

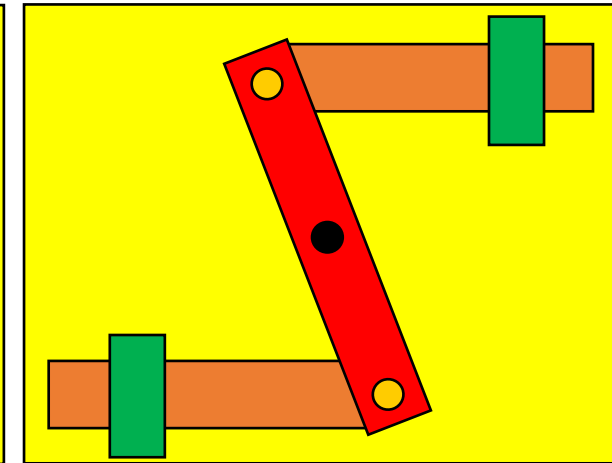
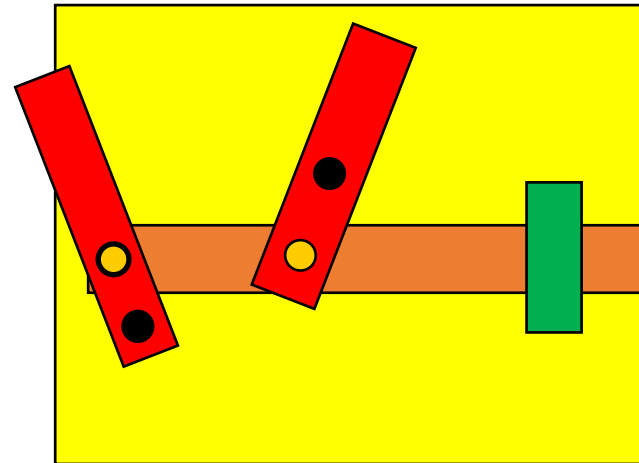
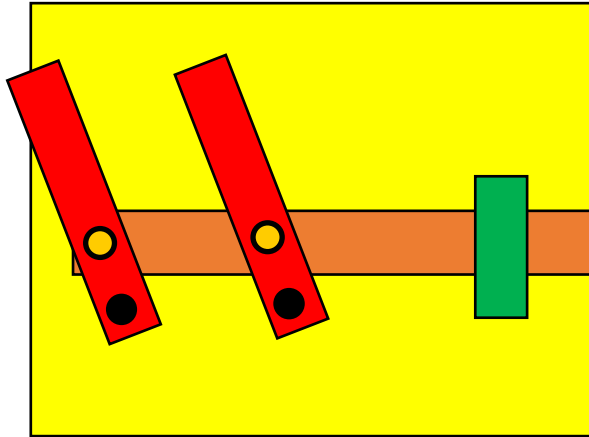
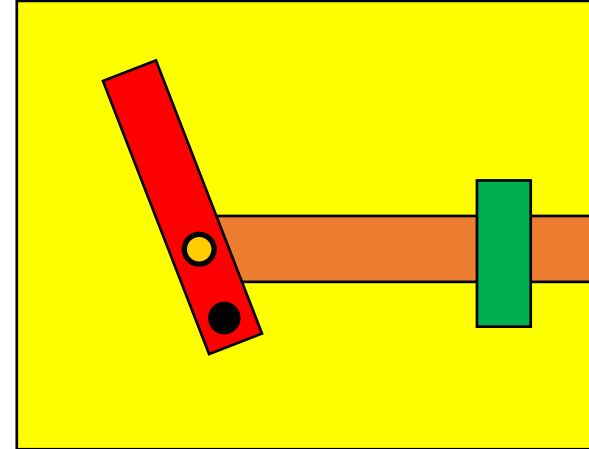


Year 5 - Summer term Levers and linkages.

Key Vocabulary

Linear	A straight or nearly straight line.
Reciprocating	Moving backwards and forwards in a straight line.
Rotary	Revolving around a centre or axis.
Oscillating	Move or swing back and forth in a regular rhythm
Lever	A lever is a rigid bar that moves around a pivot
Linkage	Levers can be jointed together to create linkages. A linkage can be used to create a change in the direction, the type and the amount of movement
Mechanism	A system of parts working together in a machine

Types of Mechanisms



Lesson sequence	
Evaluation of existing products	Explored and used mechanisms such as flaps, sliders and levers. • Gained experience of basic cutting, joining and finishing techniques with paper and card.
Focussed tasks	Demonstrate a range of lever and linkage mechanisms to the children using prepared teaching aids. • Use questions to develop children's understanding e.g. <i>Which card strip is the lever? Which card strip is acting as the linkage? Which part of the system is the input and which part the output? What does the type of movement remind you of? Which are the fixed pivots and which are the loose pivots?</i> • Demonstrate the correct and accurate use of measuring, marking out, cutting, joining and finishing skills and techniques. Children work in small groups to produce a range of different lever and linkage mechanisms using existing templates.
Design	Generate realistic ideas and their own design criteria through discussion, focusing on the needs of the user. • Use annotated sketches and prototypes to develop, model and communicate ideas.
Make	Order the main stages of making. • Select from and use appropriate tools with some accuracy to cut, shape and join paper and card. • Select from and use finishing techniques suitable for the product they are creating.
Evaluate	Investigate and analyse books and, where available, other products with lever and linkage mechanisms. • Evaluate their own products and ideas against criteria and user needs, as they design and make.
Health and Safety	Pupils should be taught to work safely, using tools, equipment, materials, components and techniques appropriate to the task. Risk assessments should be carried out prior to undertaking this project.