

Ideas for Introducing AI Concepts in the Classroom

As artificial intelligence becomes increasingly present in our daily lives, it is essential to help students understand what AI is, how it works, and why it matters. Introducing AI concepts in the classroom not only builds digital literacy but also encourages critical thinking, ethical awareness, and future-ready skills. In the following pages, you are going to find practical and engaging ideas to help educators introduce AI in ways that are age-appropriate, accessible, and connected to real-world applications.



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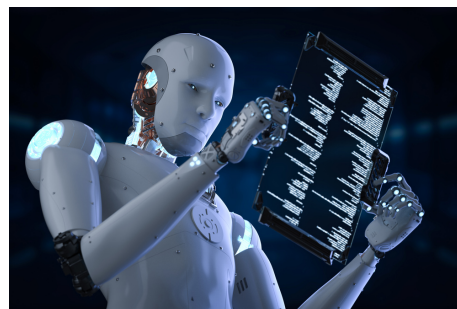
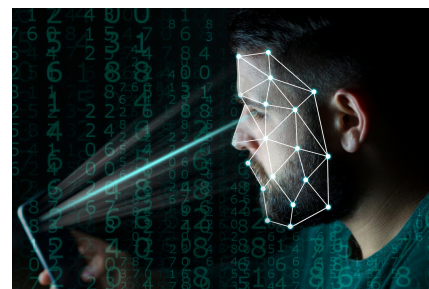
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Activity 1: Discovering Artificial Intelligence

PART 1

Look at the tech examples below. What do you think they have in common?



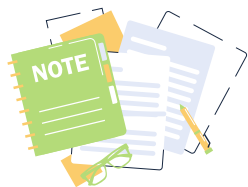
PART 2

Discuss in small groups. What makes something intelligent?

1. What does it mean to be intelligent?
2. Can a machine be intelligent? Why or why not?

PART 3

Based on your group discussion, write a definition of Artificial Intelligence (AI):



Teacher's Notes for Activity 1

Objectives

Students will explore and develop a working definition of Artificial Intelligence (AI) through observation and group discussion.

Materials Needed

·Printed worksheet OR
Printed or projected
images/descriptions of
various AI powered
technologies

Lesson Outline

1. Mystery Investigation (10 min): Show students some AI powered tech examples. In groups, students identify what these have in common.
 2. Class Brainstorm (10 min): Discuss what it means to be intelligent. Note down traits (learning, problem-solving, etc.).
 3. Define AI (10 min): Guide the groups to build a shared definition of AI. Then, collect all the definitions to have a shared definition of AI as a class.
- Optional Extension:
Ask students to research a real AI tool and show it in class or explain what it does in one paragraph.

Activity 2: How does AI work?



In traditional programming, a human writes out the instructions for the computer to follow — step by step. In contrast, machine learning allows a computer to learn from data. The computer finds patterns in the data and uses them to make decisions or predictions. Deep learning is a special kind of machine learning that uses structures called neural networks, which are inspired by the human brain.

PART 1

Fill in the blanks using the following words:

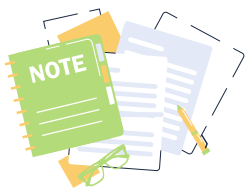
programming, data, machine learning, patterns, deep learning

1. In _____, a computer learns from examples instead of being given direct instructions.
2. Traditional _____ tells a computer exactly what to do, step by step.
3. AI systems find _____ in large sets of data to make predictions or decisions.
4. _____ is a technique that uses neural networks to help machines understand complex information.
5. AI systems need large and diverse amounts of _____ to work well.

PART 2

Imagine you are training a computer to tell the difference between cats and dogs using photos. You need to show it many labeled examples so that it can analyze the images to learn pattern and to predict new images.

1. What kind of examples would you give the computer?
2. How does the computer decide if a new image is a cat or a dog?
3. What might happen if the training data only had pictures of brown dogs and white cats?



Teacher's Notes for Activity 2

Objectives

- Understand the basics of how AI works.
- Define key concepts: machine learning, deep learning, data, and pattern recognition.
- Reflect on the role of training data and its impact on AI performance.

Materials Needed

- Printed worksheet

Lesson Outline

1. Activate prior knowledge and introduce key concepts. (5-10 minutes)

Write on the board: “Traditional Programming” vs. “Machine Learning”

- Programming: A person gives the computer step-by-step instructions.
- Machine learning: The computer learns from examples and finds patterns.
- Deep learning: A special type of machine learning using neural networks inspired by the brain.

2. Reinforce key vocabulary and concepts with Part 1 on worksheet.

(Answers: 1. machine learning, 2.programming, 3. patterns, 4.deep learning, 5.data

) (10 minutes)

3. Have students work in pairs or groups to discuss the questions in Part 2.

Facilitate discussion and emphasize the importance of diverse data and the problem of bias in AI training. (10 minutes)

Optional Extension: On the board, draw a simple concept map with three branches labeled Programming, Machine Learning, and Deep Learning, and ask students to collaboratively add brief definitions or real-life examples under each category to help visualize the differences.

Activity 3:

AI in Everyday Life

PART 1

Below are several activities. Which of these involve AI? Mark each with Yes or No and explain your reasoning.

1. A streaming app recommends movies you might like: YES / NO
2. A microwave heats your food when you press a button: YES / NO
3. Google Maps suggests a faster route due to traffic: YES / NO
4. An app gives you feedback on your grammar in an exercise: YES / NO
5. A classroom projector displays slides: YES / NO

PART 2

List two examples of how you have interacted with AI in the last 24 hours.

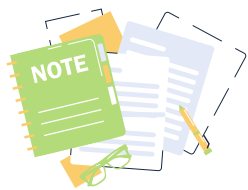
1.

2.

PART 3

Discuss the following questions in small groups.

1. Which example of AI surprised you the most? Why?
2. Do you think AI makes life better or more complicated? Explain.
3. Would you trust AI to help you make a big decision (like a medical diagnosis or financial advice)? Why or why not?



Teacher's Notes for Activity 3

Objectives

- Understand how AI is used in everyday contexts like healthcare, finance, social media, and education.
- Identify real-life examples of AI around them.
- Reflect on the role of AI in improving or challenging aspects of daily life.

Materials Needed

- Printed worksheet
- Board or projector
- Markers or pens

Lesson Outline

1. Warm-up (5–10 min): Ask students: “Where do you think you see AI in daily life?” List their ideas on the board.
2. Teacher Explanation (10 min): Briefly explain different domains where AI is used (healthcare, finance, shopping, education).
3. Worksheet Activity (20 min): Students work individually or in pairs to complete the worksheet.
4. Class Discussion (10 min): Review answers, encourage students to share their examples and insights.
5. Wrap-up (5 min): Ask students to reflect: “How do I feel about AI being part of my life?”

Optional Extension:

Homework: Interview a family member about how they encounter AI and share interesting findings with the classmates.

Activity 4: Using AI Responsibly

AI REJECTED HER IN 10 MINUTES – WITHOUT READING HER RESUME



The reason? An AI recruitment tool couldn't read her PDF resume. The formatting confused the system, which missed key information like her job titles.

"I didn't know AI was screening my application before a human," she said.

When Julia Reynolds applied for a tech job in Berlin, she expected an interview. With a master's degree, fluent German, and years of experience, she seemed like a strong candidate.

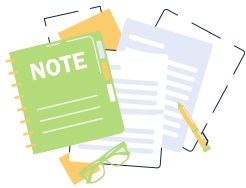
Instead, she got an instant rejection.

"I didn't know AI was screening my application before a human," she said.

Julia later learned that the AI also ranked resumes by keywords—like "data-driven" or "strategic mindset." Without them, strong applicants were dismissed.

Read the news story above and answer the following questions. Discuss your answers with your classmates.

1. Why was Julia rejected from the job so quickly?
2. What mistakes did the AI system make when reading her resume?
3. What did Julia learn about how the AI system ranked applicants?
4. What are some risks of using AI to screen job applications?



Teacher's Notes for Activity 4

Objectives

- Understand how AI is used in recruitment and its potential risks.
- Reflect on the ethical challenges of using AI in decision-making.
 - Develop critical thinking about fairness, transparency, and data bias in AI systems.

Materials Needed

- Printed worksheet (optional)

Lesson Outline

1. Warm-up: Ask students if they've ever applied for a job or internship online (5–10 min).
2. Read the news story and answer the questions (10 min).
3. Group discussion: Ethical challenges of AI in hiring (10–15 min).

Optional Extension: Write a short paragraph on whether AI should be used in recruitment.