

Lesson Plan (PDF)

Lesson Title: *Introduction to AI and Safe AI Use*

Duration: 45–60 minutes

Description: This lesson introduces students (ages 12–16) to artificial intelligence (AI) and how to use it wisely. Students will learn what AI is, see examples of AI in daily life, and discuss smart vs. risky ways to use AI. They will also explore issues of data privacy and ethical use of AI. By the end, students should understand basic AI concepts and know how to stay safe and think critically when using AI.

Learning Goals: By the end of the lesson, students will be able to:

- Define **artificial intelligence (AI)** in simple terms[1].
- Identify at least two examples of AI in their daily lives (e.g. phone apps, games, or online platforms).
- Distinguish between beneficial (“smart”) uses of AI and risky or harmful uses.
- List ways to protect their privacy and stay safe when interacting with AI tools (e.g. not oversharing personal data).

Materials Needed:

- **Projector/board:** to write warm-up questions and display key points or images (optional).
- **Student devices or printed handouts** of AI reading modules (from provided content on “Understanding AI and Safe AI Use”).
- **Student Worksheet** (one per student) with reflection questions.
- **Discussion Questions Handout** (for teacher or groups) to guide the class discussion on ethics, daily AI use, and privacy.
- (Optional) **Quiz** prepared on AI basics – e.g. a short Kahoot or a few question slides.

Lesson Outline (45–60 min):

1. **Warm-Up (5 min):** Begin by asking a few simple questions to spark interest. For example: “What do you think *AI* means?” and “Can you name an example of AI you’ve seen or used?” Give students a minute to think, then share answers. Write their ideas on the board. (Expected answers might include things like *Siri* or *Alexa*, *self-driving cars*, *face recognition*, *YouTube recommendations*, etc. – any technology where a computer seems to act intelligently[2].) This primes students for the topic and lets you gauge prior knowledge.
2. **Explore “What is AI?” (10 min):** Transition to a brief instructor-led explanation. Define **Artificial Intelligence** clearly: e.g., “*AI stands for artificial intelligence – basically, it’s a computer program or machine that can learn from data and make decisions to meet goals set by people*”. Emphasize key points of the definition (AI is a **machine-based system** that learns from examples and acts on objectives set by humans[1]). You might mention that most AI today is “**narrow AI**” – focused on specific tasks like recognizing faces or recommending videos – and that we don’t yet have a true general AI that can do *everything* a human can do[3]. Engage students with a couple of questions during the explanation, such as “How is an AI different from a regular computer program?” or “Have you ever wondered how Netflix knows what you might want to watch?”. Keep language

simple and relatable (use analogies like “learning from examples” for how AI works). This section ensures everyone has a basic understanding before diving deeper.

3. **Paired Reading: AI Modules (20 min):** Explain that students will now read short modules about AI to learn more. Divide students into pairs and provide the curated reading material from the “*Understanding AI and Safe AI Use*” content (either on their tablets/devices or printed handouts). The reading is broken into **3 brief modules** (with age-appropriate language):
4. **Module 1: What is AI and Types of AI** – covering the definition of AI, examples of tasks AI can do, and types (like machine learning, deep learning, generative AI)[4][5].
5. **Module 2: What Can AI Do? (Applications)** – real-world examples of AI in areas like healthcare, entertainment, transportation, communication, etc.[6][7].
6. **Module 3: Risks and Safe Use of AI** – an overview of challenges like AI mistakes, bias, privacy issues, and some ethical guidelines for using AI responsibly[8][9]. (This module can include the concept of **deepfakes** as a case study of a risky AI use, using the simplified “Deepfakes Explained” section from the content for ages 12–15, which describes what deepfakes are and why they are problematic in an easy way.)

Instructions: Each pair should read the modules together, taking turns or silently, and discuss briefly with each other as they read. Encourage them to highlight or note one **interesting fact** or **important point** from each module. The content is sourced from the provided material, so it’s factual and student-friendly. Circulate around the room to assist or clarify any terms (for example, explain any tricky words like “algorithm” or “bias” if they come up). This reading activity gives students a chance to learn from text and each other, accommodating different reading levels by working in pairs.

7. **Class Quiz/Interactive Activity (10 min):** Bring the class back together and conduct a quick, fun recap of what they learned from the readings. This could be a short **quiz** or a game: for instance, a 5-question Quiz (oral or using a tool like Kahoot). Example quiz questions: “*True or False: AI can learn from data to improve its performance.*”; “*Name one area where AI is used (e.g. healthcare).*”; “*What does AI stand for?*”; “*Give an example of an AI you use at home or school.*” Alternatively, you could play “**AI or Not?**” – describe a scenario and have students vote if it involves AI. (E.g., “A calculator doing 2+2” vs. “Spotify suggesting a song”). Keep it light and engaging – the goal is to reinforce key facts (like the definition of AI, examples of AI applications, etc.) in an interactive way. Celebrate correct answers and gently correct misconceptions if any come up. This activity boosts retention of the material they just read in a fun format.
8. **Data & Privacy Discussion (10 min):** Conclude with a guided discussion on **staying safe and smart with AI**, focusing on data and privacy. Start by asking, “*What personal data do you think AI apps (like social media or games) collect about you?*” Students might mention data like location, photos, search history, voice recordings, etc. Then discuss *choices* they can make: for example, **not oversharing** personal information or images online and being cautious with

permissions[10]. Emphasize that AI is powerful but not perfect – it can make mistakes or be used in harmful ways, so we have to use it responsibly. Guide students to suggest **ways to stay safe**: e.g. *“Think twice before trusting a message or video – could it be a deepfake?”*, *“Ask permission or help from an adult before giving a new app your data,”* *“Use privacy settings in apps,”* and *“Keep personal details private when chatting with AI”*. Also touch on **ethical use** – for instance, it’s important that AI is used fairly and doesn’t harm others (bring up an example: *“What if an AI at school gave unfair results to some students – what could be the problem?”* to hint at bias/fairness). Encourage students to share their thoughts or any concerns. This open discussion helps them connect the lesson to real-life choices and reinforces the idea of being an informed, responsible technology user.

Teacher Notes:

- *Preparation*: Before the lesson, review the provided “Understanding AI and Safe AI Use” content. You may choose key excerpts for the reading modules (they are already written in age-appropriate language, especially the “What is AI” summary and the “Deepfakes Explained” section for teens). If needed, print these as handouts or ensure student devices can access them. Preview any quiz technology (if using Kahoot or similar) and have it ready.
- *Differentiation*: This lesson is designed for mixed-level classes. During paired reading, consider pairing stronger readers with those who might need help. All students should grasp the basic ideas; encourage advanced students to think deeper (e.g., ask extra questions about how AI works or its impacts). For younger students (12–13), focus more on concrete examples (like AI in games or phones) and less on technical terms. Older students (15–16) might handle a bit more detail (like mentioning “machine learning” or real-world AI issues) – feel free to adjust the depth of discussion.
- *Guiding the Discussion*: When discussing ethics and privacy, be mindful of students’ experiences. Some might bring up personal anecdotes (e.g. encountering inappropriate content or scams). Acknowledge their contributions and gently correct any myths. Emphasize **critical thinking** – students should question what they see online, especially if something seems “too good to be true” or suspicious.
- *Examples and Answers*: Have a few examples ready to illustrate concepts – for instance, to explain bias, you might say *“If an AI is only trained on pictures of adults, it might not work well for kids – that’s unfair bias.”* When students answer worksheet or discussion questions, listen for understanding. Possible answers for **Worksheet Q4 (ways to stay safe with AI)** could include: *don’t share personal info with unknown apps or bots, double-check information an AI gives you, use privacy settings, and tell an adult if something strange or uncomfortable happens online.* There is no single “correct” answer to open questions, so encourage reasoning.
- *Closing*: End on a positive note that **AI is a tool** – it can do amazing things (like help doctors [11] or make fun games) as long as we use it carefully. Remind students that they are growing up in an AI-powered world, so learning about it will help them make smart choices.