

Data, algorithms and digital power

IB DP Digital Society Data, algorithms and digital power full package

1. Inquiry at a glance

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IB Digital Society: the seven concepts (change, expression, identity, power, space, systems, values and ethics) working on data and algorithms, focused through contexts into inquiry with real-world examples: paper 1's integrated demand at SL.

Must-know: a concept is a question asked of a case; data is raw capture with makers (collection, processing, storage); algorithms carry assumptions in and decisions out; the focus formula (concept x content x context x example).

2. Seven lenses

Seven lenses

Change (evolution or transformation), expression (who can speak, how far it travels), identity (self and group remade), power (who decides, who benefits), space (place reconfigured), systems (interlocking parts, emergent effects), values and ethics (what is acceptable). The same app is a different object through different lenses.

Worked: the attendance app read four ways (the register's change of medium; the power to query records; attendance taken anywhere; the ethics of tracking minors).

3. Data and algorithms

Data and algorithms

Data is raw capture (timestamps, coordinates); information is data made meaningful. Ask how data is collected (what the sensor misses), processed (cleaned, matched, modelled) and stored (who holds it, how long): a dataset is an artefact with makers. An algorithm is instructions on that data: assumptions in, decisions out.

Worked: the lateness rule's one bell time for all bus routes makes rural students late by design; the dataset is not neutral, and the values lens sees it.

4. Focusing inquiry

Focusing inquiry

The formula: concept x content x context x real-world example, asked as a question worth answering. The failure modes: the concept-only essay (no case), the case-only story (no concept), the context dump (no digital system in view).

Worked: power (concept) x algorithms (content) x social and economic (contexts) x the attendance app (example): does automation relocate the power to define lateness from teachers to the rule's authors?

Check yourself

Check yourself

Seven concepts as questions asked of cases.

Data vs information; collection, processing, storage.

Algorithms: assumptions in, decisions out.

The focus formula; the three failure modes.