

TEACHERS' NOTES

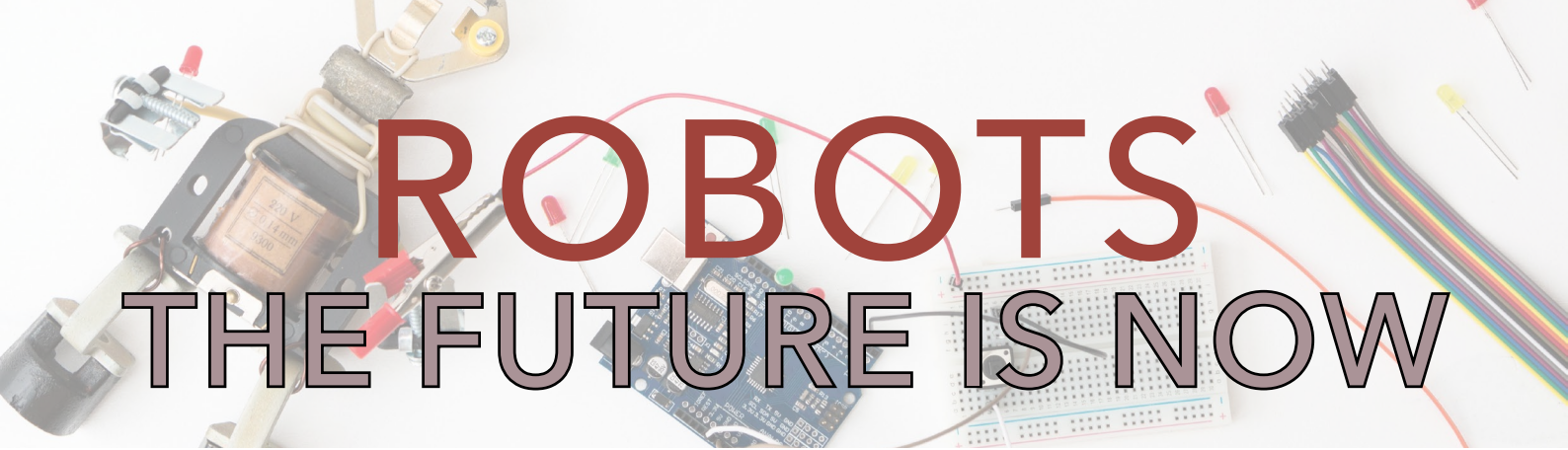


ROBOTS

THE FUTURE IS NOW

CHARLES HOPE





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Synopsis

Robots. They are all around us. They vacuum our floors, process our food, make our cars. But what is a robot?

How do they work?

Writing style

Robots: The Future is Now is written for establishing and established readers and includes enlarged pull quotes for enhanced engagement. Care is taken to reduce complex concepts to bare essence, while keeping the information and knowledge accessible and interesting.

This book offers young readers multiple entry points to engaging with the information.

Photographic style

Robots: The Future is Now combines historical, currents and scientific photographs and illustrations which will engage all readers. These images offer the reader the opportunity to explore each image in detail.

Study notes: Themes

- Modern technology
- History
- Automation
- The role of technology
- The future
- Workplaces

Specifications

Author Charles Hope

ISBN 9781742034799

Format 260mm x 250mm

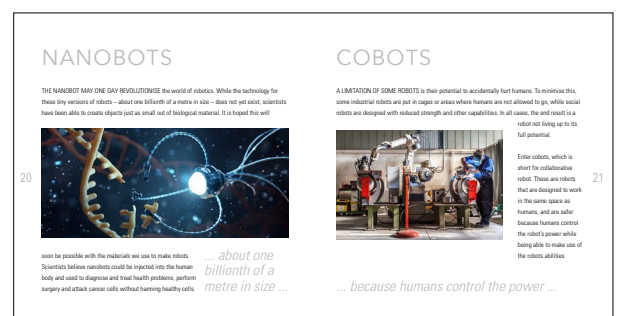
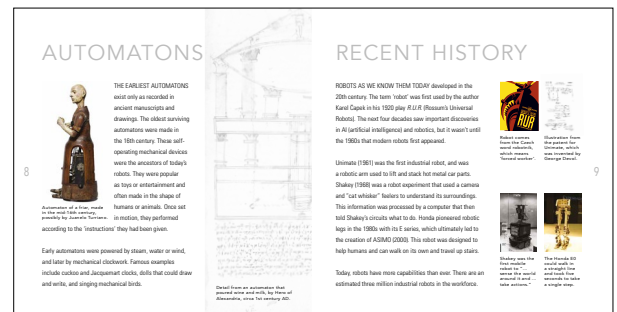
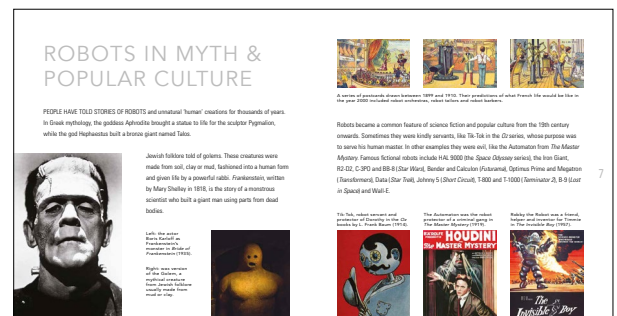
Extent 24pp + ends/cover

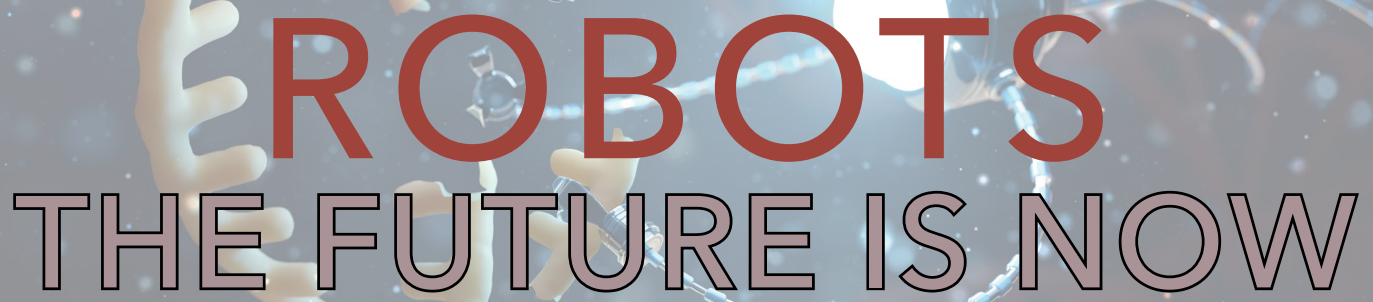
Binding Hardback

Reading level 7+

Interest level 7+

Category Non-Fiction





ROBOTS

THE FUTURE IS NOW

Curriculum link: Literacy

Before reading:

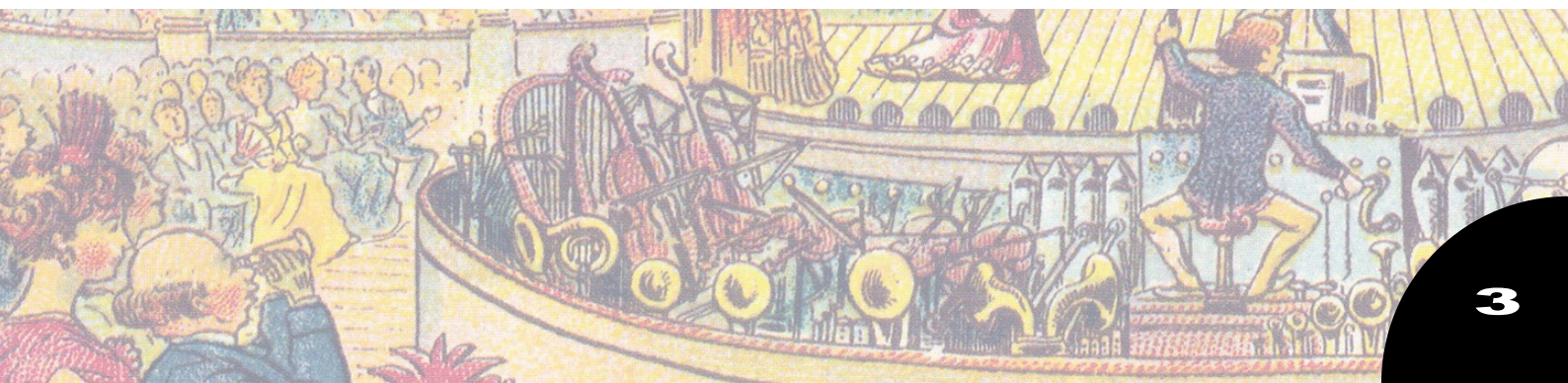
- As a class, brainstorm robots – what the students know, understand and believe about robots and their role. This can be a written or verbal exercise.
- Examine the cover. Ask students what they expect the book to be about, who do they think it is written for and what type of book it will be.
- Now have students flick through the pages. Have any of their assumptions changed?
- Read the blurb and ask students if they can think of any examples of how robots are being used today
- Create a Wonderings wall, where students write on sticky notes any questions they have about robots.

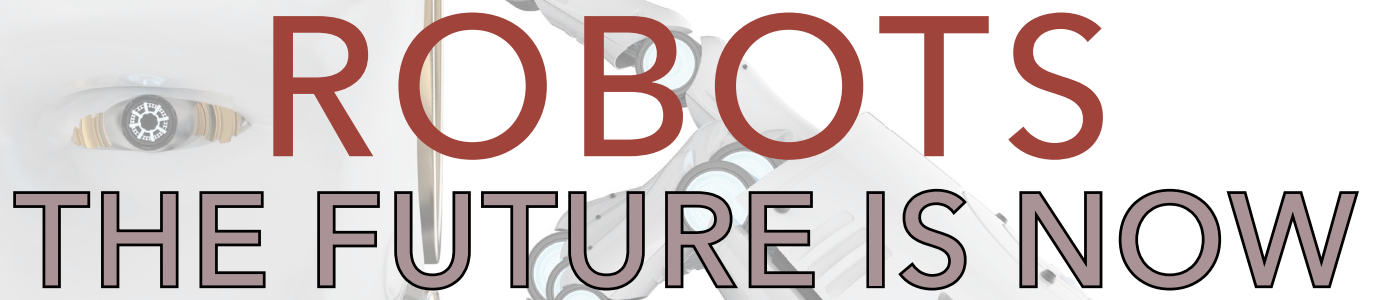
While reading:

- Ask children to note any words or ideas they would like to explore.

After reading:

- Discuss if, and how, students' beliefs and assumptions about robots have changed.
- Ask students to share any words or expressions they want to explore.
- Revisit the Wonderings wall. Have all the questions been answered?
- Allow students to conduct their own investigations into any words or descriptions they would like clarified and into any Wonderings questions not answered. Students share their discoveries with the group. This can be an individual or group activity.
- Students create their own list of words that describe robots, and share these with a partner. The pairs then share with the class to create a Robot Word Wall.
- Ask them to draw up a list of words that can be used to describe robots.





ROBOTS

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English, Writing, Creative and Oral Activities

- In the past, people have been both fearful and excited by robots role in our world. Revisit the fears and expectations, as outlined in pages 6 and 7. As a class discuss if these fears and expectations were justified.
- Discuss the advantages and disadvantages of robots. Students chose a topic - Robots Are Good for Our Society, or Robots Are A Problem for Society. Students then create a two minute speech on their chosen topic to present to class.
- In groups, students choose one of the robots mentioned in Robots; The Future Is Now. The robots can be fictional, like Tik Tok and R2-D2, or an actual robot like Shakey, Nao or Voyager 1. Students research their chosen robot and create an informative poster for display in the class. The poster should include the robot's origin, role and features.

Fictional Robots:

B-9
BB-8
Bender
C-3PO
Calculon

Data
Iron Giant
Johnny 5
Megatron
Optimus Prime

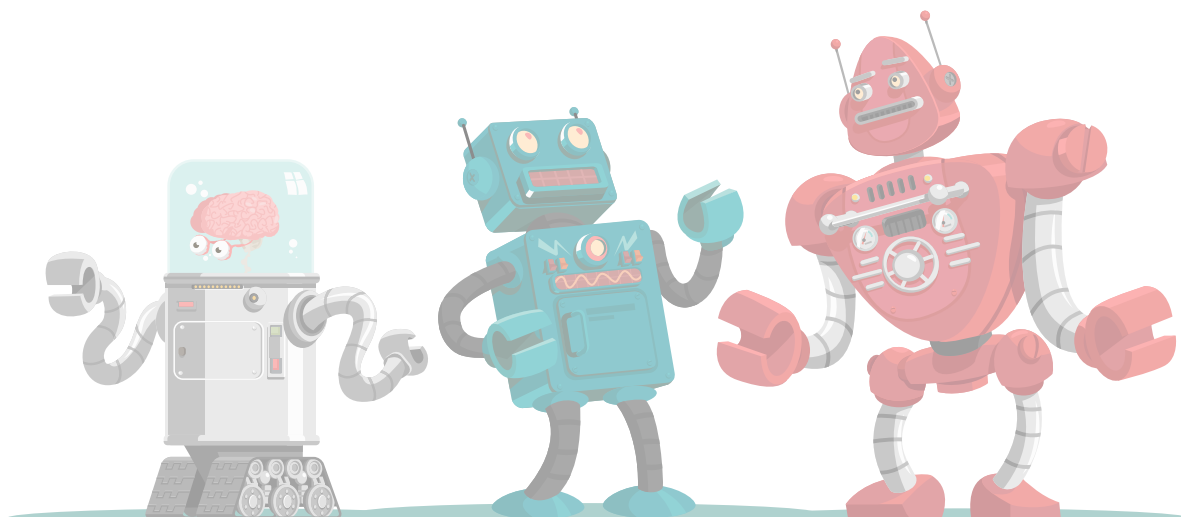
R2-D2
Tik-Tok
Wall-E

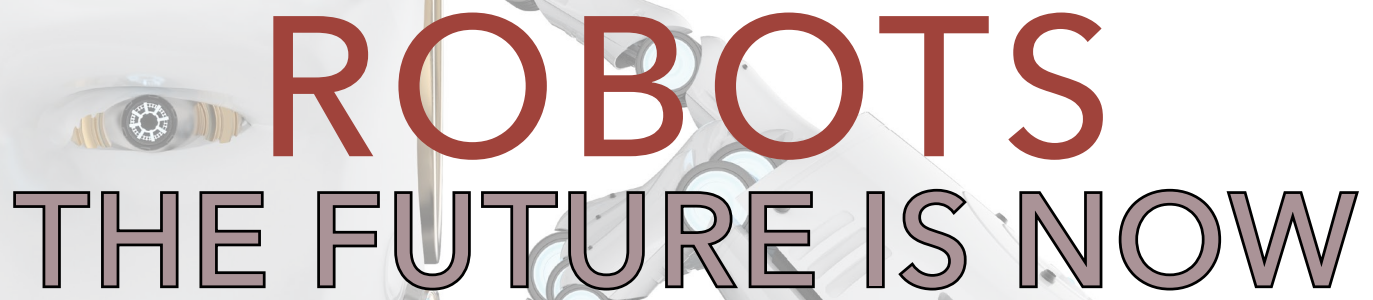
Actual Robots:

ASIMO
BUDDY
Curiosity
E0
NAO

Opportunity
Shakey
Sojourner
Sophia
Spirit

Unimate
Valkyrie
Voyager 1
Voyager 2





ROBOTS

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- As a class, discuss students' perfect robot. Would it be a robot, cyborg or android? (page 15). Students then write about their ideal robot. Once finished their written description, they could draw and label their robot. This can also be adapted to become an art or construction activity. Students can write about their ideal robot, then draw or create it. Encourage student to use a variety of mediums for their creation – boxes, natural materials such as sticks, magazines for collage, wool, material scraps.
- Revisit how robots have improved human's lives – pages 12 and 13. Ask students to predict how robots could develop in the future. Students then write a creative story set 100 years in the future, where a robot has gone bad. This robot could be one in a home, or perhaps a school. Encourage students to get to know their robot, including its role and its good points and negative points. Make sure they understand why or how it has gone bad. Once they understand this, they are ready to write.
- Other creative writing prompts:
 - * Imagine your best friend is a robot. Write a narrative about your day at school.
 - * Imagine you are an astronaut on a mission to another galaxy that will take years to complete. Your only company is a robot. Write about your experience.
 - * Imagine you are an inventor asked to build a robot to save the planet. Write a narrative your experience creating the robot and how it will work.

Additional video resources

- | | |
|---|--|
| • Automaton 1 , Automaton 2 , Automaton 3 | • Tesla robots |
| • Boston Dynamics youtube channel | • How robots work |
| • Humans being mean to robots | • Valkyrie |
| • Trailer for <i>The Iron Giant</i> movie (rated PG) | • Robots on Jimmy Kimmel |
| • Elektro the robot | • Mars rover |
| • Unimate | • Uncanny Valley |
| • Shakey | • Nanobots in <i>Big Hero 6</i> (rated PG) |
| • History of Honda robots | |

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Close Activity

(highlighted words to be taken out and remaining sentences filled in by students)

- Robots are **machines** which perform jobs usually done by humans. Robots usually don't look like **humans**.
- Automaton is another name for **robot**. The earliest automatons were power by **steam**, water or wind.
- Robots as we know them developed in the **20th century**. The term 'robot' was first used by **author** Karel Capek in his 1920 play R.U.R. (Rossum's Universal Robots).
- A cyborg is a person who needs a **mechanical** or electronic device to help with their **physical** function, such as a bionic limb or pacemaker.
- An **android** is a type of robot that is made to look human. **Humanoid** is another word that can be used to describe an android
- AI, or Artificial Intelligence, is the study of human-made **objects** and their ability to learn, **understand** and act.

Marketing and promotion

Robots is the latest title in *The Future is Now* series, which explores modern technologies and how they shape our world.

Other
titles

