

# Lesson 5: Critical Thinking - Privacy & Ethics

Data Protection, AI Ethics & Creating Your Safety Plan • 60 to 75 Min • KS3

## Learning Objectives

- Identify personal information that should never be shared with AI systems
- Understand how AI collects, stores, processes, and monetises personal data
- Discuss 4 key ethical principles: fairness, transparency, privacy, accountability
- Know their data rights under UK GDPR and the Children's Code
- Create a personal AI safety plan and take home the Family AI Agreement
- Reflect on the full 5-lesson unit and consolidate learning

## Materials Needed

- Privacy Checkup Worksheet (from toolkit)
- Family AI Agreement template (from toolkit), one per student to take home
- Four Corners signs: Strongly Agree, Agree, Disagree, Strongly Disagree
- "Data Timeline" handout (printable below)
- Personal AI Safety Plan template (printable below)
- Unit Assessment quiz (optional, 15 questions, printable below)
- Student devices for Privacy Checkup (optional)

# Teacher Background Knowledge

## The Data Economy: Understanding the Business Model

Most internet services that children use are “free”, but they aren’t really free. The business model is: **collect user data -> build profiles -> sell targeted advertising.**

### Key statistics:

- Google’s 2023 revenue: **\$307 billion**, 80% from advertising
- Meta’s (Facebook/Instagram) 2023 revenue: **\$135 billion**, 97% from advertising
- TikTok projected 2025 ad revenue: **\$27 billion**
- Average revenue per user (ARPU) for Meta in Europe: **\$19/quarter**

The phrase to teach: **“If you’re not paying for the product, you ARE the product.”**

### What data is collected:

Location (GPS, Wi-Fi, cell towers), browsing history, search history, app usage, contacts, photos (EXIF data includes location), messages (on some platforms), purchase history, biometric data (face, fingerprint), voice recordings (smart speakers), typing patterns, sleep schedule (fitness trackers), health data, social connections.

## What AI Chatbots Do With Your Data

### OpenAI (ChatGPT):

- Conversations are stored by default (can opt out)
- Data may be used to train future AI models
- Conversations may be reviewed by human trainers
- Data can be subpoenaed by law enforcement
- Under-13s are prohibited; 13 to 18 need parental consent

### Google (Gemini):

- Conversations may be reviewed by human annotators
- Data retained for up to 3 years
- Connected to Google account data ecosystem

**Key message for students:** Treat AI chats as PUBLIC, not private. Never share: full name, school name, address, phone number, passwords, photos of yourself, family information, financial information, location.

## UK Data Protection for Children

### UK GDPR:

- Children under 13 cannot consent to data processing; parental consent required
- Privacy policies must be written in clear language children can understand
- Right to access: You can ask any company what data they hold about you
- Right to erasure: You can ask companies to delete your data
- Right to object: You can object to profiling and automated decisions

### ICO Children's Code (Age Appropriate Design Code):

- 15 standards for online services likely to be accessed by children
- High privacy by default for under-18s
- No "nudge techniques" to weaken privacy settings
- Minimal data collection, only what's necessary
- No profiling by default unless compelling reason
- Geolocation off by default
- Services must complete a Data Protection Impact Assessment

## Four Ethical Principles of AI

**1. Fairness:** Does the AI treat all people equally regardless of race, gender, age, disability? Example: recruitment AI that penalises women is unfair.

**2. Transparency:** Can we understand HOW the AI makes decisions? Many AI systems are "black boxes"; even their creators can't explain individual decisions.

**3. Privacy:** Is user data collected, stored, and used ethically? Is consent genuinely informed? Can users control their data?

**4. Accountability:** When AI causes harm, who is responsible? The developer? The company? The user? Currently, there's no clear answer in many cases.

## Detailed Lesson Timeline

Time	Activity	Detailed Instructions
0 to 8 min	Unit Review & Hook	<p><b>Quick review of Lessons 1 to 4:</b> Ask one question per lesson: L1: "What is AI?" L2: "How do recommendation algorithms work?" L3: "What is the REAL Framework?" L4: "What are deepfakes?"</p> <p><b>Hook: Data Timeline:</b> "Let's calculate how much data one teenager generates in a single day:"</p> <ul style="list-style-type: none"> <li>• 50 photos taken (each 3 to 5 MB = 200 MB)</li> <li>• 200 messages sent (location, typing speed, contacts)</li> <li>• 100 Google searches (interests, questions, concerns)</li> <li>• 12 apps used (each tracking behaviour)</li> <li>• Location tracked 24/7 (GPS ping every few minutes)</li> <li>• 30 websites visited (browsing history, cookies)</li> <li>• 15 videos watched (interests, attention span)</li> <li>• Social media scrolling (every pause, like, share tracked)</li> </ul> <p><b>That's approximately 40 to 80 MB of behavioural data per day, 15 to 30 GB per year.</b> Ask: "Who owns all this data? Who profits from it?"</p>
8 to 20 min	Never Share with AI	<p><b>Explicitly teach the "Never Share" list:</b></p> <p>Full name (first + surname together) School name or location Home address or area Phone number Photos of yourself or friends Passwords or PINs Family information (parents' names, siblings) Financial information (bank details, card numbers) Medical information Emotional vulnerabilities ("I feel depressed", "I'm being bullied")</p> <p><b>WHY?</b> (Explain each):</p> <ul style="list-style-type: none"> <li>• Data is stored and may be used for training</li> <li>• Human reviewers may read conversations</li> <li>• Data breaches happen; OpenAI had one in March 2023</li> <li>• Law enforcement can subpoena records</li> <li>• AI is not a therapist or counsellor. For emotional support, talk to a real person (Childline: 0800 1111)</li> </ul>

Time	Activity	Detailed Instructions
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20 to 35 min	<b>Ethics Debate: Four Corners</b>	<p>Place signs in 4 corners: <b>Strongly Agree, Agree, Disagree, Strongly Disagree.</b> Read each statement. Students move to their corner. Each corner shares reasoning.</p> <p><b>Statement 1:</b> “Schools should use AI to monitor all student emails and messages to prevent bullying.” <i>For: protects victims, catches bullies. Against: invasion of privacy, surveillance state, false positives, chilling effect on free speech.</i></p> <p><b>Statement 2:</b> “If a company’s app is free, it’s fair for them to use your data to make money.” <i>For: they need revenue, you choose to use it. Against: children can’t truly consent, data use is opaque, power imbalance.</i></p> <p><b>Statement 3:</b> “AI should be allowed to decide who gets a job interview.” <i>For: removes human bias, efficient. Against: AI has its own biases, people deserve human judgement, no accountability.</i></p> <p><b>Statement 4:</b> “Governments should ban all deepfake technology completely.” <i>For: prevents harm, protects people. Against: legitimate uses (film, art, accessibility), unenforceable, stifles innovation.</i></p> <p><b>Key teaching point:</b> These are genuine dilemmas with no easy answers. The ability to consider multiple perspectives is critical thinking in action.</p>
35 to 47 min	<b>Privacy Checkup</b>	<p>Distribute the Privacy Checkup worksheet from the toolkit. Students audit their own digital privacy across 7 categories:</p> <ul style="list-style-type: none"> <li>• Password Safety (8 items)</li> <li>• Social Media Privacy (8 items)</li> <li>• Personal Information (7 items)</li> <li>• Device &amp; App Settings (8 items)</li> <li>• AI &amp; Chatbot Privacy (6 items)</li> <li>• Browsing &amp; Internet (6 items)</li> <li>• Phone &amp; Messaging (5 items)</li> </ul> <p>Students score themselves honestly. Total: ____/48. <b>Identify top 3 actions to improve score.</b> These become the start of their safety plan.</p>
Time	Activity	Detailed Instructions
47 to 55 min	<b>Personal Safety Plan</b>	<p>Students create their personal AI Safety Plan using the template:</p> <p><b>Section 1: My Privacy Actions</b> (from Privacy Checkup) 3 specific actions to improve their digital privacy this week.</p> <p><b>Section 2: My REAL Framework Commitment</b> How they’ll use REAL when doing homework or reading content online.</p> <p><b>Section 3: My Deepfake Response Plan</b> The 5-step action plan in their own words.</p> <p><b>Section 4: My AI Boundaries</b> What they will and won’t share with AI chatbots.</p> <p><b>Section 5: Who I’ll Talk To</b> Name 3 trusted adults they’d go to with AI safety concerns.</p>

55 to 63 min	<b>Family AI Agreement</b>	<p>Distribute the Family AI Agreement template. Explain:</p> <p>“This is HOMEWORK, but it’s not a test; it’s a conversation starter. Take this home and sit down with your parents or guardians. Go through each section together. Talk about screen time, AI chatbot rules, privacy, social media, and what happens if rules are broken. Sign it together.”</p> <p>Walk through the main sections briefly:</p> <ul style="list-style-type: none"> <li>• Screen time rules (weekdays vs weekends)</li> <li>• AI chatbot rules (what’s allowed, what’s not)</li> <li>• Privacy and safety commitments</li> <li>• Social media rules</li> <li>• Consequences and rewards</li> <li>• Review schedule (when to revisit and update)</li> </ul>
63 to 75 min	<b>Unit Summary &amp; Celebration</b>	<p><b>Review all 5 lessons:</b></p> <p>L1: AI is technology that learns from data, not magic, not a brain  L2: AI personalises everything we see; filter bubbles are real  L3: AI makes mistakes; always verify with REAL  L4: Deepfakes are dangerous; know the action plan  L5: Your data is valuable; protect it</p> <p><b>Final message:</b> “You are now AI-literate citizens. You understand what AI is, how it works, where it can go wrong, and how to stay safe. Use this knowledge to make good decisions. Share what you’ve learned with your families.”</p> <p><b>Optional: Unit Quiz</b> (15 questions, printable below)</p> <p><b>Celebration:</b> Certificate of completion for the AI Safety unit (optional).</p>

## MY AI SAFETY PLAN

Name: \_\_\_\_\_ Date: \_\_\_\_\_

### My Top 3 Privacy Actions This Week:

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

### My REAL Framework Commitment:

When I use AI for homework, I will: \_\_\_\_\_

\_\_\_\_\_

### My Deepfake Response Plan (in my own words):

If I see a suspected deepfake, I will: \_\_\_\_\_

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**I will NEVER share with AI chatbots:**

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**My 3 Trusted Adults:**

1. \_\_\_\_\_ 2. \_\_\_\_\_ 3. \_\_\_\_\_

**Signed:** \_\_\_\_\_ **Date:** \_\_\_\_\_

# Unit Assessment Quiz (15 Questions)

Optional formative/summative assessment covering all 5 lessons.

## 1. What is artificial intelligence?

- a) A robot that looks like a human
- b) Technology that learns from data to make decisions or predictions
- c) A very fast computer
- d) A computer program that follows rules

## 2. What is the main difference between AI and a regular computer program?

- a) AI is faster
- b) AI costs more to build
- c) AI learns from examples rather than following fixed rules
- d) AI only works on expensive computers

## 3. Which of these uses AI?

- a) A calculator
- b) A light switch
- c) Netflix recommendations
- d) A toaster

## 4. What is a “filter bubble”?

- a) A type of spam filter
- b) When algorithms only show you content matching your existing interests
- c) A privacy setting
- d) A type of deepfake

## 5. What does AI “hallucination” mean?

- a) AI seeing things that aren't there
- b) AI refusing to answer
- c) AI generating false information with confidence
- d) AI running too slowly

## 6. What does the R in the REAL Framework stand for?

- a) React quickly
- b) Read carefully
- c) Report immediately
- d) Research online

## 7. What is a deepfake?

- a) A very deep website
- b) AI-generated or manipulated media designed to look authentic
- c) A type of computer virus
- d) A very detailed photograph

## 8. How many fingers do AI-generated images sometimes show?

- a) Always exactly 5
- b) Always exactly 4
- c) Often 6 or more (or fewer)
- d) AI never gets hands wrong

## 9. Under the Online Safety Act 2023, creating intimate deepfakes is:

- a) Legal in the UK
- b) Only illegal for adults
- c) A criminal offence
- d) Only illegal if shared

## 10. What should you do FIRST if you see a suspected deepfake of a classmate?

- a) Share it with friends to warn them
- b) Ignore it
- c) Don't share it and tell a trusted adult
- d) Try to make a better one

**11. Why do companies collect your data?**

- a) To keep you safe
- b) Because the law requires it
- c) To sell targeted advertising
- d) For fun

**12. Which of these should you NEVER share with an AI chatbot?**

- a) A maths problem
- b) Your full name and school
- c) A creative story idea
- d) A science question

**13. What is AI bias?**

- a) When AI prefers one programming language
- b) When AI makes random errors
- c) When AI produces unfair results because it learned from biased data
- d) When AI is too slow

**14. What does “If you’re not paying for the product, you ARE the product” mean?**

- a) Free apps are always low quality
- b) Companies use your data and attention to make money from advertisers
- c) You should always pay for apps
- d) Free apps have more features

**15. Which of these is the BEST strategy when reading AI-generated information?**

- a) Trust it because AI is very smart
- b) Ignore it completely because AI is always wrong
- c) Check it against multiple reliable sources
- d) Only use it for entertainment

## **Answer Key (Teacher Only)**

**1:B, 2:C, 3:C, 4:B, 5:C, 6:B, 7:B, 8:C, 9:C, 10:C, 11:C, 12:B, 13:C, 14:B, 15:C**

**Scoring:** 1 point per correct answer. Total: \_\_\_/15

13 to 15: Excellent understanding | 10 to 12: Good | 7 to 9: Developing | Below 7: Needs revisiting

## Differentiation Strategies

Activity	Lower Ability / SEN	Core	Higher Ability
<b>Data Timeline</b>	Pre-filled timeline. Students identify 5 data collection points.	Complete timeline. Calculate daily data volume.	Research: What does your favourite app's privacy policy actually say? Present findings.
<b>Ethics Debate</b>	2 simpler statements. Sentence starters for reasoning.	4 statements, Four Corners activity.	6 statements including nuanced ones. Written argument for most challenging statement.
<b>Privacy Checkup</b>	Simplified version (20 items). Teacher-guided walkthrough.	Full 48-item checkup. Independent completion.	Full checkup + audit a family member's privacy (with permission). Compare scores.
<b>Unit Quiz</b>	10 multiple-choice only. Word bank for difficult terms.	15 mixed questions.	15 questions + 2 extended writing: analyse an AI ethics dilemma.

## Key Vocabulary

**Data Economy:** The economic system where personal data is collected, analysed, and monetised, primarily through targeted advertising.

**UK GDPR:** UK General Data Protection Regulation: law governing how personal data is collected, stored, and used.

**Children's Code:** The ICO's Age Appropriate Design Code: 15 standards online services must follow to protect under-18s.

**Right to Erasure:** Your legal right to ask any company to delete all personal data they hold about you.

**Informed Consent:** Agreement given with full understanding of what you're agreeing to. Many terms and conditions are too long and complex for true informed consent.

**Data Breach:** When personal data is accessed, stolen, or exposed without authorisation. Organisations must report breaches within 72 hours.

**Profiling:** Using personal data to analyse or predict behaviour, preferences, interests, or other characteristics of an individual.

**Transparency:** The principle that AI systems should be explainable; users should understand how and why decisions are made.

**Accountability:** The principle that there must be someone responsible when AI causes harm or makes errors.

**Algorithmic Fairness:** The principle that AI systems should treat all people equitably, regardless of protected characteristics.

## Post-Lesson Teacher Notes

**Unit reflection: what worked across all 5 lessons?**

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What would I change for next year's delivery?

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Quiz results summary (average score): \_\_\_/15

**Additional Resources:**

- ICO Children's Code Hub: [ico.org.uk/for-organisations/children](https://ico.org.uk/for-organisations/children)
- Childnet International: [childnet.com](https://childnet.com) (online safety education)
- UK Safer Internet Centre: [saferinternet.org.uk](https://saferinternet.org.uk)
- NSPCC Online Safety: [nspcc.org.uk/keeping-children-safe/online-safety](https://nspcc.org.uk/keeping-children-safe/online-safety)
- The AI Ethics Brief: [brief.ai](https://brief.ai) (weekly AI ethics newsletter)
- BBC Own It app: digital wellbeing tool for children