

February 2018 Educator Toolkit: Artificial Intelligence

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Why This Matters Now

Movie buffs have been hearing about artificial intelligence for years – from Steven Spielberg’s 2001 science fiction drama *AI* to the 2015 robotic police force in *Chappie* and beyond. AI is no longer the stuff of science fiction. This essential part of the technology sector aims to create intelligent machines of all kinds that think, work and react like humans. Just as electricity transformed the way industries functioned in the past century, artificial intelligence — the science of programming cognitive abilities into machines — has the power to substantially change society in the next 100 years. AI is being harnessed to enable such things as home robots, robo-taxis and mental health chatbots to make you feel better. The growth in this industry suggests great opportunity for Generation Z (today’s high school students) as they prepare for life after high school and college. Computer scientists tell us that the AI field requires strong foundations in math, technology, logic and engineering. Careers in AI use automation, robotics and sophisticated computer software and programs. Giving students a deeper understanding of AI and its business dimensions will inspire them to think about their potential place in this exciting, high-tech market.

Resources

Article

[The Allure of Artificial Intelligence](#)

Get the conversation about AI started with this introduction to the industry and all its moving parts, from machine learning and RoboBees, to Cortana and computer science. Then use the conversation starters accompanying the article to do a deeper dive into the topic. For example: “What do you see as the greatest reward of AI? What about the greatest risk? Using the article and the toolbar to the right, find out what people are saying on both sides of the argument. Use what you learn to reflect on where you stand on the future of Artificial Intelligence. Log in to KWHS and share your insights in the comment section of this article.” Once you’ve discussed the article, assign this follow-on KWHS piece for a fascinating perspective on the AI start-up culture: [A Teen App Developer Embraces a World Where ‘AI Is Going to Get into Everything.’](#)

Lesson Plan

[Management: ‘The Power of Impossible Thinking’](#)

Students interested in the business of AI will need to embrace their innovative spirits. Many of them may someday manage businesses on the cutting-edge of technology. This lesson provides students access to some of the ideas presented in Colin Crook and Jerry Wind’s book *The Power of Impossible Thinking: Transform the Business of Your Life and the Life of Your Business*. Through a guided discussion, students will address thought-provoking concepts like: “We think the barriers are in the world, but often they are in our own minds,” and then apply their new knowledge through the development of a strategic plan for a business, product or service in the local community. We encourage you to add an AI twist to their innovation exercise by incorporating intelligent machines into their strategic plans, thus exploring the power of their own thinking with that of manmade minds.

Hands-on Learning

It can be difficult to grasp the depth and scope of artificial intelligence. It is literally transforming the business landscape as we know it. Specific jobs held by AI professionals include surgical technicians working with robotics, manufacturing and electrical engineers, software analysts and developers, mechanical engineers and algorithm specialists. Seeing is believing – and understanding. Plan a series of “AI Adventures” for your students that involve guest speakers working in the field, trips (either physical or virtual) to AI start-ups, companies or college classrooms developing technology, and

even movie and YouTube viewings that will get students thinking in new ways about how artificial intelligence is developed and applied. Millennial entrepreneurs tell us that they love to share their knowledge and advice with the next generation. Why not Skype with the CEO of an AI startup in Silicon Valley? Be sure to read [A Teen App Developer Embraces a World Where 'AI Is Going to Get into Everything'](#) for a list of cool startups. [Honda](#) is also a great place to explore the latest applications of AI. Or watch an [AI movie](#) and then discuss [this article](#). [The Association for the Advancement of Artificial Intelligence](#) may also spark ideas for your next “AI Adventure.”

Video Glossary

Provide an extra layer of learning for your students with our video glossary. Here, Wharton professors define terms: Computer Science, Startup, Venture Capital and Innovator

KWHS Quote of the Month

“I would like to work in the Virtual Reality (VR) and Artificial Intelligence (AI) space. And then maybe create mixed reality, which is a combination of both.” – *Hamish Finlayson, 13, world-known app developer*