Interactive Archives:
Re-Interpreting Collections with Programmable Technology

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Newcastle University · **Northumberland** County Council · **NORTHERN BR—DGE CONSORTIUM** · Arts & Humanities Research Council

Children, Heritage & Digital Technology

- 3.5 year PhD study – National Productivity Investment Fund (postponed summer 2019)

- Investigating alternative methods of education and engagement for heritage sites and archive collections using digital technology – for children & young people

- Primarily working with Newcastle University Special Collections C.P. Trevelyan collection and Northumberland Archives

- Collaboration with Wallington Hall and Hylton Castle

- Industry partner – Northumberland County Council

Interactive Archives

Interactive Archives was a series of workshops where children and young people from schools or community groups investigated an archive collection and created an interactive digital outcome based on the collection. Workshops focused on heritage and archive collections; digital engagement and cross-curricular working.

- Began June 2018
- 10 workshops by the end of Summer 2019
- ~200 participants
- 6 schools
- 2 community groups
- 8 curriculum areas covered
- 4 kinds of programmable technology
- 5 collections used
- Long term and short term project workshops

Interactive Archives – C.P. Trevelyan

- School based with Key Stage 3 students

- Used Newcastle University Special Collections web-based resource Page Turners to access C.P. Trevelyan photograph album collection online.

- Students worked with the theme of the Trevelyan Man Hunt

- Students worked in groups

- Groups provided with activity prompts to create an interactive digital output based on a certain area of the Trevelyan Man Hunt using different technology.

- Example activities include: hunt game using Micro:Bit compasses to find hidden objects; Scratch based hunt game with interactive controllers made with Makey Makey; the music of the hunt reimagined using Sonic Pi and playable instruments connected to Scratch and Makey Makey to play the reimagined music.

- All activities connected to the History and IT National Curriculum. All activities also connected to at least one other additional curriculum area.

# Page Turners – Newcastle University Special Collections

- Web-based resource used to access C.P. Trevelyan collection from the classroom.

- Meta-data and research featured on the web-based resource produced by myself during 3 year archival assistant bursary position at Newcastle University Special Collections.

View the resource at: http://newcastleuniversity.onlineculture.co.uk/ttp/ttp.html?id=85d053db-f4be-41ba-83a2-1a7f9bf47b39&type=book
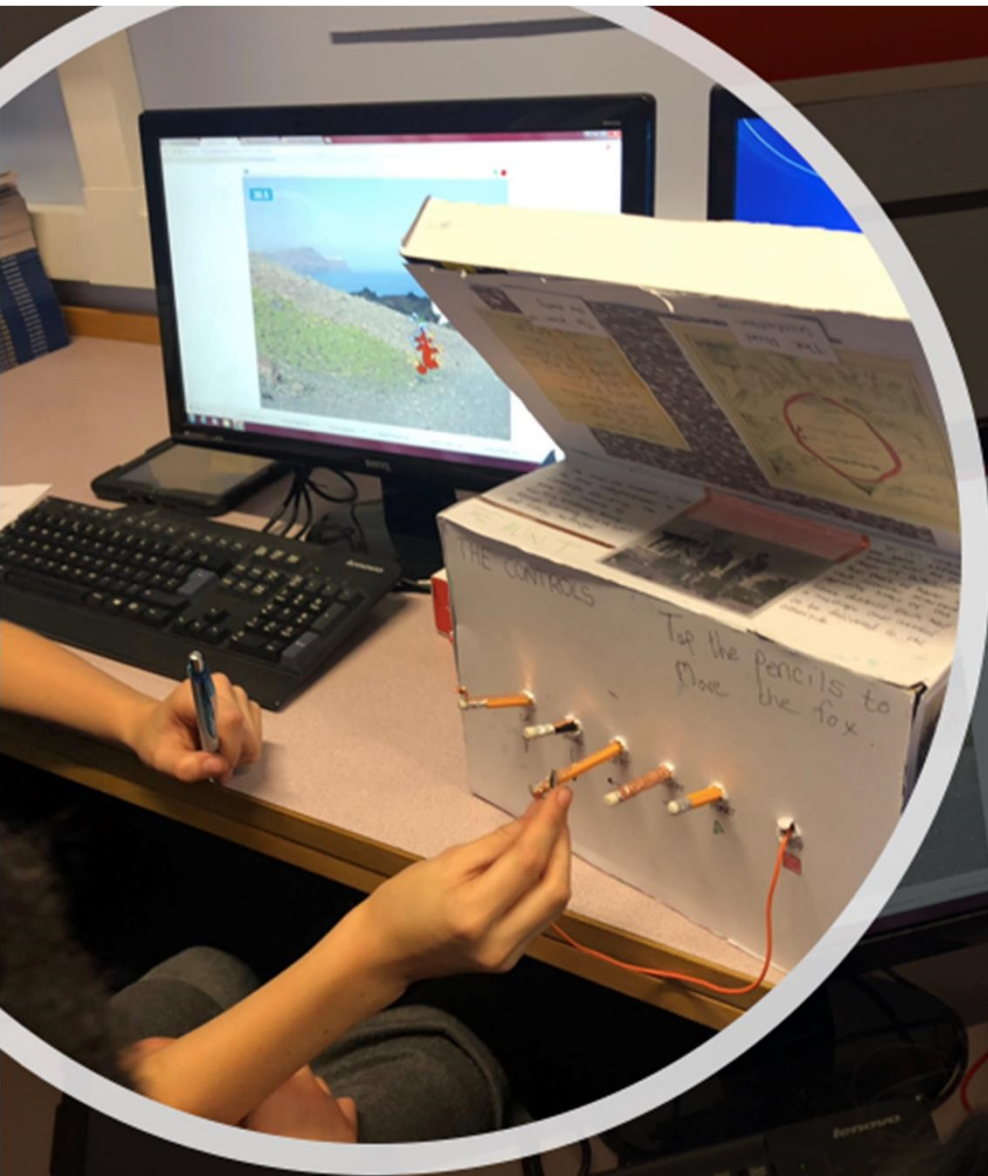
Scratch & Makey
Makey – Interactive
Games

Scratch & Makey Makey – Interactive Books with Audio Recordings

A hunting horn was used for setting off the *hounds*. You are a *hound*. Find the hare but go quick as you can you are being timed!

Micro:Bit Compass and Tracker – Finding Hidden Objects

Linking to the Curriculum

| Subject	Curriculum Points
Computing	• Use two or more programming languages to solve a variety of computational problems. • Undertake creative projects that involve selecting, using, and combining multiple applications, preferably across a range of devices, to achieve challenging goals, including collecting and analysing data and meeting the needs of known users. • Create, re-use, revise and re-purpose digital artefacts for a given audience, with attention to trustworthiness, design and usability.
History	• Undertake a local study • Understand the methods of historical enquiry

Key Stage 3 Curriculum for England

Playable Hunt Games

Activity	Technology	Curriculum area	Curriculum points
The Hunt: Geo-Trail. Create a map of Wallington and plot a trail of locations to find hidden objects. Use the Micro:Bit as a compass to find the locations. Use other Micro:Bit's as beacons to hunt for the hidden items. Could one of these items be a Hare?	Micro:Bit	Geography Physical Education	• Geographical skills & fieldwork – interpret maps in the classroom and the field. • Take part in outdoor and adventurous activities which present intellectual and physical challenges.
The Hunt: indoor playable games. Create a playable Hunt games in Scratch using Makey Makey to create interactive controls.	Scratch Makey Makey	Design Technology	• Identify and solve their own design problems and understand how to reformulate problems given to them. • Develop specifications to inform the design of innovative, functional, appealing products that respond to needs in a variety of situations.

# Interactive Archives – C.P. Trevelyan Long Term Project

- Key Stage 3 female students – part of school's girls into STEM initiative

- 6 week project

- Began with visit to the University to see the collection first hand and to receive a lecture from the School of History

- Worked in groups of 3

- Free reign to choose own theme or topic relating to C.P. Trevelyan and family

- Accessed Page Turners resource back in the classroom

- Created high quality engagement and education resources using Scratch, Mediator and Makey Makey

- Outcomes included multi-level games with digitally designed characters; choose you own adventure games; and building exploration games

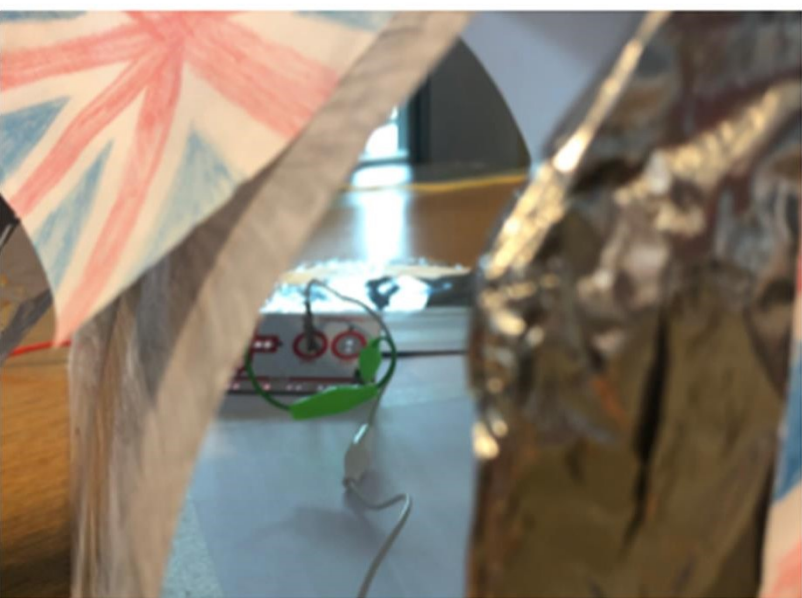# Scratch & Makey Makey – Multi-Level Game
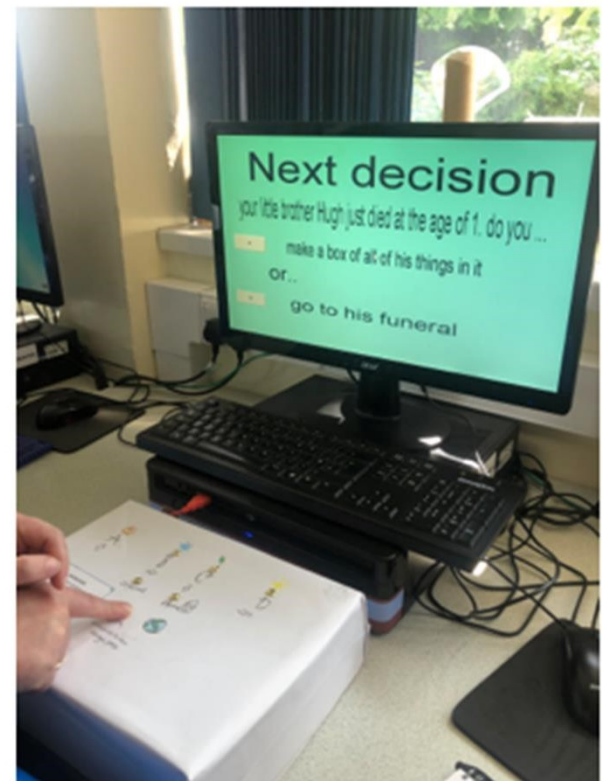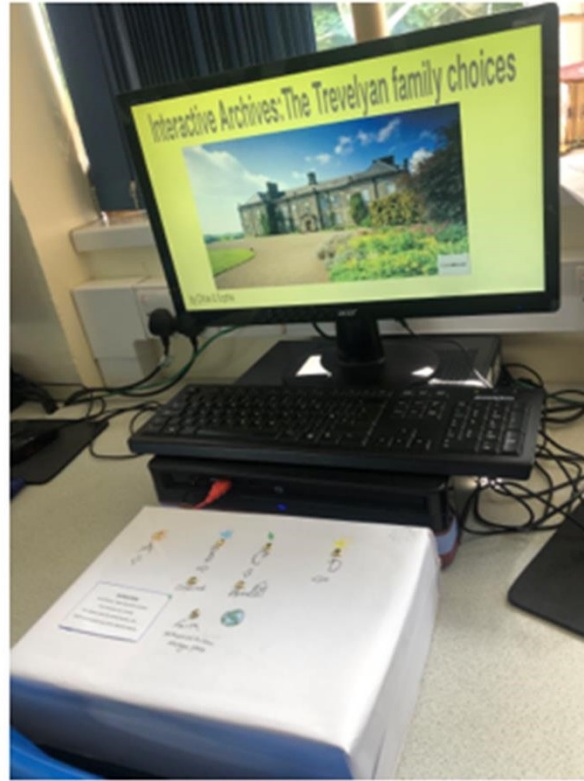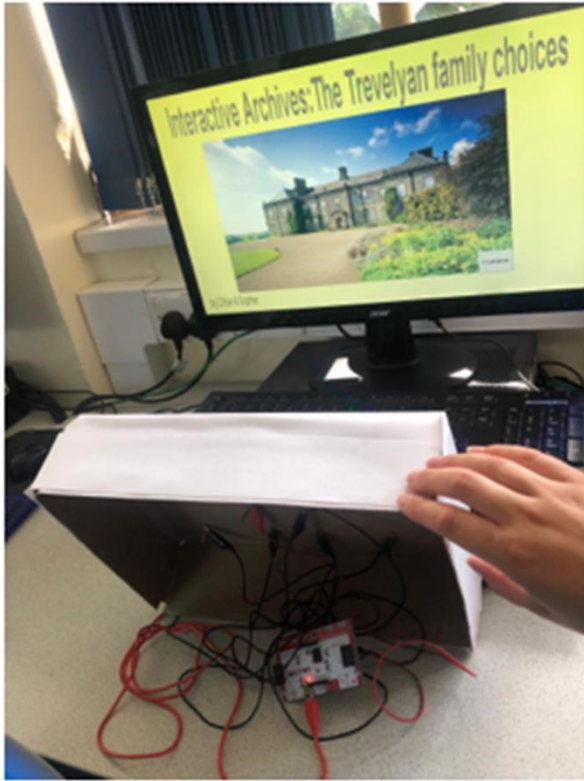
# Mediator & Makey Makey - Choose Your Own Adventure Game
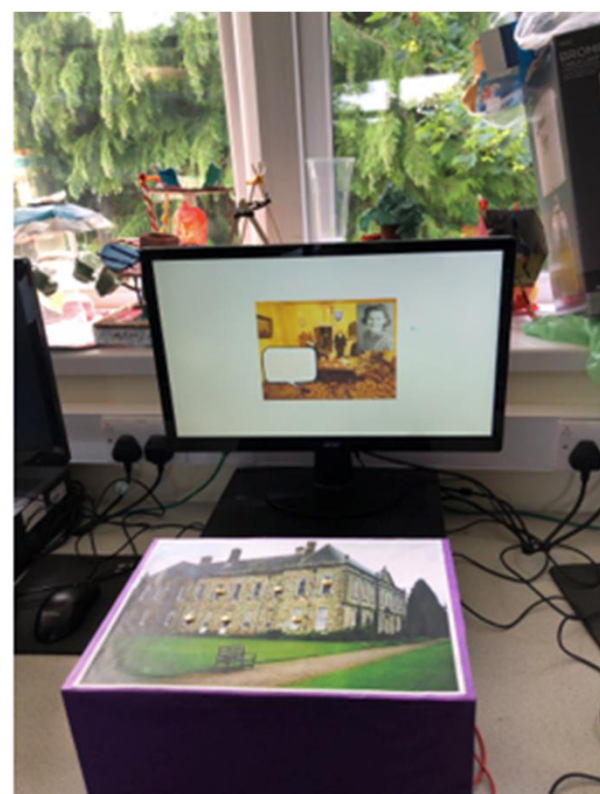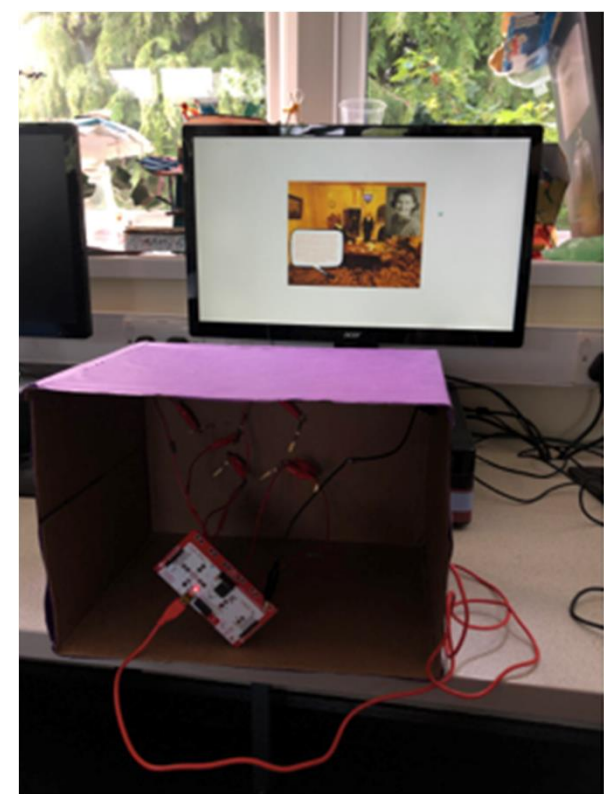
Mediator & Makey Makey – Building Exploration Game

Interactive Archives – Northumberland Archives

- School based with Key Stage 3 students at Northumberland Archives Woodhorn location

- Community based at Northumberland Archives Berwick location. Young people with ages ranging from 9-13

- Woodhorn group worked with the First World War collection

- Woodhorn group worked in teams to produce digital outputs based on 5 different areas from the collection including war diaries and personal letters

- Outcomes include animations and prototype arcade games

- Woodhorn group used Scratch and Makey Makey

- Berwick group worked with legal manorial records from the 16th to 18th Centuries

- Berwick group worked in teams to create a mock trial based on trials identified in the legal records

- Berwick group created evidence for their trials, and had to track down missing evidence using Micro:Bit compasses

Scratch & Makey Makey –
Animated Interactive Objects
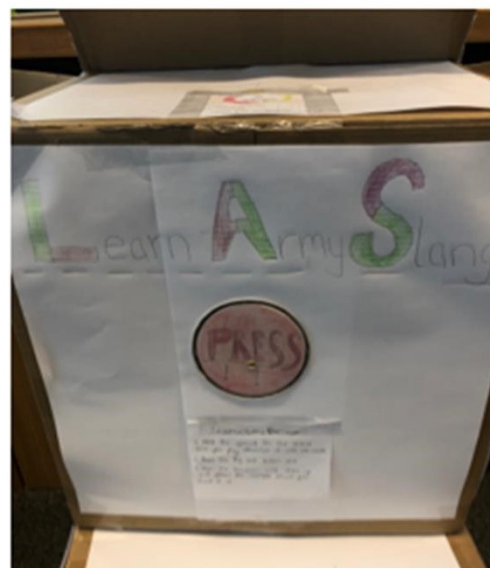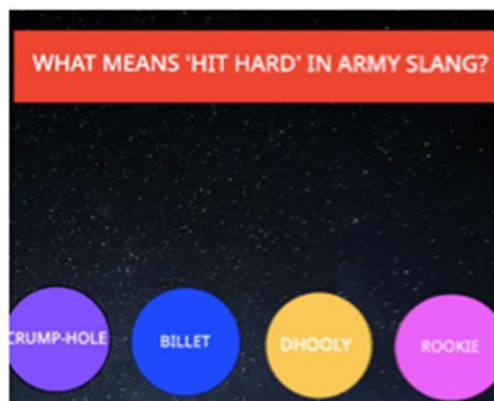
Scratch & Makey Makey – Multiple Choice Arcade Game

Other Areas of Interactive Archives

- Newcastle University – *Cholera Quiz*. Primary students visited Newcastle University library to explore cholera resources and programmed an ineractive cholera quiz using Scratch and makey makey to quiz each other on what they had learnt (June 2019)

- Hylton Castle – *Cauld Lad of Hylton Castle*. Community group Micro:Bit story walk based on local ghost story (July 2019)

- Wallington Hall – planned interactive needlepoint inspired by tapestry collections. To be created with conductive thread and programmed using Scratch and Makey Makey (postponed due to PhD interruption)

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