style="list-style-type: none"> • I know how to design a product based on the user and purpose. • I know how my design has changed after making a prototype and I can adapt my original ideas upon this. • I know, from my plan, which parts will move and how it will move. • I know how to evaluate a product against its audience, purpose and function. • I know how to evaluate a product as it develops. <p align="center">Design brief</p> <p>Can you design a Fun Fair Ride or Ferris Wheel that children would like to go on if they came to the Summer Fair? Think about the structure and how you are going to use pulleys and levers to make it turn and move.</p>	<ul style="list-style-type: none"> • I know that pulleys can rotate in different directions • I know that a set of related mechanisms used to create movement is called a mechanical system. • I know that gears are toothed wheels that lock together and turn one another. • I know that pulleys are similar to gears, but the wheels are joined by a drive belt. • I know that pulleys can be used to affect the speed, direction or force of a movement. • I know existing products that use pulleys and gears and how these have influenced modern day. • I know how to use computers to programme and control my product. 	<p>Designing</p> <ul style="list-style-type: none"> • I can sketch and model alternative ideas • I can record ideas using annotated diagrams • I can develop one idea in depth <p>Making</p> <ul style="list-style-type: none"> • I can use a range of tools and equipment competently • I can cut accurately and safely to a marked line <p>Evaluating</p> <ul style="list-style-type: none"> • I can use my research of existing products to inspire my own design. • I can consider the user and purpose of existing products. • I can evaluate appearance and function against original criteria <p>Technical knowledge</p> <ul style="list-style-type: none"> • I can make a product that relies on pulleys or gears • I can link my scientific knowledge to design by using pulleys or gears • I can join materials using a variety of temporary and permanent methods. • I can build frameworks to support mechanism

Vocabulary**Diagrams/Pictures**

Circuit diagram	A picture which represents the circuit.
Circuit switch	A switch that controls whether a circuit is open or close.
Design brief	A written description of what a project should do or what is needed
Gear	A rotating mechanisms that mesh together using cut teeth.
Mechanical system	A circuit with moving parts.
Motor	A component that moves when electric possess through it.
Pulley	A wheel on an axle that helps support something to move.
Rotation	Turning around a centre

