

technology

ScratchJr: a sequence with a repeat

Lesson at a glance

Open by spotting the part of a known dance or clap that happens again and again, then name the ScratchJr repeat block. Model on the IWB: one hop inside a repeat set to 3, then a turn inside the same way. Pairs plan hop or turn and a number with tablets face-down, then build, press the green flag and fix bugs. They record blocks, repeat number and what the repeat did on the Investigation Journal page before a short share.

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 with ScratchJr open to a blank project and a character ready. Mirror ScratchJr on the IWB for the demo. Print or set Investigation Journal pages with three headings only: blocks/steps in order, repeat number, what the repeat did. Tablets stay face-down until the build step.

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

Tablets stay face-down until the build step; one tablet per pair, charged and carried carefully. Save or reset projects and return devices to charge as your school prefers.

**Teaching moves**

- **Getting Started:** No tablets out. Ask for one dance or clapping pattern the class knows and sketch it on the board. Circle the part that repeats and ask: which bit happens more than once?
- **Today's coding word:** Freeze a still of a repeat block with one hop in its mouth on the IWB if you can. Spend most time on the repeat block and the number window; leave sequence as everyday talk for later.
- **Watch the repeat block:** Think aloud: wonder, predict, drag green-flag + hop inside repeat-3, run, then change the number to 5. Take hands-up guesses before each run. Second quick model: clear the hop, put one turn inside the same repeat, run once. Keep pupil tablets face-down.
- **Plan our hop or turn:** Name pairs first. Tablets stay closed. Each pair chooses hop or turn and a number (suggest 3, 4 or 5) and says the stem: Our character will ____ inside a repeat set to _____. Share two plans; offer hop-repeat-4 to any stuck pair.
- **Build and test with a repeat:** Only now wake the tablets—one per pair, partners swap who drives halfway. Watch for empty repeats, number left at 1, or missing start block. Coach with: Is the hop or turn inside the mouth? What number is showing? Did you press the green flag?
- **Record in your journal:** Hand out the journal page only now. Say the three headings aloud as you give them out. Circulate and ask one pair to read their 'what the repeat did' line as a model; if a pair only drew the character, prompt them to add the repeat number.
- **What did the repeat do?:** Invite two or three pairs max. After two shares ask the whole class: was that like hop-hop-hop in our dance? Then celebrate bugs fixed: who had to change something and test again?

What it should show

With a start block and one hop or turn inside a repeat set to n , the character should hop or turn exactly n times. Odd results usually mean the motion block sits beside the repeat not in its mouth, the number is still 1, or there is no start block—re-check those three before changing anything else.

Misconceptions & interventions

- **Pupils treat the repeat block as decoration and leave the hop or turn sitting beside it, not inside the mouth.** — Point at their screen and ask: is the motion block inside the repeat mouth? Drag it in with them and re-run so they see one block do the work of many.
- **Pupils think a bigger number makes the character louder or faster, not that it runs more times.** — Have them count aloud on a run of 3, then change only the number to 5 and count again—same speed, more hops.
- **Pupils leave the repeat number at 1, so nothing obvious seems to happen and they think the block is broken.** — Ask what number is showing, set it to 3 or 4 together, and re-test so the loop is visible.

Differentiation

Emerging	Developing	Proficient
• Offer the ready plan hop inside a repeat set to 4, and sit with the pair to check the motion block is inside the mouth before they press the green flag.	• After a successful run, ask them to change only the number, predict the new count aloud, then test and compare.	• Stretch inside the same project: add a second action inside the same repeat (hop then turn) or try a new number and say the prediction before running.

Cross-curricular hook

Link to PE dance phrases and Maths pattern work—the repeating part of a clap or border is the same idea as the ScratchJr repeat.