

## technology

## ScratchJr: a sequence with a repeat

## Lesson at a glance

Open by spotting the repeating bit in a familiar dance or clap pattern. Name the repeat block, then model on the IWB: one hop inside a repeat set to 3, run it, change the number, and briefly try a turn the same way. Pairs plan hop or turn and a number with tablets still closed, then build and test on one shared ScratchJr tablet. They record blocks, repeat number and what happened on the Investigation Journal page, and close with a short share linking the block back to the dance loop.

## Learning objectives

- Build a ScratchJr sequence that uses a repeat block
- Plan steps first, test the program, and say what the repeat did

## Before the bell – prep

Charge one tablet per pair; open each to a blank ScratchJr project with one character ready before the bell. Mirror ScratchJr on the IWB for the demo. Print or rule Investigation Journal pages with three headings: blocks/steps in order · repeat number · what the repeat did.

## Materials

| Item                            | Qty | Per   | Source             | Low-cost substitute                                                                             |
|---------------------------------|-----|-------|--------------------|-------------------------------------------------------------------------------------------------|
| tablet with ScratchJr installed | 1   | group | school kit         | teacher drives ScratchJr on the IWB while pairs take turns building                             |
| Investigation Journal page      | 1   | pupil | provided printable | plain paper with three headings: blocks or steps in order · repeat number · what the repeat did |

## Safety watch-point

One tablet per pair on the desk; no walking with devices. Save or reset projects, then charge and store tablets at pack-away.

**Teaching moves**

- **Today's coding word:** Keep the board light: star the phrase repeat block and note that the number tells how many times. Mention test only as run-and-watch. If you can, freeze a still of a repeat with one hop in its mouth so pupils see the shape before the live demo.
- **Watch the repeat block:** Tablets stay face-down. Think aloud: wonder, predict, drag green flag + hop inside repeat set to 3, run, then change to 5. Hands up before each run for how many hops. In 30–40 seconds swap hop for turn inside the same repeat so pairs know both choices. No IWB? Act it with a child and arrow cards, then hold up one tablet.
- **Plan our hop or turn:** Name pairs first. Devices stay closed. Stem: Our character will \_\_\_\_ inside a repeat set to \_\_\_\_\_. Suggest 3, 4 or 5. One partner says the plan; the other checks. Hands-up share of two plans; offer hop inside repeat 4 if a pair is stuck.
- **Build and test with a repeat:** Only now wake tablets—one per pair, swap driver halfway. Coach the look-fors: start block, motion inside the repeat mouth, number set, green flag, count aloud. On bugs ask: Is it inside the mouth? What number shows? Did you press the flag? Fast finishers add a second action inside the same repeat or try a new number and predict first.
- **Record in your journal:** Hand out the journal only now. Say the three headings aloud as sheets go out. Circulate; if a pair only drew the character, get them to add the repeat number. Ask one pair to read their what the repeat did line as a model. Keep sheets in class—not homework.
- **What did the repeat do?:** Two or three pairs share action, number and result. Then whole-class: Was that like hop-hop-hop in our dance? Celebrate who fixed a bug. Gently correct any claim that a bigger number means louder or faster—the number is how many times only.

**What it should show**

With a motion block inside the repeat and a start block, the character should hop or turn exactly the set number of times (e.g. repeat 4 → four hops). Odd counts usually mean the motion sat beside the repeat not in its mouth, the number was left at 1, or there was no green-flag start—re-check those three before re-running.

**Misconceptions & interventions**

- **The repeat block is just decoration—you still need one hop block for every hop.** — On the IWB, build three separate hops, then rebuild with one hop inside repeat-3. Ask which version did the same job with fewer blocks.
- **Pupils leave the hop or turn beside the repeat, so the mouth stays empty and only one move (or none) runs.** — Point at the repeat mouth on their screen: Is the block sitting inside or next to it? Have them drag it in and count again.
- **A bigger number makes the character louder or faster.** — Run the same hop at 3 then at 5. Ask what changed and what stayed the same—count only, not speed or volume.

Differentiation

| Emerging                                                                                                                                                                                                                                                                                                                                      | Developing                                                                                                                                                                                                                                               | Proficient                                                                                                                                                                                                                                                                       |
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| <ul style="list-style-type: none"><li>• Offer the ready plan hop inside repeat 4 and stay at the pair desk to check the block is inside the mouth before they press the green flag.</li><li>• On the journal, accept a simple drawing of the character plus the repeat number written large; scribe the what it did line if needed.</li></ul> | <ul style="list-style-type: none"><li>• After a successful run, change only the number, predict the new count aloud, then test.</li><li>• Swap driver so the partner rebuilds the same plan from scratch and both can say what the repeat did.</li></ul> | <ul style="list-style-type: none"><li>• Add a second action inside the same repeat (e.g. hop then turn) and predict the full pattern before running.</li><li>• Tell the class one real-life repeat they notice (song chorus, skipping pattern) that matches the block.</li></ul> |

Cross-curricular hook

Link to PE or Music—spot the repeating phrase in a class dance, clap pattern or song chorus and match it to the repeat number.