

Name: _____ **Date:** _____

Total Recall: Can You Outsmart the AI in 5th Grade?

Examine how training data shapes digital brains before you launch into a future where humans and algorithms work side-by-side.

1. An environmental scientist uses AI to track endangered snow leopards. If the AI was only trained on photos of leopards in the daytime, what will likely happen when it sees a night-vision photo?

- A. It will automatically know it's a leopard because machines are smarter than humans.
- B. It might fail to recognize the leopard because its training data was biased toward daylight.
- C. It will rewrite its own code to see in the dark instantly.
- D. It will ask the snow leopard to move into the sunlight for a better photo.

2. A team of engineers is building a robot to sort recycling. Instead of coding every rule, they show the robot 10,000 photos of plastic bottles. This process of learning from patterns is called _____.

- A. Manual Programming
- B. Hard-coding
- C. Machine Learning
- D. Remote Controlling

3. True or False: A neural network is a physical piece of hardware made of biological brain cells that is inserted into a computer.

- A. True
- B. False

4. Imagine an AI designed to predict which books a student will enjoy. To evaluate if the AI is working correctly, what should the designers check?

- A. How many colors the AI uses in its interface.
- B. If the AI suggests the same book to every single person.
- C. The speed at which the computer's fan is spinning.
- D. The accuracy of suggestions compared to the student's actual favorites.

5. True or False: If an AI algorithm is used to decide who wins a creative writing contest, it might be 'biased' if it was only trained on stories written by professional adults.

- A. True
- B. False

6. When an AI for a smart-farm must decide between watering a thirsty crop or saving water during a drought, it is using a process called _____.

- A. Data Entry
- B. Automated Reasoning
- C. Battery Charging

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D. Pixel Mapping

7. A 'Black Box' in AI refers to a situation where even the programmers don't fully understand exactly how a complex model reached its specific conclusion. Why is this a challenge?

- A. Because the computer will run out of electricity.
- B. Because it makes the computer too heavy to carry.
- C. Because it is difficult to ensure the AI's decision was fair or ethical.
- D. Because the 'box' is actually a dark purple color.

8. To help an AI identify different types of trees in a forest, a scientist provides a 'Dataset.' In this scenario, the Dataset is used as the _____ for the AI.

- A. Fuel Source
- B. Internet Browser
- C. Training Material
- D. Mechanical Arm

9. How do Neural Networks 'learn' from their mistakes during training?

- A. They delete their entire memory and start over every day.
- B. They adjust the 'weights' or importance of different connections in their software.
- C. They send an email to a human asking for the right answer every time.
- D. They search the internet for a YouTube tutorial.

10. True or False: If you want an AI to be 'Creative,' it must first analyze thousands of examples of human work to understand the structure of art or music.

- A. True
- B. False