

Year 5 DT Knowledge Organiser

Term: Spring 2

Topic: Exploration and Discovery

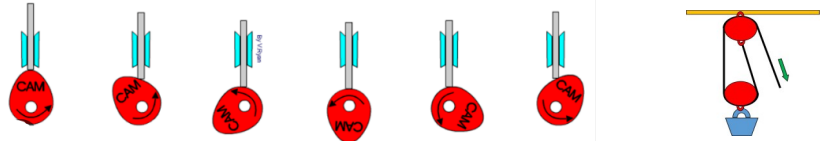
Strand: Understand and use mechanical systems in products.

Vocabulary

machine	Something which makes doing something easier - usually by increasing the amount of force
cam	a cam is a mechanism in a linkage system. When it is rotated, things which are attached to it can move up and down.
follower	the part of a machine in contact with a rotating cam, which moves as a result of the cam's movement
pulley	a simple machine of a wheel with a groove along the edge to guide a rope or cable.
design	a plan or drawing produced to show the look and function of an object before it is made.
evaluate	carefully looking at something to decide how effective, important or successful it is

What should I know already?

- That an effective product is one which has been planned, designed, and evaluated.
- The properties of various materials, e.g. wood is generally inflexible, plastic can have different properties.
- That the suitability of materials for a project varies depending on their properties.



Purpose, Research, Design, Create, Evaluate

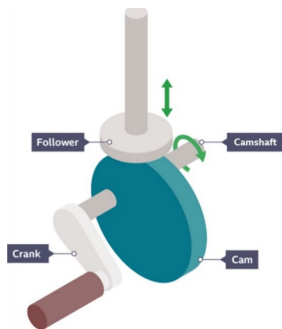
Purpose - every product has a purpose. What is the purpose of your model? How is it going to be created to meet that purpose?

Research - what examples of moving models can you find? What type of mechanism do they have? What ideas can you take from them to create your own model?

Design - designing your model is an important step. You need to think carefully about the purpose of your product. How is your product designed to meet the purpose? Does it have a moving part produced by a mechanism?

Create - follow your design to create your product. If you find something from your design doesn't work as you're creating it, think about changing your design to make it work. It's much better to have a product that meets the purpose that has had to be changed, than to have one that doesn't work at all.

Evaluate - does your product meet the purpose? What went well? What didn't? What would you do differently next time? What have you learnt?



Design and Technology Skills

- Generate innovative ideas based on research
- Produce appropriate lists of tools, equipment and materials
- Write step-by-step plans as a guide to making
- Accurately measure, mark out, cut and shape materials and components
 - Accurately assembly, join and combine materials and components
- How mechanical systems such as cams, or pulleys or gears create movement
- How to reinforce and strengthen a 3D framework

Health and Safety

-Remove any jewellery and tie back long hair. Wear an apron.

-Follow guidelines for working with electrical equipment.

-Walk safely and calmly around the classroom/workshop.

Keep your work area and floor area clear - keep your belongings well clear.

Follow the teacher's instructions for using equipment carefully.

Make sure that you are wearing the correct equipment for tasks.

Return all equipment to the correct zoned areas of the classroom/workshop.

Report all spillages & clean up properly after yourself.