

technology

Technology in Irish life: digital systems around us

Lesson at a glance

Open by listing real Irish digital systems pupils used this week — Leap card, self-checkout, weather app, farm machines. Define input, process, output and data, then place four Leap-journey cards on the board IPO map together, treating the journey-log as the data-trail puzzle. Groups research one of four systems (self-checkout, weather app, smart farming, eFlow) on A3 posters, transfer a labelled IPO sketch plus privacy question into the Investigation Journal, share findings, and close with a display-only 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 is teacher-model only. Set out one A3 sheet and markers per group. Open the Leap IPO interactive on the whiteboard before pupils arrive so the three columns and four drag-cards are ready.

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**

If a classroom device is used to show a weather app or similar screen, use only adult-approved school devices on the school network. Do not ask pupils for personal account logins or home addresses. No opening of mains-powered equipment.

**Teaching moves**

- **Getting Started:** Take three or four quick hands-up examples of Irish digital systems and list them on the board only — do not map any yet. Ask which might quietly collect the most data, then move on; keep this to about three minutes.
- **How technologists describe a system:** Give the four words with one plain example each from the teacher table. Head off the idea that the phone or machine is the process — the device is hardware; the process is the work it does. Leave Leap unsolved and tell them the next step places the cards together.
- **Map a Leap card on the board:** First drag the three clear cards with the class: tap = Input, check balance and journey = Process, gate or beep = Output. Only then reveal journey time and stop logged. Take two or three ideas before stating the rule: no fourth Data column — the data trail sits with Process. Ask who might use that journey data and what would be fair.
- **Research an Irish digital system:** Hand each group one research card, A3 and markers — nobody gets Leap. Circulate for about 17 minutes and make groups point to IPO and data on the poster, justified from the card clues. Push two decisions: which data matters most for the job, and one privacy question they can stand over.
- **Record your IPO map:** Keep the Journal light: transfer labels from the poster, mark the data trail, one help-in-Ireland sentence, and their privacy question. If a group invents a fourth Data column, send them back to the board rule. Aim for about five minutes so sharing still fits.
- **Share your findings:** Use a visible timer and the tight stem: system → IPO in one breath → key data → daily-life benefit → privacy question. About one minute per group; one listener comment after each. If more than eight groups, neighbour-share first then spotlight four (one per card type).
- **Living with digital systems:** Spend the full five minutes pulling benefits and data questions already heard — shopping, weather, farming, tolls — rather than hearing posters again. Draw out that systems need some data to work, but not every detail forever, and that fair questions are part of good technology thinking.

**What it should show**

Posters and Journal pages should show a justified IPO map with data sitting under Process (not a fourth column), one named data example judged most important, and one explainable privacy or fairness question. Weak maps usually copy the card wording without choosing; nudge them to point back to a specific clue. Early finishers add one Irish benefit and one careless-sharing risk.



Misconceptions & interventions

- **Pupils say the phone, till or sensor is the process.** — Hold up the device idea and restate: the machine is hardware; the process is the hidden work (check fare, match barcode, build a forecast). Point them back to the Leap board where check balance and journey sits in Process.
- **Pupils invent a fourth IPO box called Data, or put the journey log under Output because it is stored.** — Return to the board rule: there is no Data column; a data trail is facts the process uses or stores, so it sits with Process. Add a small data-trail label beside Process if needed.
- **Privacy questions become scare stories rather than fair questions matched to the data.** — Ask which data on their poster the question is about, and whether that data is needed for the job. Revoice: fair questions are part of technology thinking, not anti-technology thinking.

Differentiation

Emerging	Developing	Proficient
• Give oral stems at the Journal page: Input is... Process is... Output is... Data used is... Our question is... and let them copy labels straight from their poster. • Stay longer at that table and ask them to point to one clue on the card for each IPO choice before writing.	• After IPO is solid, ask which single piece of data matters most for the job and why, then tighten their privacy question so it names that data.	• If finished early, add one way the system helps people in Ireland and one risk if the data were shared carelessly; in share, add only what is new if another group held the same card.

Cross-curricular hook

Links to SPHE digital wellbeing — what data is needed for the job, who sees it, and what is fair to keep.