UNIVERSITY OF CAMBRIDGE PRIMARY SCHOOL

Inventions

Year 2 | Summer 1

CURRICULUM SPOTLIGHT: DT | COMPUTING

ENQUIRY

Can we design and make a prototype for a futuristic playground? How can we make a robot move through a maze?

OUTCOMES

Exhibition and coding maze event for parents/carers

VOCABULARY

DT: **Disciplinary:** Explore, evaluate, product, design, criteria, materials, tools, equipment, ingredients, template, mock up, improve

Substantive: structure, wall, tower, framework, weak, strong, base, top, underneath, side, edge, surface, thinner, thicker, corner, point, straight, curved metal, wood, plastic circle, triangle, square, rectangle, cuboid, cube, cylinder

Computing: Functions, code, execute, drive, head, microphones, sensors, sequence, debugging, move, pause, direction, map, location, spatial reasoning, sequencing, loops, constraints

ENGLISH KEY TEXTS

- Cherry Moon by Zaro Weil
- 100 Things to Know About Numbers, Computers & Coding by Various
- The Story of Inventions by Catherine Barr

RESOURCES

Coding kit, photographs of various structures, construction kits, paper, card, plastic sheet, paper and plastic straws, pipe cleaners ,reclaimed materials including small containers, card boxes, cotton reels

English	Mathematics	Physical Education	DT
Grammar - Apostrophes for contracted form and for possession **Text types** - Poetry - Explanation - Double page spread	**Geometry** Recognising 2D and 3D shapes Properties of shape **Mass, capacity and temperature** Comparison Measuring volume and mass Four operations **Money** Counting Calculating Comparing	**Unit 5 Physical** **Coordination: Sending and Receiving** **Agility: Reaction / Response**	**Designing** Design purposeful, functional, appealing products for themselves and other users based on design criteria-refining design as work progresses. Generate, develop, model and communicate their ideas through templates, mock-ups and, where appropriate, information and communication technology **Making** Select from and use a range of tools and equipment to perform practical tasks (for example joining and finishing.) Select from and use a wide range of materials and components, including construction materials and ingredients and textiles, according to their characteristics. Cut materials safely using tools provided. Measure and mark out to the nearest centimetre. Demonstrate a range of joining techniques (such as gluing, hinges or combining materials to strengthen). **Evaluating and improving** Evaluate; explore and evaluate a range of existing products Evaluate their ideas and products against design criteria **Structures** **Build structures exploring how they can be stronger, stiffer and more stable** **Use materials to practise drilling, screwing, gluing and nailing materials to make and strengthen products**

Phonics	PSHCE	Science
Extended Code Unit 33 /n/nn/ne/gn/kn Unit 37 /j/g/ge/dge Units 38/39 /g/gg/gh/gu Units 40/41 /f/ff/gh/ph Unit 42 /m/mm/mb/mn Unit 43 /or/oar/ore/our/augh/ough	Managing safety and risk	**Food chains** - Describe how animals obtain their food from plants and other animals, using the idea of a simple food chain, and identify and name different sources of food.

Computing	Religious Education
• Using multiple methods to debug code, responding to the outputs of a program (Dash) • Choose the most appropriate method to make a robot complete a function. • Using critical thinking to plan and conduct research, manage projects, solve problems and make informed decisions using appropriate digital tools and resources. • Using loops and sequencing to solve problems. • Use technology purposefully to create, organise, store, manipulate and retrieve digital information	• Exploring the theme of 'belonging' • Exploring why the Mosque is known as the heart of the Muslim community • Evaluating how much a mosque helps a Muslim's feeling of belonging • Helping others feel belonging -