

LESSON 18

How search engines find and rank pages

40 minutes

Strand 2: Let's get connected

Outcome 2.3

Outcome 2.4

WHAT THIS LESSON DOES

Find out the key differences between web browsers and search engines. Act as a search engine to rank pages for a query and then use real searches to see how different factors change the order of results shown.

CURRICULUM OUTCOMES

Outcome	What the specification asks for
2.3	explain the difference between search engines and web browsers
2.4	investigate how search engines deliver results

WHAT STUDENTS SHOULD BE ABLE TO DO

- Explain the difference between a search engine and a web browser (LO 2.3)
- Investigate how a search engine finds and ranks results (LO 2.4)

BEFORE THE BELL

- No page prep needed: the Be the search engine activity already includes four pages and two ranking goals. Check that student devices can reach a search engine for the trials in step 5 (or plan to run those trials on the board).
- Student devices with browser access, or run the ranker on the board
- Student devices with browser and search-engine access

How search engines find and rank pages

HOW THE LESSON RUNS

4 min	introduction	Start
3 min	content	Browser or search engine?
3 min	content	Crawl, index, rank
12 min	activity	Hands-on: be the search engine
4 min	activity	Trial 1: searching against typing an address
5 min	content	Trials 2 and 3: change the words
3 min	content	Write down what you found
3 min	content	Make sense
2 min	content	Reflect
1 min	summary	What you covered

TEACHING MOVES

- Model the distinction between browser and search engine using the classroom display.
- For the ranking activity, allow two minutes of individual ranking before revealing a goal order.
- Run Trial 1 whole-class on the board, then pairs on Trial 2 with a visible timer; treat Trial 3 as optional extension only.
- Have students write their two lines (Trial 1 and Trial 2) before devices close so Make sense has concrete reports.
- Use cold-call questions in Make sense to check understanding.

WHAT TO WATCH FOR

- Students confuse browser and search engine; clarify by pointing to the address bar versus the search box.
- Students may not notice personalisation. At Reflect, one line is enough: results can also depend on signals about the person searching (for example location or recent searches). Comparing several devices here costs more time than it teaches.
- Students treat the top result as "the best page". In Make sense, ask: "Best for whose goal?" and point back to the two feed-ranker takeaways.

DIFFERENTIATION

- Support: offer these stems: "A browser is the app that..." / "A search engine is the service that..." / "I know the difference because the address bar... while the search box..."
- Support: pair students for the ranking activity to discuss orders.
- Extension: challenge students to suggest additional signals a search engine might use beyond those discussed. Trial 3 in step 6 is also an optional extension for pairs who finish early.