

LESSON 3

Future of robotics

20 minutes

Robotics Fundamentals

WHAT THIS LESSON DOES

In this lesson, we'll explore the exciting possibilities of the future of robotics. We'll learn about advancements in artificial intelligence, the promise of human-robot collaboration, and biologically inspired designs. We'll also consider the role of robots in space exploration and ethical considerations related to their use. By the end of the lesson, we'll have a better understanding of how robots will continue to transform the way we live and work in the future.

WHAT STUDENTS SHOULD BE ABLE TO DO

- Understand the role of AI in advancing robotics capabilities.
- Explore the potential of human-robot collaboration in daily tasks.
- Recognise the influence of biological systems on robot design.
- Appreciate the significance of robots in space exploration.
- Consider ethical implications of increasing robot integration into society.

BEFORE THE BELL

- Begin with an engaging introduction to the future of robotics, highlighting global efforts and innovations. Discuss AI's role in robotics, encouraging students to research examples and consider real-world applications. Explore human-robot collaboration by having students imagine a robot assisting in daily tasks and discuss design and safety features. Introduce biologically inspired robotics with examples of nature-inspired designs. Cover robots in space exploration, focusing on their role in harsh environments. Address ethical considerations, prompting discussion on job displacement, privacy, and misuse. Conclude with a reflection on how robotics advancements could impact society, encouraging students to share their thoughts on future opportunities and challenges.

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HOW THE LESSON RUNS
Introduction
Exploring AI in Robotics
Human-robot collaboration
Biologically inspired robotics
Robots in space exploration
Ethical considerations
Wrap-up and Reflection