Grades 6-8: Exploration of AI

Key Areas of AI

Time Estimate: 35-50 minutes

Learning Objectives

Define critical areas including ML, NLP, and computer vision.

Supplemental Materials

Key Areas of AI Presentation (Download in Google Slides)

Activities

WARM UP

Time
5 minutes

Description

Write the following three short scenarios on the board or present them on a slide:

1. A smart speaker understands your voice and sets a timer when you say, "Set a timer for 10 minutes."
2. A photo app can detect your face and automatically tag you in pictures.
3. A music app learns what songs you like and recommends similar ones.

Ask students to match each scenario with one of the three major AI types:

- Machine Learning (ML)
- Natural Language Processing (NLP)
- Computer Vision (CV)

Call on a few students to share their guesses, then reveal the answers:

1. NLP
2. Computer Vision
3. Machine Learning

TEACHER DEMONSTRATION: KEY AREAS OF AI

Time
10 minutes

Description

Present the "Key Areas of AI" slideshow: [link to Google slideshow](https://docs.google.com/presentation/d/1xDeg28Wha33_-noIVeOjE3r-Jc7kmfjL2oOdXeH0xwU/edit?usp=sharing)
https://docs.google.com/presentation/d/1xDeg28Wha33_-noIVeOjE3r-Jc7kmfjL2oOdXeH0xwU/edit?usp=sharing

CLASSROOM ACTIVITY: WHICH AI AM I?

Time
10 minutes

Description

Divide students into small groups. Give each group a set of 8–10 short real-world AI scenarios (you can prepare a printed worksheet or slides). Examples include:

- An app that reads handwriting
- A robot sorting trash from recycling
- A digital assistant setting reminders
- A shopping site suggesting items

Each group must:

1. Decide which type of AI is involved (ML, NLP, or CV)
2. Briefly explain their reasoning

Then have a quick class share-out and discuss any disagreements.

Class Activity Scenarios: Identify the AI Area

1. **Smart Email Sorting**: An email service learns to recognize which emails are spam and which are important by analyzing patterns over time.
   a. ***Likely AI Area: Machine Learning (ML)***
2. **Voice-Controlled GPS:** You say, "Take me to the nearest gas station," and your GPS responds with directions.
   a. ***Likely AI Area: Natural Language Processing (NLP)***
3. **Social Media Tagging**: You upload a photo, and your app automatically recognizes your friend's face and suggests tagging them.
   a. ***Likely AI Area: Computer Vision (CV)***
4. **Language Translation App**: You speak into your phone in English, and it responds with a French translation of what you said.
   a. ***Likely AI Area: Natural Language Processing (NLP)***

(CONT.) CLASSROOM ACTIVITY: WHICH AI AM I?

5. **Movie Recommendation Engine**: After watching several superhero movies, a streaming platform starts recommending similar action-packed films.
    a. ***Likely AI Area: Machine Learning (ML)***
6. **Self-Driving Car**: Recognizing a Stop Sign A self-driving vehicle detects and responds to a stop sign while driving through a neighborhood.
    a. ***Likely AI Area: Computer Vision (CV)***
7. **Smart Personal Assistant**: You ask your device, "What's the weather like in Chicago today?" and it answers you with current conditions.
    a. ***Likely AI Area: Natural Language Processing (NLP)***
8. **Photo Sorting by Objects**: Your photo gallery can automatically sort pictures based on what's in them—like showing all photos of dogs.
    a. ***Likely AI Area: Computer Vision (CV)***
9. **E-Commerce Product Suggestions**: An online store suggests shoes based on your past purchases and what other customers with similar tastes bought.
    a. ***Likely AI Area: Machine Learning (ML)***
10. **Chatbot Customer Support**: A website chatbot answers questions like "What are your business hours?" and "Can I return this item?"
    a. ***Likely AI Area: Natural Language Processing (NLP)***

★ BONUS: DIGITAL PLATFORM ACTIVITY

Time

15 minutes

Description

Want to extend this lesson with an interactive digital experience designed for students in grades 6-8?

Students can explore the key areas of AI through a guided online activity on the Skill Struck AI literacy platform.

Set up a **free** AI literacy account for your class:

Create a Free AI Literacy Account

skillstruck.com/free-ai-literacy-2025-2026-skill-struck

Access the lesson here once you've created your free account.

WRAP UP

Time
5 minutes

Description

Open up your AI platform of choice (ensure that it is school-approved before doing so), like **Chat for Schools**, and input the following prompt:

"Explain the difference between machine learning, natural language processing, and computer vision in a way a **[6th/7th/8th]** grader could understand." **(include the grade you teach)**

Then, as a class, ask students to help refine the prompt based on the response. Use this structure:

- **Step 1**: Review the response. Is it too complex? Missing examples? Too wordy?
- **Step 2**: Refine your prompt. Example:
  - Add: "Give a real-world example for each."
  - Clarify: "Use simpler words and keep it under 100 words."
  - Combine: "Compare the three types side by side."

Purpose of Refinement: Help students learn how to ask clear, specific, and useful questions to get better AI responses.

Finish by asking:

- What changed in the answer when you revised your prompt?
- How does that help you understand the concepts better?