



AI Adventures:
Exploring the World of Smart Machines
STUDENT GUIDE

LESSON 2

How Computers Grow Their Brains!



**JA
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Lesson 2:

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OVERVIEW

How does a computer get so smart? In this lesson, you'll discover the secret way that AI learns. You might be surprised to find out it's a lot like how you learn new things in school—by practicing and making mistakes!



KNOWLEDGE CHECK

Place a check mark (✓) next to the correct answer.

1. Think like an AI trainer! We want to teach an AI to know the difference between a hockey puck and a baseball. What is the BEST way to help it learn?

- ☐ a) Show the AI one picture of a hockey puck and one picture of a baseball.
- ☐ b) Let the AI watch a hockey game and a baseball game and hope it figures it out.
- ☐ c) Describe what a hockey puck and a baseball look like using only words.
- ☐ d) Show the AI hundreds of different pictures of hockey pucks and baseballs, with each one labeled.

2. An AI is learning to identify animals. It sees a picture of a poodle and guesses "cat." The programmer tells the AI, "Nope, that's a dog." What will the AI do next?

- ☐ a) The AI will remember its mistake and try to do better next time.
- ☐ b) The AI will get sad and stop learning.
- ☐ c) The AI will decide that all poodles are actually cats.
- ☐ d) The AI will ignore the programmer and keep guessing "cat."

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REFLECTION ACTIVITY: BE AN AI TRAINER!

Mission:

Imagine you are teaching a robot helper to sort laundry into different piles.



1. The Data:

What kind of "data" (examples) would you need to show your robot?
(Think: pictures of shirts, photos of pants, images of socks!)

2. The Labels:

How would you "label" the data so the robot knows which pile is for which type of clothing?

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LESSON 2 ANSWER KEY

1. d
2. a



GLOSSARY

Artificial Intelligence (AI): A technology that gives computers and robots a 'brain' to think, learn and solve problems in a way similar to, but different from, the human brain.

Data: All the information (like pictures, words, and numbers) that we give to an AI to help it learn.

Neural Network: A special computer system designed to work a bit like the human brain's connections that helps AI learn and make decisions.

Training: The process of teaching an AI by giving it lots and lots of data. For example, showing a computer 1,000 pictures of cats so it learns what a cat looks like.

