

Teaching Coding

Coding & STEAM 2019

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Week 2: Teaching with Scratch

8th August 2019

Teaching Coding

- Unplugged
- Puzzles
- Design Projects

Unplugged

- Teaching **Coding** without the use of a Computer
- Useful when:
 - introducing and reinforcing different **Computational Concepts**
 - you can't book a Computer lab
 - there are issues with Computers (e.g. no internet)

Unplugged - Example

- There are many different **unplugged** activities that cover different **Computational Concepts**
- Code.org has a collection of **unplugged** resources [here](#)
- An example we like is [My Robotic Friends](#)
- Could be used to introduce **sequences** before teaching this concept in Scratch

Puzzles

- A common approach for teaching Coding, using Code to solve logic problems
- Navigating a character by giving it instructions are often used as **Puzzles**
- Lightbot is one example of this

Puzzles - Example

- Code.org (who started the Hour of Code) have many different puzzles
 - <https://code.org/learn>
- Different themes and characters: [Minecraft](#), [Frozen](#) and [Star Wars](#)
- We will quickly look at the [Frozen Hour of Code activity](#)

Projects

- Common when teaching Scratch
- These vary in student direction
 - Could be step-by-step
 - For more confident learners, could provide less guidance
- In this program we will start with step-by-step projects and then move onto more open-ended activities

Projects - Examples

- Wide walls in Scratch: [Stories](#), [Animations](#) and [Games](#)
- Code Club has some step-by-step guides to creating projects
- ACARA also has work samples for Digital Technologies, that demonstrate the planning and creating of Scratch projects

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- In this program we will investigate a combination of these three teaching approaches:
 - Unplugged
 - Puzzles
 - Projects
- We will focus on **Projects** in Scratch
- In this session you will learn about using **Teacher Accounts** to manage students' projects