

60-90 minute lesson

AI and sustainability: difficult choices

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TOPICAL TALK FESTIVAL

Although AI is helping people find solutions to climate change, there's no hiding the fact that it's also contributing to the problem. By 2030, the amount of carbon dioxide produced by AI data centres will equate to roughly 40% of the annual emissions of the United States. So what's more important: AI's potential for progress? Or protecting the planet?

Science and technology

Environment and climate

Lesson objectives

Topical Talk skill



Listening

Step 3: I listen to others and can tell someone else what it was about

Step 10: I am aware of how a speaker is influencing me through their language

Step 11: I listen critically and compare different perspectives

For more information on the skills:

bit.ly/TTFrameworks

Knowledge



I know how AI is helping people and why it is not yet sustainable

Sustainable Development Goals



11 SUSTAINABLE CITIES AND COMMUNITIES



13 CLIMATE ACTION



Want more resources?

Take a look at the Topical Talk resource library. All resources are free and it takes seconds to sign up.

talk.economistfoundation.org/resources

Teacher instructions

Before this lesson

- Print the *Teacher instructions*, or have them to hand
- Have the *PowerPoint* ready to share on screen
- Print and cut the *Cards*, enough for one each
- Have *Post-it notes* to hand, enough for one each

Missing something? Head to the Topical Talk resource library and search for this lesson to download everything you need.

talk.economistfoundation.org/resources

Activity one

Slide 1

Introduce the lesson and remind students of the Topical Talk skills. When you see the skills icons throughout the *PowerPoint*, ask students to reflect on how they are practising that skill.

Slide 2

Choose a student to read the slide aloud. Check that students understand the keywords by asking them to use each one in a sentence.

Slides 3 to 7

Students should get into groups of four. For each quiz question, give groups time to discuss their answer, debate with the class and then write down their final decision. Remind students that their aim is for everyone in the class to get the answer right.

Slides 8 to 9

Reveal the answers and discuss the questions together.

Activity two

Slide 10

Give each student a *Card*. Choose a student to read the slide aloud. Set a timer for three minutes for students to complete each of the three rounds.

Slide 11

Challenge students to get into groups in silence and in under one minute.

Slide 12

Choose one student to read the slide aloud. Set a timer for six minutes for groups to decide how to rank the perspectives. Choose groups with different ideas to explain. Give a final few seconds for groups to change their minds based on what they heard. Praise those who change their minds based on what they've heard.

Tip: if student numbers do not make groups of nine, adjust the shape to include fewer perspectives.

Activity three

Slide 13

Draw a triangle on the board. Give each student a Post-it note and ask them to write their name on it. Ask a student to read the slide aloud. Explain that students should position their Post-it note on the triangle closest to the name or names that they agree with the most. For example, if they agree with only one person they could stick their Post-it note onto the corner of the triangle. However, if they agree with two people equally, they could stick their Post-it note on a side half-way between them. When students have placed their Post-it notes, choose some to explain their decisions. Praise those who change their mind about where to place their Post-it notes based on what they hear others say.

Challenge: point to random positions on the triangle and ask students to give an example of a perspective that might make someone choose that position.

Slide 14

Give time for students to reflect on how they developed their skills and knowledge during this lesson. Praise detailed reflections and metacognition.

Keywords

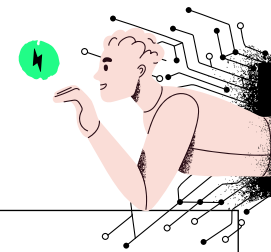
1. AI

= when machines do things that usually require human intelligence. For example, make decisions, react to their environment or recognise voices

2. Sustainable

= when we are able to keep doing or producing something without it running out or causing irreversible damage to the planet

We'd love to see your Topical Talkers in action! Share your photos with [@econ_foundation](https://twitter.com/econ_foundation) and use [#TopicalTalk](https://twitter.com/TopicalTalk) for the chance to feature on our social media channels!



Cards



I am a doctor

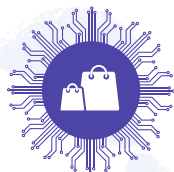


AI helps me to spot and diagnose medical problems. For example, it can analyse test results and images of people's bodies to find anything abnormal.

"I think I should be able to use AI because..."

"If I couldn't use AI then..."

I am an online shopper



AI monitors what I have bought and suggests products that I might be interested in. It helps me to find bargains!

"I think I should be able to use AI because..."

"If I couldn't use AI then..."

I am a farmer

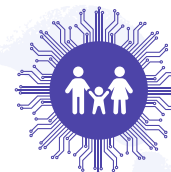


AI tells my equipment to feed only the thirsty plants, where to add fertiliser and which plants are weeds. This helps me to reduce waste, save money and grow more food.

"I think I should be able to use AI because..."

"If I couldn't use AI then..."

I am a parent



AI helps to manage my family's busy calendars, finds recipes that work with my children's allergies and gives me tips about how to help them with their homework. It saves me time so I can do other things.

"I think I should be able to use AI because..."

"If I couldn't use AI then..."

I am a university student



I am studying to be an environmental scientist. AI makes me personalised timetables and tracks my deadlines to help me stay organised.

"I think I should be able to use AI because..."

"If I couldn't use AI then..."

I am a banker



AI can spot strange spending on someone's card that might be a result of a crime or fraud. This helps me to help people manage their finances better and keep their money safe.

"I think I should be able to use AI because..."

"If I couldn't use AI then..."

I am a forest ranger



I use drones with AI to help me spot deforestation, track people cutting down trees illegally and monitor the forest's health. It helps me protect the environment more effectively.

"I think I should be able to use AI because..."

"If I couldn't use AI then..."

I am the owner of a big online shop



In the future, self-driving vehicles will help me as they will be able to deliver goods to customers. This will ensure deliveries are quicker, more efficient and more environmentally friendly.

"I think I should be able to use AI because..."

"If I couldn't use AI then..."

I am a scientist



I can use AI to spot natural disasters. I look at images taken from space, weather patterns and messages sent from sensors. This means I can detect the early-warning signs of a natural disaster and help people before it's too late.

"I think I should be able to use AI because..."

"If I couldn't use AI then..."