

Game Lab

60 minutes

Game Design Studio

WHAT THIS LESSON DOES

As the teacher, guide students through brainstorming and creating MakeCode Arcade projects. Introduce the activity, form small groups, facilitate brainstorming, oversee idea presentations with feedback, support project creation, and organise a celebratory 'Show and Tell' session.

WHAT STUDENTS SHOULD BE ABLE TO DO

- Develop and articulate original ideas for a simple MakeCode Arcade project.
- Collaborate effectively in small groups to brainstorm and refine project ideas.
- Present project ideas clearly and constructively, incorporating feedback from peers and teachers.
- Apply basic MakeCode Arcade blocks to create a simple game or interactive project.
- Reflect on the process of project creation, identifying learning points and areas for improvement.

BEFORE THE LESSON

- Open MakeCode Arcade and check it loads on your school network before the bell, then have a simple example game ready to demonstrate in step 1.
- Sort pens and paper for each group of three to five pupils for the brainstorming session.
- Confirm you have enough computers, one per group is enough, and that the board or projector will mirror a pupil's screen for the closing show-and-tell.
- Have a saved MakeCode project ready to open quickly so the demonstration does not eat into build time.

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HOW THE LESSON RUNS

Introduce the lesson
Forming Groups
Brainstorming Session
Sharing and Feedback Session
Project Creation
Show and Tell

TEACHING MOVES

- 1. Introduce the lesson. Play or open your example game and name the blocks pupils already know that make it work, so ideas stay inside what they can actually build today.
- 2. Forming Groups. Set groups of three to five yourself rather than letting pupils pick, and say aloud that everyone's idea gets heard before the group decides.
- 3. Brainstorming Session. Start a visible ten-minute timer and keep steering groups toward one small, finishable idea rather than an ambitious one they cannot complete.
- 4. Sharing and Feedback Session. Model one kind, specific piece of feedback first, then hold pupils to that shape. Use the scripted line to gently shrink oversized ideas without deflating them.
- 5. Project Creation. Circulate constantly, unstick groups with a question rather than the answer, and point pupils to each other when one group solves something.
- 6. Show and Tell. Only run this if time is genuinely left. Ask each group what they changed from their plan, not just what they built.

WHAT TO WATCH FOR

- Pupils treat this as a competition and pitch huge, arcade-quality games they cannot finish in the time. Use the scripted reminder that big apps started small, and steer each group to one sprite doing one thing they can actually complete.
- In a group, one pupil takes the mouse and the others watch. Ask groups to agree who builds which part, and swap the driver partway so more than one pupil handles the blocks.

DIFFERENTIATION

- Emerging: Give a starter prompt if a pupil is stuck brainstorming: one sprite that moves when you press a button. Pair them with a confident group member and give them a single, clear part of the build to own.
- Developing: Let them work from their brainstorm drawing, and prompt them to add one thing at a time and test it before moving on.
- Proficient: Once their simple game works, challenge them to add a score, a sound or a second sprite using blocks they already know. Ask them to explain their sequence of blocks back to you and predict what would change if they reordered them.