

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 brief.
- **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.