

Ethics in CS

2-week, post-test unit plan for AP CS A

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Unit Essential Questions:

How should ethics play a role in our decisions when using computers?

What is an individual's responsibility to act ethically?

What is the government's responsibility to define ethical behavior?

Supporting Essential Questions

1. Do companies have an obligation to "do the right thing"?
2. Should the government force ethical behavior?
3. Can an algorithm be racist?
4. How does improved technology end up harming students?
5. How will automation affect the job landscape of the future?
6. Should trolling be protected as free speech?
7. How public is what you post online?
8. Should employers be allowed to discipline employees for social media posts?
9. What does it mean to own a piece of software?
10. Should people be trusted to act ethically?

Standards (from Rhode Island Computer Science Standards)

3-RC-CU-1 Evaluate the ways computing impacts personal, ethical, social, economic, and cultural practices.

3-RC-CU-2 Design and analyze computational artifacts to reduce bias and equity deficits.

3-RC-CU-3 Evaluate the impact of equity, access, and influence on the distribution of computing resources in a global society

3-RC-SLE-1 Evaluate the impact of intellectual property laws on the use of digital information

3-RC-SLE-2 Evaluate the social and economic implications of privacy and free speech in the context of safety, law, or ethics.

3-RC-SI-1 Use tools and methods for collaboration on a project to increase connectivity between people in different cultures and career fields.

Objectives Overview by Lesson number

1. SWBAT argue the ethical considerations of the application of computing practices in economic decisions.
2. SWBAT propose legislation to regulate decisions related to computing practices in business.
3. SWBAT argue for or against the ethics of using an algorithm that creates inequity.
4. SWBAT identify and address causes and effects of the Technology Gap.
5. SWBAT identify the ethical concerns of automation in the industrial world.
6. SWBAT identify the ethical concerns of coordinated attacks like "review bombing" .
7. SWBAT analyze the privacy policies of several photo-sharing sites.
8. SWBAT understand appropriate online behavior.
9. SWBAT understand copyright law as it relates to software and digital media.
10. SWBAT identify which ethical computing concerns should be the responsibility of the government and which should be the responsibility of the government.

Overview of Lesson Activities

Lesson 1 – Scruples Game (Day 1)

Objective – SWBAT argue the ethical considerations of the application of computing practices in economic decisions.

Overview

Students will take on the role of the CEO of a company tackling a computing related ethical challenge. They will choose a

side and argue their case with personal takes. Students will post these takes on a collaborative Jamboard that can be read by their classmates. They will choose one or two of the scenarios to share their opinion on.
Deliverables/Assessment Jamboard will contain students' takes on various issues, and provide a gallery for other students to view many different opinions on the same topic. Students are expected to interact respectfully.
Lesson 2 – Scruples Game Gallery Walk (Day 2)
Objective – SWBAT propose legislation to regulate decisions related to computing practices in business.
Overview After completing a Gallery Walk of the previous day's Scruples activity Jamboard, students will work in groups to come up with a code of ethics for companies to follow when making ethical decisions regarding computing practices.
Deliverables/Assessment Students will post a link to a Google Doc with their code of Ethics on to a Padlet for their classmates to see.
Lesson 3 – A “Racist” Algorithm
Objective – SWBAT argue for or against the ethics of using an algorithm that creates inequity.
Overview Students will read an article and analyze the results of the High School choice matching algorithm, which was designed to reduce racial inequity by disassociating racial identifiers from data, but ended up causing even more inequity. Students will discuss in groups alternatives to the current matching algorithm with the goal being to reduce inequity.
Deliverables/Assessment Students will submit their idea/proposal for altering the algorithm to increase equity via a Google Doc to Google Classroom.
Lesson 4 – The Technology Gap
Objective – SWBAT identify and address causes and effects of the Technology Gap.
Overview Students will read two articles detailing the causes of the technology gap and its harmful effects on students in America. They will then choose one of the causes and propose some legislation that will address this cause. Students will use persuasive language to justify why fixing this issue will help students and predict opposition to their legislation.
Deliverables/Assessment Students will post their proposals to specified communication platform and interact with at least two other proposals using respectful and thoughtful language.
Lesson 5 - Automation
Objective – SWBAT identify the ethical concerns of automation in the industrial world.
Overview Students will read an article on the advantages and disadvantages of automation. They will pick a job that is at risk of being replaced by automated machines and decide if this will be beneficial or detrimental to society, and analyze the potential fallout of that job being eliminated.
Deliverables/assessment Students will post on a Padlet and partake in a debate, then will identify and explain what they believe is the best argument for each side, submitting via a Google form exit ticket.
Lesson 6 – Review Bombing and Trolling
Objective – SWBAT identify the ethical concerns of coordinated attacks like “review bombing” .
Overview - Students will read about various “review bombing” attacks and coordinated attacks (The Boys tv show, The Last of Us Part 2, K-pop Trump rally), then discuss if they believe these coordinated attacks were ethically justified, and why. Students will argue if these types of coordinated attacks are free speech that should be protected, or if participants should be held accountable.
Deliverables/Assessment The set of rules and the analysis of two review-bombing attacks in particular.
Lesson 7 – Personal Data Privacy
Objective – SWBAT analyze the privacy policies of two content-sharing sites (Instagram and TikTok).
Overview Students will analyze the common sense media report on the privacy of two popular social media apps: TikTok and Instagram. Before they begin, they will write down two things they expect to see in the privacy policies. After/during

reading, they will write down things that surprised them and identify if their predictions were true. They will then compare and contrast the two privacy policies and write a primer for new users that briefly summarizes what they can expect from using the service.

(Follow-up lesson) This can be followed by a debate about whether or not it should be okay for these sites to share photos and information with government agencies.

Deliverables/Assessment

Student pairs will submit a program that takes user input and then assigns a score to the user based on how much of their privacy they are protecting. This would be sort of a text-based adventure game.

Lesson 8 – Online Conduct

Objective – SWBAT outline appropriate online behavior.

Overview

Students will read an article outlining the laws regarding private employers can and can't fire somebody for when posting on social media. Students will play another Scruples game where they are given several social media posts with controversial or inflammatory statements, and will take the role of the person's boss. For each situation, they would post on the Jamboard of what an appropriate consequence, if any, would be for the post in question.

The posts:

"I teach at the most ghetto school in Charlotte."

Just simply: "I HATE MY BOSS!"

A spokesperson for a company: "Marriage is between a man and a woman."

(a picture of a Taco Bell employee licking Tacos)

(a picture of an employee with prominently featured drug paraphernalia)

These are actually all examples of somebody getting fired, whether it was legal to fire them or not. Many more can be found online.

Students will then discuss whether the action they would like to take is legal based on the article read at the beginning of class, or if they might be sued for wrongful termination.

Deliverables/Assessment

Jamboard with each social media post and student's opinions on how they should be disciplined, if at all.

Lesson 9 – Digital Rights Management

Objective – SWBAT understand the advantages and disadvantages of Digital Rights Management on software.

Overview

Students will read an article about the advantages and disadvantages of DRM and summarize each position. After that, they will read an article about the issues caused by DRM upon the release of Diablo III. Students will synthesize these resources to determine what should be done by media creators to prevent piracy, if anything at all? Should the government step in to protect consumers from companies attempting to restrict consumer's access to their product? Should companies be charging for their products at all?

Deliverables/Assessment

Padlet/Slack post with their support or opposition to DRM and their alternative solutions to problems plagued by consumers and companies. Students will also respond to at least two other students.

Lesson 10 – Bringing it All Together

Objective – SWBAT identify which ethical computing concerns should be the responsibility of the government and which should be the responsibility of the government.

Overview

Looking back at each of the previous lessons, students will decide who should hold the majority of the responsibility to act ethically: individuals or the government that makes the laws. They will decide if companies and/or individuals can be trusted to make the "right" ethical decisions or if the consequences for acting unethically make it too important to leave to choice. Students will work in pairs and choose two of the topics discussed over the past two weeks and create a persuasive presentation calling for increased or decreased legislation regarding those issues. They will research potential

solutions, then argue for their necessity. If time allows, students can make these presentations to the class or in small groups.

Assignment/Assessments

Slide deck with students' thoughts and write-up on several scenarios chosen from the previous two weeks worth of lessons.

Rubric:

Two topics chosen.

For each topic:

- overview
- primary ethical concern
- proposed solution (legislation/de-legislation)
- justification

Presentation (slide deck/poster)