Computing: Digital Literacy

Year 8 Term 1

1. Digital tools & AI features

Big idea: AI is a powerful tool that predicts patterns from data, but it can be inaccurate, biased and influential—so users must think critically and use it responsibly.

Benefits	Risks
Fast access to information	**Inaccurate or biased information** – AI outputs may be wrong or reflect bias
Instant communication	**Privacy risks** – personal data can be collected, stored or misused
Access to wide knowledge	**Echo chambers** – users may only see content that reinforces their views
Supports learning	**Over-reliance on AI** – reduces independent thinking and judgement
Collaboration	**Addiction / reduced human interaction** – less face-to-face communication
Creativity tools	**Influences opinions and behaviour** – algorithms shape what users think or do
Efficiency – automates tasks and saves time	**Environmental impact** – high energy and water usage in data centres

2. Safe and responsible use

Stay Safe

- Do not share personal information with AI Anything typed can be stored as data and may be accessed later
- Use strong passwords Include upper/lower case letters, numbers and symbols; avoid personal details
- Never share passwords Even with friends, as this can risk accounts and personal data

Be Critical

- Check information using reliable sources
- Seek different viewpoints (avoid echo chambers)
- Use your judgement—question outputs

Understand AI Limits

- AI systems are not human. They do not have feelings or real understanding.
- Do not rely on AI for emotional support. AI cannot provide real empathy.
- Use AI for tasks, not relationships. AI is useful for learning and productivity, but real people provide genuine support.

3. AI vs human interaction

AI does not think, feel or understand – it only simulates human-like responses.

Humans understand context, emotions and body language and draw on real life experience, allowing them to interpret meaning and respond with real empathy. AI currently can not do this.

AI may sound human-like, but this is only an **illusion created by programming (simulated conversation).**
Humans understand **context, tone and sarcasm**, which AI often struggles with

Common Misconceptions

- AI understands you
- AI is always correct
- AI is unbiased
- Chatbots are real "friends"

4. Chatbots & digital relationships

AI (chatbots) generate responses by looking at keywords and predicting the next most likely words using patterns in data.

Chatbots are often programmed to show politeness, keep you using them longer and to obtain as much information from you as possible. **Chatbots use simulated empathy** (polite, supportive language), but they **do not have real feelings or care about you**

Chatbots are always available (24/7) and never disagree, which can make them appealing to users.

Benefits of Chatbots	Risks of Digital Relationships with Chatbots
Provide quick information and explanations	**Social withdrawal** – choosing AI over real-life relationships
Help generate ideas (e.g. stories, revision questions)	**Emotional reliance** – sharing problems with AI instead of real people
Support organisation and tasks	**Over-trusting AI** – treating responses as facts
Offer translation and learning support	**Privacy risks** – personal data may be stored or accessed by developers
Judgment-free space to practise communication	**Reduced critical thinking** -Relying on AI instead of thinking independently

5. Environmental impact of AI

AI is powerful but resource-intensive—using it responsibly helps reduce its impact on the environment

Key Facts

- One AI query can use around **10× more electricity** than a standard search
- AI queries can use **30–80× more water** than a normal search
- Training AI can use enough energy to power **100+ homes for a year**

Environmental Risks

- High energy consumption → contributes to climate change
- Large water usage → impacts water supply
- Land use → data centres require large areas
- Electronic waste (e-waste) → outdated hardware is difficult to recycle
- Use of rare materials → mining impacts the environment

Responsible Use

- Use the right tool (search engine for simple facts, AI for complex tasks) - Use AI only when it adds value!
- Avoid unnecessary AI use to reduce energy consumption
- Be aware of environmental impact when using digital tools
- Think before prompting AI – is it really needed?

6. Keywords

Artificial Intelligence (AI)	Computer systems that use data and algorithms to perform tasks and generate outputs that appear intelligent
Algorithm	A set of step-by-step instructions used to solve a problem or make a decision.
Chatbot	A computer program that simulates conversation by predicting what to say next.
Digital Footprint	The trail of data you leave online through your actions, which can be used to personalise content.
Echo Chamber	An environment where you only see content or opinions that reinforce your existing beliefs.
Bias (AI Bias)	When an AI system produces unfair or unrepresentative results due to the data it was trained on.
Dataset	A collection of data used to train an AI system.
Data Centre	A large facility containing servers that store and process data used by digital systems and AI.