The Football Academy

Make a kick strength data logger

micro:bit the next gen

Computing topics covered

Hardware
- Connecting a micro:bit to a laptop
- Using onboard button inputs
- Logging and downloading data
- Using the LED display output

Coding and Programming
- Variables
- Repeat Loops
- Selection and conditionals
- Data Handling
- Debugging

Computational Thinking
- Logical Reasoning
- Decomposition
- Algorithms

Information Technology
- Data Handling

Curriculum links

England

Computing: NC KS2
- Select, use and combine a variety of software on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data/info
- Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems
- Work with variables and various forms of input and output

Design Technology KS2
- Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at a particular audience
- Apply their understanding of computing to program, monitor and control their products

Maths: Statistics Y5
- Complete, read and interpret information in tables

Science: Working Scientifically KS2
- Recording data and results of increasing complexity using tables and line graphs

Northern Ireland

Thinking Skills & Personal Capabilities: Thinking, Problem Solving & Decision Making KS2
- Generating possible solutions, trying out alternative approaches and evaluating outcomes

Maths: Handling Data KS2
- Collect, classify, record and present data drawn from a range of meaningful situations, using graphs, tables, diagrams and ICT software; interpret a wide range of tables, lists, graphs and diagrams

World Around Us: Progress in Learning KS2
- Examine and collect real data and samples from world around them

Scotland

Technologies: Craft/Design/Engineering/ Graphics 2nd
- I can extend and enhance my design skills to solve problems

Maths: Info Handling - Data/Analysis 2nd
- Using technology and other methods, I can display data simply, clearly and accurately by creating tables, charts, diagrams, and using simple labelling/scale

Science: Scientific Skills 2nd
- Present data/information by choosing from an extended range of tables and charts including bar and line graphs

Wales

Science & Technology: Design Thinking & Engineering Step 3
- I can use design thinking to test/refine decisions
- I can combine component parts, materials & processes to achieve functionality
- I can apply my knowledge and skills when making design decisions to produce specific outcomes

Maths: Statistics Step 3
- Represent info by creating a variety of appropriate charts of increasing complexity, inc line graphs

Science & Technology: Computation Step 3
- Effectively store and manipulate data to produce and give a visual form to useful information

Cross-curricular opportunities

Design Technology:
- Using ICT to support design and make activities
- Problem solving, evaluating and improving

Maths:
- Measurement and use of standard units
- Collecting, organising and interpreting data

PHSE:
- Discussions around data privacy
- Staying heathy - exercise and leisure time

Science:
- The human body - skeleton and muscles
- Forces - simple acceleration and push pull forces
- Healthy eating and exercise - being active and healthy