UNIVERSITY OF CAMBRIDGE PRIMARY SCHOOL

Innovation

Year 5 | Summer 1

CURRICULUM SPOTLIGHT: COMPUTING | DESIGN AND TECHNOLOGY

ENQUIRY

How can technology be used to help others?

OUTCOMES

STEM Design Exhibition

VOCABULARY

D&T: Alternative, analyse, annotated sketch, amendments, compare, criticality, design specification, drawbacks, evaluate, feedback, flowchart, functional, innovation, investigate, permanent, prototype, purpose, quality, reinforce, research, stability, temporary, test, user.

Computing: buzzer, circuit, code, codebit, coding, function, functions, invention, invention cycle, input, loops, output, programme, rechargeable battery, routine, sequences, slide dimmer, usb cable, usb power bit.

ENGLISH TEXTS

- Mysteries of Harris Burdick by Chris Van Allsburg
- Beauty and the Bin by Joanne O'Connell

BACKGROUND KNOWLEDGE

- Howell (2020) Working with Building and Structures
- Moreno (2021)Architecture for Kids: Skill-Building Activities for Future Architects
- 15 Incredible technologies that will change the world - https://www.youtube.com/watch?v=xPl8H2jZ_UI

RESOURCES

Little Bits Coding

CORE CURRICULUM LEARNING OUTCOMES

<table>
<tr><th>English</th><th>Mathematics</th><th>Physical Education</th><th>Design and Technology</th></tr>
<tr><td>Spelling: Phonemes: ch, sh, ay, ee, er

▪ Use the perfect form of verbs to mark relationships of time and cause</td><td>▪ Finding equivalent fractions and simplifying fractions
▪ Common denomination: adding and subtracting</td><td>Health and Fitness
▪ Static balance- stance
▪ Coordination- footwork
▪ Tennis
▪ Rounders</td><td rowspan="5">Substantive Knowledge

▪ Understand how key events and individuals in DT have helped shape the world.
▪ Apply their understanding of how to strengthen, stiffen and reinforce more complex structures
▪ Develop a range of practical skills to create products (such as cutting, drilling and screwing, nailing, gluing, filing and sanding).

Disciplinary Focus
▪ Designing, Making, Evaluating and Improving</td></tr>
<tr><th>PSHCE</th><th>Spanish</th><th>Computing</th></tr>
<tr><td>▪ Personal Safety</td><td>▪ Romans</td><td>Digital Literacy
▪ The use of computer networks and the internet beyond the classroom (look at the role of computers in aiding space exploration – linking with NASA).
Information Technology
▪ Present data and information in a variety of ways for a given purpose (children collate information about a NASA project). Creating an online presentation.
Computer Science
▪ Use input and outputs to complete a basic function.
▪ Create and debug algorithms.
▪ Use a range of functions to add complexity to code. Explaining the impact that this will have.</td></tr>
<tr><th colspan="2">PRE</th><th>Science</th></tr>
<tr><td colspan="2">Substantive Knowledge: The Ten Commandments are useful guidance for Christians.
▪ Christians believe that the Holy Spirit lives in Christians and that the ‘Fruits of the Spirit’ are the evidence of the Holy Spirit in Christians
▪ Going to church is one way some Christians show commitment to God
▪ Prayer is an important way Christians connect with God
▪ Holy Communion is a way Christians remember Jesus’ death
▪ Baptism is an outward expression of an inward commitment to God
▪ Christians seek to love others

Philosophy and Ethics: Is it ever OK to lie?

Evaluation: Children evaluate the various ways Christians show commitment to God

Personal reflection: Children consider commitment in their own lives</td><td>Earth
▪ Describe the movement of the Earth, and other planets, relative to the Sun in the solar system.
▪ Describe the movement of the Moon relative to the Earth. Describe the Sun, Earth and Moon as approximately spherical bodies.
▪ Use the idea of the Earth’s rotation to explain day and night and the apparent movement of the sun across the sky.</td></tr>
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