Teach the robot: learning from examples

40 minutes · Ages 6 to 8 · AI thinking · Free to print and share

Goal

Students explain that AI learns patterns from examples, and that missing or one-sided examples lead to mistakes.

Vocabulary

- artificial intelligence (AI)
- pattern
- example
- mistake
- fair

Materials

- Paper and crayons
- A made-up creature card for each group (a "zibble": round, three legs, spots)

Warm-up (5 minutes)

Ask: "How did you learn what an apple is?" Draw out that they saw many examples.

Activity

1. One student per group is the "robot" and waits outside. The others draw five zibbles that all have spots.
2. The robot comes back, studies the drawings, and must decide whether new drawings are zibbles. Include one without spots.
3. Discuss: the robot thought every zibble needs spots because every example had them. That's a pattern, and a mistake.
4. Redo it with more varied examples. Does the robot do better?
5. Connect it: "AI is a computer program that learned from lots of examples. If the examples are missing things, it can be wrong or unfair."

Talk about it

- What would a computer need to see to learn what a cat is?
- What could happen if an AI only saw pictures of one kind of person?
- How can people check whether an AI is right?

Check for understanding

Exit ticket: "Draw one way an AI could make a mistake, and write one sentence about why."

No devices?

The whole lesson is unplugged.

Going further

Connects to the AI4K12 big idea "Learning". Follow with the prompt writing lesson.

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