Alternate Histories


An increasing number of “alternate history” science fiction books are being published. Recently I read the first four books of the World War series written by Harry Turtledove (1994, 1995, 1996a, 1996b).

The story begins in 1941, after World War II is in full swing. At that time, the earth is invaded by beings from a planet that is many light years away. They have arrived at earth by traveling at sublight speed, with most of the soldiers in “deep sleep.”

The technology of the invaders has advanced far beyond that of the earth people. How far? Arthur C. Clarke asserted that “any advanced technology is indistinguishable from magic.” To the earth people of the early 1940s, the technology of the invaders seems like magic.

However, much of the invader’s technology is the technology we now take for granted. Computers built using large-scale integrated circuits. Radar, laser guidance systems and computers used in a variety of missiles, and other “smart” weapons. Nuclear weapons. Wireless video telephones. Video cameras. Infrared and “low-light” vision systems. Spaceships and jet airplanes.

Technology on our planet has advanced so much in the past 60 years that it might indeed be viewed as magic by people from 60 years ago. Moreover, the pace of technological change during the past 60 years shows no signs of abating. In fact, many scientists and engineers argue that the pace is accelerating.

Educational Applications

Children readily adapt to new technology, but many adults struggle with such change. Thus, children growing up with computers at home and school are able to acquire a fluency with computer use that surpasses that of many of their teachers.

This provides an excellent opportunity for collaborative learning activities among students and teachers, where all are able to contribute and to learn. It also provides an excellent opportunity for helping students learn about change. How do individual people, and society as a whole, deal with a rapid pace of technological change? The following are some curriculum activities that can be adapted to a variety of grade levels.

1. Engage your students in conversations about things they know that people did not know 25 or 50 years ago. (Pick numbers of years that correspond to the years in which your students’ parents and grandparents were the same age your students are now.)
   a. For example, all of your students have seen a floppy disk. They know that information is recorded magnetically on its surface. With a little prodding, they know that this information can be accessed randomly—as distinguished from sequentially—and that text, graphics, and sound can
all be stored on a floppy disk. Moreover, your students know that there are hard disks that store hundreds of times as much information as floppy disks. Finally, your students know about CDs and CD-ROMs. These store information in a digital format, but are not the same as magnetic disks.

b. For a second example, consider the Internet. How would your students explain the Internet to children 25 or 50 years ago? What do your students know about converting information to digital formats, transmitting information digitally, and then converting back to an analog format? What do your students know about satellites, fiber optics, and cellular telephones?

How did the parents and grandparents of your students adjust to the technological changes during the last 25–50 years? For example, are parents and grandparents adept at programming a VCR or microwave oven? Are parents and grandparents as comfortable using computers as your students? Have they learned to surf the Internet and retrieve information from the Web?

2. Have your students write an “alternative history” story. For example, suppose that the computer had never been invented. How would life be different? Suppose that computers had been invented 50 years earlier. How would this have affected history, and how would life be different now?

3. Have your students discuss and write about the following: “Suppose that you were magically transported 2,000 years back in time. What could you tell the doctors, scientists, and engineers of 2,000 years ago that would help them? What could you tell teachers, social scientists, or politicians?”

4. How has education changed since the time when your students’ grandparents and parents were in school? Have your students make a list of things that they think might have changed, and a list of things that they think may not have changed much. Each of your students should interview one or more people who went to school 25 or 50 years ago. Share the results by way of small-group and whole-class discussions.

5. What will education be like 25 or 50 years from now? What will be the same, and what might be different? Engage your students in discussions. Have them write about possible futures of education.

Final Remarks

We are just at the beginnings of the major changes that information technology will bring to our world. You can help to prepare your students for such changes by engaging them in the types of activities discussed in this article.

As you try out these and other ideas with your students, please share what you are learning with your fellow teachers. Send your best examples to the ISTE editors.

References

