

Teacher Resource

Artificial Intelligence

Focus Questions

1. Before watching the BTN story, predict what you think it will be about.
2. What is the name of the music studio that created the song for the AI Song Contest?
3. Who won the song contest?
4. Why was the AI Song Contest created?
5. Explain how the song was created.
6. Complete the following sentence. Computers find mathematical _____ within music to create original songs.
7. What is artificial intelligence?
8. Who used computers to make music in 1961?
9. What do you think the future of using AI in music is?
10. What was surprising about this story?

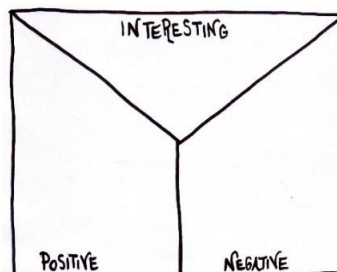
Activity

Note taking

Students will practise their notetaking while watching the BTN *AI Song Contest* story. After watching the story, ask students to reflect on and organise the information into three categories.

What information in the story was...?

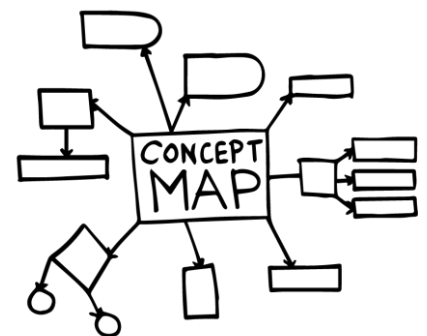
- Positive
- Negative or
- Interesting



Discussion

Discuss the information raised in the BTN *AI Song Contest* story. Ask students to record what they know about artificial intelligence or AI on a mind map. What words do they associate with AI? What questions do they have? Use the following questions to guide discussion:

- What is artificial intelligence? Come up with a class definition.
- What are some everyday examples of AI? (smartphones, streaming services and smart home devices)
- How was AI used in the BTN story?
- How can AI be used in creative jobs?
- What words do you associate with AI?
- What are some benefits of AI?
- What are the disadvantages?
- How do you think it will impact on the future of learning and work?
- What questions do you have about AI?



Key Learning

Students will develop a deeper understanding of what artificial intelligence is and how it will impact on society.

Curriculum

Design and Technologies – Years 5 & 6

Select appropriate materials, components, tools, equipment and techniques and apply safe procedures to make designed solutions.

Design and Technologies – Years 7 & 8

Select and justify choices of materials, components, tools, equipment and techniques to effectively and safely make designed solutions.

Science – Year 4

Science knowledge helps people to understand the effect of their actions.

Science – Years 5 & 6

Scientific knowledge is used to solve problems and inform personal and community decisions.

Activity

Glossary

Students will brainstorm a list of key words and terms that relate artificial intelligence. Here are some words to get you started.

Artificial intelligence	Machine learning	Technology
mimic	Innovation	Algorithm

Activity

Inquiry Questions

After watching and discussing the *BTN AI Song Contest* story, what questions do students have and what are the gaps in their knowledge? The following KWLH organiser provides students with a framework to explore their knowledge on this topic and consider what they would like to know and learn.

<i>What do I <u>know</u>?</i>	<i>What do I <u>want</u> to know?</i>	<i>What have I <u>learnt</u>?</i>	<i><u>How</u> will I find out?</i>

Students will develop their own question/s for inquiry, collecting and recording information from a wide variety of sources. Students may develop their own question for inquiry or select one or more of the questions below.

- What is artificial intelligence and how is it currently being used?
- How will artificial intelligence change society? Make some predictions.
- Are there any areas where artificial intelligence should not be used?
- What is the history of artificial intelligence? When did the idea of artificial intelligence begin?
- How can we prepare for AI?
- How do you think it will impact on the future of learning and work?

Activity

AI Experiments

Students explore the following AI systems then ask them to reflect on how they know the system uses AI.

[AI Duet](#) – This experiment lets you play a duet with the computer. Just play some notes, and the computer will respond to your melody.

[Freddie Meter](#) – An AI-powered singing challenge that rates how closely your singing matches the voice of Freddie Mercury.

[Quick Draw](#) – A game that challenges players to draw a picture of an object or idea and then uses a neural network artificial intelligence to guess what the drawings represent.



[Semantis](#) – Word association games powered by machine learned. Each time you enter a clue, the AI looks at all the words in play and chooses the ones it thinks are most related.

Activity

Watch these BTN stories that explain the impact artificial intelligence will have on jobs in the future then answer the questions.

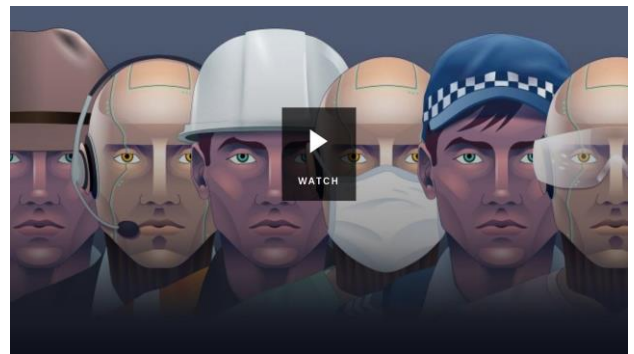
Artificial Intelligence Jobs

1. What is artificial intelligence?
2. Give examples of how artificial intelligence is being used.
3. Scientists predict that in the next decade _____% of Australian jobs could be replaced by artificial intelligence.
4. What sorts of jobs could be replaced by computers and robots?
5. A student from the UK has developed software that can...
6. What are STEM subjects and why is it important to learn them at school?
7. Name three facts you learnt watching the BtN story.



Robot Jobs

1. Give examples of jobs that artificial intelligence is already doing.
2. How are robots being used in the legal profession?
3. What sorts of jobs could be replaced by artificial intelligence?
4. What is an advantage of robots doing some jobs?
5. According to experts, it's important for kids to learn _____ subjects.
6. A recent report said that by 2030, workers will spend 77% more time using...
7. Do you think artificial intelligence will make the world better? Give reasons for your answer.

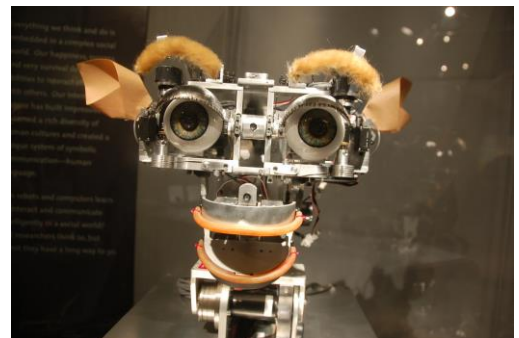


Activity

Design an AI Robot

If you could build a robot that uses AI, what kind would you build? What would you make it do? Would it help you do your homework or play your favourite sport? Students will brainstorm ideas in pairs and then share their ideas as a class. Students will design a robot that performs a specific task. When thinking about their design, ask them to consider:

- What problem or challenge does the robot solve?
- What are some of the functions your program will carry out?
- How does your robot use artificial intelligence?
- Does the robot need any special features? If so, what are they?
- How will your robot function? Consider the following:
 - How will it be controlled?
 - How does it move?
 - How will it detect the environment around it?



Students will draw a design of their robot and present it to the class. Students will include a detailed diagram of each component and a description of how it works.

Useful Websites

Australia Wins AI Eurovision Song Contest – BBC News

<https://www.bbc.com/news/technology-52632916>

Australia wins artificial intelligence song contest - AI Song Contest

<https://www.vprobroadcast.com/titles/ai-songcontest/articles/australia-wins-ai-song-contest.html>

AI Experiments – Experiments with Google

<https://experiments.withgoogle.com/collection/ai>

Robot Jobs - BTN

<https://www.abc.net.au/btn/classroom/robot-jobs/10522582>

Artificial Intelligence Jobs – BTN

<https://www.abc.net.au/btn/classroom/artificial-intelligence-jobs/10523718>