

technology

Technology in Irish life: digital systems around us

Lesson at a glance

Open by collecting everyday Irish digital systems pupils already use — Leap, self-checkout, weather apps, farm tech. Teach Input–Process–Output and data in plain words, then place Leap cards together on the flow-builder interactive, parking the journey-log as a data trail with Process. Groups research a different system on printed cards, build an A3 IPO poster with one privacy question, transfer a quick sketch to the Investigation Journal, share in one-minute slots, and close with a talk on benefits and fair data questions.

Learning objectives

- Map a real Irish digital system as inputs, processes, outputs and data used
- Present findings on how the system shapes daily life and raise one question about data or privacy

Before the bell – prep

Print and cut the four research cards (self-checkout, weather app, smart farming, eFlow) — one card per group; Leap stays teacher-model only. Set out one A3 sheet and markers per group. Open the flow-builder interactive on the IWB in explore mode, IPO layout, before the bell.

Materials

Item	Qty	Per	Source	Low-cost substitute
research cards (self-checkout, weather app, smart farming, eFlow toll tag)	1	group	provided printable	one shared class set of four cards passed between groups in turn
A3 poster sheet	1	group	classroom	two A4 sheets taped side by side
markers or colouring pencils	4	group	classroom	ordinary pencils and one shared marker per group
Investigation Journal page	1	pupil	classroom	plain paper with the same recording task written on the board

**Safety watch-point**

Low hazard: supervise scissors if cards are cut in class; optional classroom tablet stays on a weather home screen only — no pupil account logins.

**Teaching moves**

- **How technologists describe a system:** Keep the board short: Input, Process, Output, Data — one plain example each. Head off the hardware trap once: the phone or machine is not the process; the process is the work it does. Do not fully solve Leap here; save the complete arc for the interactive.
- **Map a Leap card on the board:** Beat 1: place only tap → check balance and journey → gate/beep as Input, Process, Output. Beat 2: reveal journey time and stop logged; ask whether it is heard/seen or quietly kept, then state the rule — no fourth Data column; data trail sits with Process. Fold the room in: 'Are they right? What data is collected?' End with who might use that journey data and what would be fair.
- **Research an Irish digital system:** Give each group one card only and about 17 minutes. Circulate asking them to point to IPO and data on the poster and justify from the clues, not guesses. Push two decisions: which data matters most for the job, and one privacy question they can stand over. Early finishers add one Irish benefit and one risk if data were shared carelessly.
- **Record your IPO map:** Five-minute paper transfer only — labels from the poster into the Investigation Journal, not a second artwork. Prompt strugglers aloud: Input is... Process is... Output is... Data used is... Our question is... Keep posters free for the share.
- **Share your findings:** Visible timer: system → IPO in one breath → key data → daily-life benefit → privacy question, about one minute each. One listener comment after each share, or two at the end. Over eight groups: 3-minute neighbour share first, then spotlight four (one per card type). Revoice: 'You described the system before judging it — that is how technologists start.'
- **Living with digital systems:** Synthesis for a full five minutes — do not re-hear every poster. Draw two or three concrete examples from the shares. Surface: systems save time and help decisions; some data is needed but not every detail forever; fair questions are good technology thinking, not anti-technology.

**What it should show**

Groups justify IPO from card clues: e.g. self-checkout scans/pay → match prices/total → receipt; weather app location/readings → forecast → alerts; farm sensors → compare to targets → dashboard/action; eFlow tag/plate → match account/toll → charge. Data trail labelled with Process. A successful outcome names which data matters most and one explainable privacy question matched to it — not a scare story. Odd maps usually guessed beyond the clues; send them back to the card wording.



Misconceptions & interventions

- **Pupils say the phone, till or gantry is the process.** — Point at the device, then ask what hidden work it does with the input — check, calculate, decide, store. Rename the device as hardware and the work as process on their poster.
- **Pupils invent a fourth IPO box called Data, or treat logged facts as an output they can hear or see.** — Return to the Leap board: journey time and stop logged sits with Process as a data trail. Have them add a small ‘data trail’ label beside Process, not a new column.
- **Privacy questions become scare stories (‘they steal everything’) with no link to the system’s job.** — Ask which named data on their poster the question is about, and whether that data is needed for the job. Tighten to one fair question they can explain, e.g. who sees the shopping list or farm animal IDs.

Differentiation

Emerging	Developing	Proficient
• Sit with the teacher table and use the spoken stems Input is... Process is... Output is... while pointing at card clues before writing on the poster. • Offer a partly labelled IPO sketch on plain paper they complete from the card, then copy key labels into the Investigation Journal.	• After the main map, decide which single piece of data matters most for the job and say why from the clues. • Add one concrete way the system helps people in Ireland beside the privacy question.	• Critique whether every data item on the card is needed for the job, and tighten the privacy question to who sees it and for how long. • Compare their system’s data trail with another group’s (e.g. eFlow vs Leap) and name one shared fairness issue.

Cross-curricular hook

Tie to SPHE digital citizenship — fair questions about who sees personal data — and oral language when groups present in one clear minute.