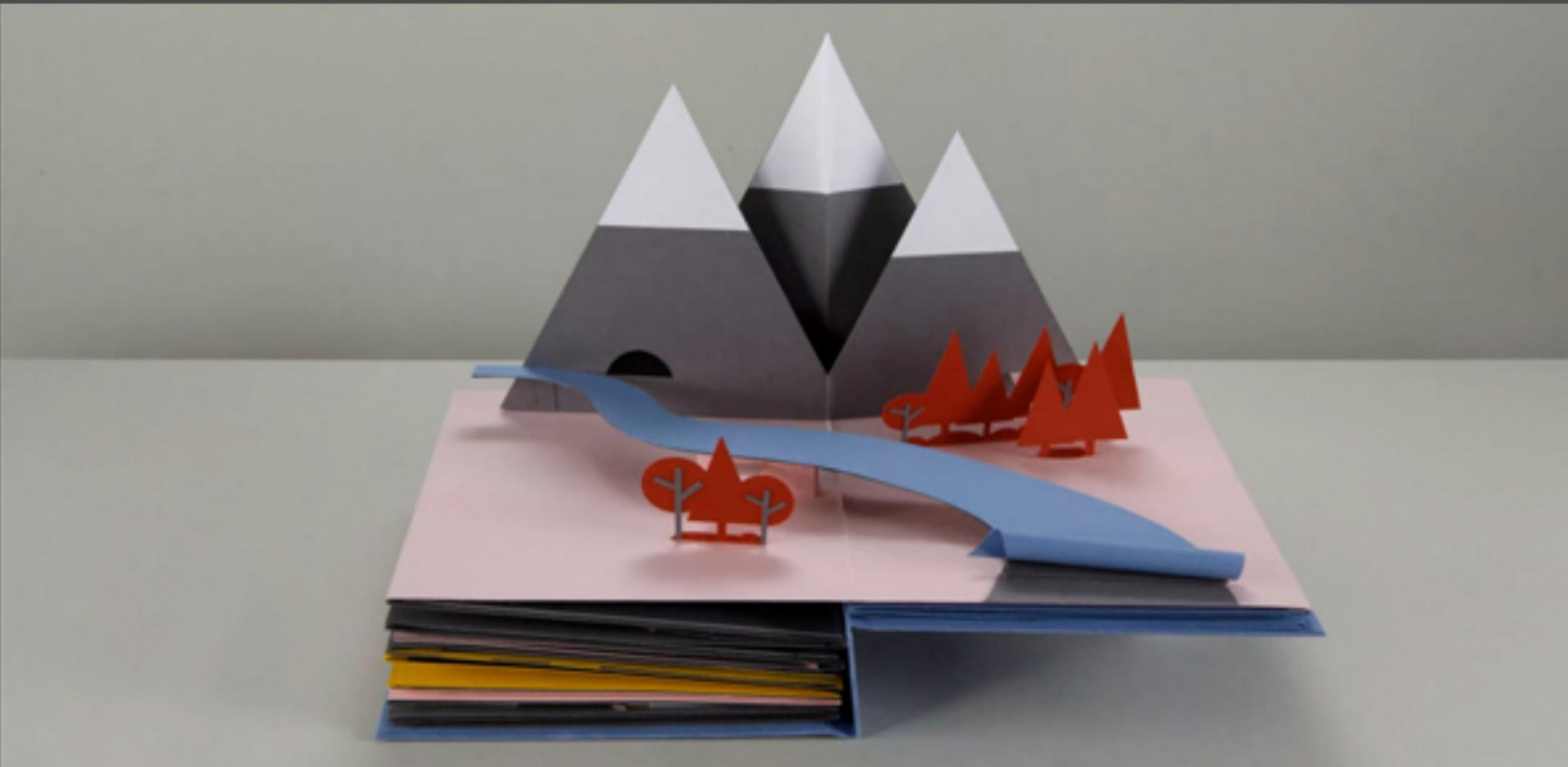
FENISCOWLES PRIMARY SCHOOL

Striving for Excellence

DESIGN TECHNOLOGY
YEAR 5 MODULE OVERVIEWS



Y5	Context	Design	Make	Evaluate	Technical Knowledge
Autumn	***Electrical systems*** ***Electronic greetings cards*** This unit builds on pupils' knowledge of how to incorporate electrical circuits into products from Y4. Children explore how circuits can be adapted to suit different purposes, explore series circuits and recreate one using conductive adhesive tape. They then apply this knowledge to design and create an electronic greeting card.	Designing an electronic greetings card with a copper track circuit and components Creating a labelled circuit diagram showing positive and negative parts in relation to the LED and the battery Writing design criteria for an electronic greeting card Compiling a moodboard relevant to my chosen theme, purpose and recipient	Making a functional series circuit Creating an electronics greeting card, referring to a design criteria Mapping out where different components of the circuit will go	Evaluating a peer's product against design criteria and suggesting modifications that could be made to improve the reliability or aesthetics of it or to incorporate another type of circuit component Stating what Sir Rowland Hill invented and why it was important for greeting cards Analysing and evaluating a range of existing greeting cards	Learning the key components used to create a functioning circuit Learning that copper is a conductor and can be used as part of a circuit Understanding that breaks in a circuit will stop it from working Explaining how a series circuit will work in my card Identifying the negative and positive leg of an LED Drawing a series circuit diagram and symbols

Spring	***Mechanical systems*** ***Making a pop-up book.*** After choosing a simple story or nursery rhyme, children a four page pop-up storybook design. They will add accompanying captions, incorporating a range of mechanisms and decorative features, including structures, levers, sliders, layers and spacers.	Designing a pop-up book which uses a mixture of structures and mechanisms Naming each mechanism, input and output accurately Storyboarding ideas for a book	Following a design brief to make a pop up book, neatly and with focus on accuracy Making mechanisms and/or structures using sliders, pivots and folds to produce movement Using layers and spacers to hide the workings of mechanical parts for an aesthetically pleasing result	Evaluating the work of others and receiving feedback on own work Suggesting points for improvement	Knowing that an input is the motion used to start a mechanism Knowing that output is the motion that happens as a result of starting the input Knowing that mechanisms control movement Describing mechanisms that can be used to change one kind of motion into another
Summer	***Food*** ***What could be healthier?*** Focusing on nutrition, children research and modify a traditional bolognaise sauce to make it healthier. They will cook their new and improved versions, making appropriate packaging and also learn about the ethical considerations of farming cattle.	Adapting a traditional recipe, understanding that the nutritional value of a recipe alters if you remove, substitute or add additional ingredients Writing an amended method for a recipe to incorporate the relevant changes to ingredients Designing appealing packaging to reflect a recipe	Cutting and preparing vegetables safely Using equipment safely, including knives, hot pans and hobs Knowing how to avoid cross-contamination Following a step by step method carefully to make a recipe	Identifying the nutritional differences between different products and recipes Identifying and describing healthy benefits of food groups	Understanding where food comes from - learning that beef is from cattle and how beef is reared and processed Understanding what constitutes a balanced diet Learning to adapt a recipe to make it healthier Comparing two adapted recipes using a nutritional calculator and then identifying the healthier option

Summer	***Digital World*** ***Monitoring devices*** Applying Computing knowledge and understanding to program a Micro:bit animal monitoring device that will support animal care and alert their owners when the temperature is not optimal using sound and an LED. Children develop the CAD skills by learning how to navigate the Tinkercad interface and essential tools to combine multiple objects.	Researching (books, internet) for a particular (user's) animal's needs Developing design criteria based on research Generating multiple housing ideas using building bricks Understanding what a virtual model is and the pros and cons of traditional and CAD modelling Placing and manoeuvring 3D objects, using CAD Changing the properties of, or combine one or more 3D objects, using CAD	Understanding the functional and aesthetic properties of plastics	Stating an event or fact from the last 100 years of plastic history Explaining how plastic is affecting planet Earth and suggesting ways to make more sustainable choices	Describing key developments in thermometer history Programming to monitor the ambient temperature and coding an (audible or visual) alert when the temperature rises above or falls below a specified range Explaining key functions in my program (audible alert, visuals) Explaining how my product would be useful for an animal carer including programmed features