In educating and empowering young people with the knowledge and skills presented in the Cybersecurity course, it is necessary to be intentional about discussing the role of ethics within the computer science community. We are all too familiar with news of security breaches, hacking, and identity thefts gracing the headlines on a regular basis. Our students are the future of the computer science/cybersecurity world, and having real conversations about how to make ethical decisions is crucial.

In designing this course, PLTW has done intentional development of activities and scaffolding that recognizes the brain development of high school students. Research shows that the teen years are notoriously linked to making questionable choices and taking risks. These choices may be more a result of brain physiology than poor judgement. During early adolescence, there is a "battle" of brain development taking place. The social-emotional part of our brains undergoes rapid development, while the cognitive-control center develops later, thus creating an imbalance. The social-emotional part of the brain seeks rewards and has been shown to be stimulated by risk taking; the more risks, the more the reward centers are activated. Without a fully formed cognitive control center, the scales tip in favor of risk-taking behaviors. This disparity in development peaks around age 16. In later years, the brain's cognitive-control center finally catches up and helps adults evaluate and govern the impulses from the social-emotional brain.

The following resources and case studies were compiled to equip teachers with the tools and resources to have crucial ethical conversations and to capitalize on teachable moments. The International Society for Technology in Education (ISTE) has outlined standards for teachers, students, and administrators regarding technology education. One of the standards outlined for students is Digital Citizenship, defined as: "Students recognize the rights, responsibilities and opportunities of living, learning and working in an interconnected digital world, and they act and model in ways that are safe, legal and ethical" (ISTE, 2018). While we can never predict nor prepare students for every ethical decision they may encounter, we can prepare them to think critically, which will guide them in their choices and the resulting consequences.

"The complexity of technology and how society chooses to address technology use make it difficult for students to find true north" (Ripple and Bailey, 2005). Using case studies to practice decision making is a great way for students to truly reflect on the complexity of real-life situations. During these discussions, it is critical to refer to the "living" Code of Conduct that students create throughout the course. Ask students whether they are abiding by the expectations they outlined for themselves and whether the code needs modification as a result of the discussion.

It is also crucial that as the facilitator, you reserve judgement and remain a neutral party. Be sure to value the perspectives of everyone and create an open space where everyone feels safe sharing. Not all situations have clear "right" or "wrong" answers. Additionally, recognizing that students come from a wide array of life experiences and have diverse moral influencers, be prepared for these different perspectives to emerge during ethical conversations. As a facilitator, it is important to help students consider different perspectives, practice active listening, better understand the complexity of ethical dilemmas, and engage in civil discourse.

While maintaining a civil, education-focused discussion, take advantage of opportunities to have students think critically about the issue at hand. This experience can help them develop the skills to engage respectfully in ethical conversation with the intention to learn.

Questions to help guide and reflect on ethical conversations include:
   a. What is the ethical dilemma or consideration in this situation?
   b. What are the various perspectives that individuals might have when considering this scenario?
   c. What is your personal perspective on this scenario?
   d. What is a new perspective you previously had not considered?
   e. What would it take for you to change your mind?