

ARCADE CODER -

WORKSHOP GUIDE

EASY	01: DISCOVERY - THE TECHNOLOGY
	02: DISCOVERY - DRAWING WITH LIGHT
	03: DISCOVERY - ANIMATION WITH SPRITES
INTERMEDIATE	04: DICE GAME - SKILL VS CHANCE
	05: DICE GAME - RULES
	06: DICE GAME - PLAY AND EVALUATION
ADVANCED	07: MAZE - THE WORLD AND OBJECTS
	08: MAZE - DESIGN/CODE/TEST
	09: MAZE - EVALUATION
	10: WHACK A MOLE 2 - THE PLAYER
	11: WHACK A MOLE 4 - DESIGN/CODE/TEST
	12: WHACK A MOLE - PLAY AND EVALUATION

MEETS UK STATUTORY CURRICULUM :

KS2 DESIGN & TECHNOLOGY
KS2 COMPUTING



TECH WILL SAVE US

6+

- EASY BLOCK CODING
- CREATE & ANIMATE GAMES
- HOURS OF FAMILY FUN

ARCADE CODER

WELCOME!

Ready to become

HOME!

a games designer?

Download the Games Studio to start playing

CONNECT APP

WELCOME



The Arcade Coder is a programmable game console that teaches children how to design and code their own games for up to 4 players. Through an iPad app, children will experiment with illuminated LED animations, customise pre-coded games by adding code blocks to existing frameworks. Once confident, they can even invent brand new ones, totally from scratch!

The sessions are graded from easy through to advanced. Most 6 - 7 year olds should be able to complete the easy sessions. The intermediate sessions are a further stretch but within reach for this range. The advanced sessions are the trickiest and provide enough challenge for even the most competent mini coder but might require support.

Design, Make, Evaluate

These STEAM sessions (Science, Technology, Electronics, Art, & Maths) look at the way computer games are constructed. Through a cycle of exploration, design, and evaluation, participants will go through the steps of programming different games on the Arcade Coder. We provide bug testing sheets for your group to use. This is an important part of any coding/making process that we are never too young to learn.

21st Century skills

Coding is not the only skill predicted to be essential in the future. Creativity, collaboration, resilience and problem solving are all set to be highly valued too. Through tasks that can be carried out in pairs and give enough scope for creativity and collaboration, participants will get the opportunity to flex these skills. We have even included group feedback sessions so they can bolster their soft emotional skills by practising the art of giving and receiving useful constructive criticism and praise. We celebrate risk taking and failure as much as success.

Resources

Every session requires that Makers have access to:

- an Arcade Coder
- a shared iPad tablet to follow the App tutorials

Any additional resources needed are listed at the bottom of each session.

We have also made a selection of printable resources to help master some of the trickier skills, such as the X Y coordinates and designing a maze. These are designed to not only make some of the abstract concepts of coding more concrete, but also can act as a gentle assessment tool. Oh, and don't forget the all important Awards Certificates. Who doesn't thrive on a little celebration of success, no matter how small!

When things go wrong...

We embrace the fact that Making and coding can be as frustrating as it is rewarding, and we hope this is something you can communicate to your Makers too. Mistakes are a critical part of the learning process, and often allow that 'Ureka' moment to happen. Allow the physical and emotional space for these mistakes to happen happily!

Enjoy
Making is fun!

SESSION OVERVIEW



EASY

- 01: DISCOVERY - THE TECHNOLOGY**
Introduction to the Arcade Coder
History of games and computer games
- 02: DISCOVERY - DRAWING WITH LIGHT**
Graphics and Painting in computer games
Use the Painter to create your first images
- 03: DISCOVERY - ANIMATION WITH SPRITES**
How does animation work?
Using the code editor for the first time to make an animation
Certificate Ceremony

INTERMEDIATE

- 04: DICE GAME - SKILL V CHANCE**
Randomisers - dice, spinners, coins tosses, cards etc
Build a dice, agree some rules and play a first game
- 05: DICE GAME - RULES**
The role of rules in computer games.
Create a new board game, design the board and write the rules
Make it!
- 06: DICE GAME - PLAY AND EVALUATE**
Groups Play session and Evaluation
Certificate Ceremony

ADVANCED

- 07: MAZE - THE WORLD AND OBJECTS**
The use of a World and Objects in computer games
explore more advanced names and features of code
(variable, sprites, costumes, x y coordinates)
- 08: MAZE - DESIGN/CODE/TEST**
Plan a maze on paper labelling x y coordinates
Create maze on Arcade Coder and bug test
- 09: MAZE - EVALUATE**
Time to make any last minute tweaks
Play and evaluate each others games
- 10: WHACK A MOLE 2 - THE PLAYERS**
The role of the Player in computer games
Make Whack a Mole 2 player game, Bug fixing and testings
- 11: WHACK A MOLE 4 - DESIGN/CODE/TEST**
Make Whack a Mole 4 player game
Bug fixing and testings
- 12: WHACK A MOLE - PLAY AND EVALUATE**
Groups Play session and evaluation - Whack a Mole Olympics
Certificate Ceremony