Discussing #CSforGood as a class

How CS and technology are used and applied in the real world is a crucial part of learning computer science. Here are some themes and questions to spark discussion in your classroom about the role of computer science in creating positive social change.

We learn CS to detect problems

Building a society we want to live in begins with understanding the problems we need to address. We can use technology to detect and even predict problems.

Read this story about how smartphones are being used to detect earthquakes and then work in pairs or groups to answer the questions below. Then discuss as a class.

Questions for discussion:

- What technology does the article discuss?
- What problem is Google trying to solve? Why is this important?
- What are other ways that computer science or technology can help detect problems?

Full URL:
https://www.reuters.com/article/us-alphabet-google-quake/google-turns-android-phones-into-earthquake-sensors-california-to-get-alerts-idUSKCN2571TN

We learn CS to find creative solutions

Learning computer science gives us a foundation to find solutions. It is our creativity then that enables us in every industry and aspect of life to design solutions built upon that foundation.

Read this story about how urban planners are using AI in Minecraft to design better cities, and then work in pairs or groups to answer the questions below. Then discuss as a class.

Questions for discussion:

- What technology does the article discuss?
- What challenge or challenges are participants trying to address?
- Think of the technology that you use on a daily basis. What does it help you do? What problems or challenges does it help you solve?
- Can you think of a time you used technology in a way it wasn't necessarily intended, in order to solve a problem?

Full URL:
https://www.technologyreview.com/2020/09/22/1008675/ai-planners-minecraft-urban-design-healthier-happier-cities/

Discussing #CSforGood as a class

We learn CS to connect with each other

From video chats and classes to apps that allow us to sing together remotely, people have built technical innovations that have kept us connected with some semblance of community through a global pandemic. And, we will continue to find ways to humanize technology to unite us.

Watch this video of students from Chino Valley Unified School District singing an a capella version of "Over the Rainbow" via video conference after covid-19 canceled their annual Choral Festival. Then have them work in pairs or groups to answer the questions below.

Questions for discussion:

- Name as many of the technologies as you can that enabled these students to sing together despite stay-at-home orders due to covid.
- Do you use any of these technologies? How frequently--weekly? daily?
- Have you used technology lately to make art? Record music? Write poetry? Play games with friends? Talk to family members? If you did not have access to these technologies, what would you do?
- Should everyone have access to these technologies? Why or why not?

Full URL:
https://www.cbsnews.com/video/students-sing-together-from-home-after-coronavirus-cancels-concert/?intcid=CNM-00-10abd1h

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We learn CS to ensure equity and inclusion

The pandemic has exposed the digital divide like never before. Everyone must have the opportunity to learn computer science to have a part in building a future where all of us are included and all our voices heard.

Read this story about a new tool that helps root out potential biases in image sets that are used to train artificial intelligence (AI), and then work in pairs or groups to answer the questions below. Then discuss as a class.

Questions for discussion:

- What does this tool do and what problem is it trying to solve?
- What do you think 'open-source' means? Why would the researchers make their tool open-source?
- What are some of the examples mentioned in the article of biases in image sets? Can you think of any others?
- Why is it important to be able to identify these biases? How does this relate to equity and inclusion

Full URL: https://www.therobotreport.com/princeton-tool-helps-clear-biases-computer-vision/