The classic children’s book spurs food for thought for science educators

By Mika Munakata

To children, *The Little Prince* by Antoine de Saint-Exupery (1943) may be a mystical story about a traveler among planets. For adults, the story can be appreciated for the lessons it teaches us about what it is like to be a child—and how children may perceive the world of adults. And, for science educators, particularly, *The Little Prince* challenges us to take into account the whole child when teaching and to consider the complexities and implications of the discipline we are committed to teach.

This article reflects on some of the issues we face as teachers and suggests analogies between the encounters of the Little Prince and the challenges of making science meaningful for our students.

**The Little Prince**

At first, the story of *The Little Prince* appears to be a simple tale of a prince who possesses mystical powers. As one reads deeper into the story, however, it becomes a philosophical journey through the eyes of two disarming characters: an impressionable pilot and the wise little prince. When they meet, the pilot is instantly enamored by the childlike qualities of the Little Prince and is lured into his world by stories of his travels among asteroids. From the king of Asteroid 325 who rules over no one to the earthly fox who is looking to be tamed, we are introduced to the perplexing characters the Little Prince meets on his journey.
Nurturing Curiosity

The first encounter between the pilot and the Little Prince occurs after the pilot’s plane breaks down in the middle of the Saharan desert. As the pilot tinkers with his engine, he hears a feeble voice in the air, pleading him to draw a sheep: “If you please, draw me a sheep.” With this simple request, the friendship between the pilot and an elflike prince springs to life.

After the pilot draws the sheep, the Prince becomes curious about the relationship between sheep and flowers. The two have this conversation:

- A sheep—if it eats little bushes, does it eat flowers too?
- A sheep...eats anything it finds in its reach.
- Even flowers that have thorns?
- Yes, even flowers that have thorns.
- Then the thorns—what use are they?
- The thorns are of no use at all. Flowers have thorns just for spite!
- I don’t believe you...flowers have been growing thorns for millions of years. For millions of years, the sheep have been eating them just the same. And is it not a matter of consequence to try to understand why the flowers go to so much trouble to grow thorns, which are never of any use to them? Is the warfare between the sheep and the flowers not important? (p. 27–29)

Just as the Prince contemplates the reason for thorns on rose bushes, every child has questions about the way the world works. Educators can take advantage of this innate inquisitiveness in children. Through science, we can teach children how to answer their own questions and, perhaps more importantly, how to question the world around them by meeting the “particular interests, knowledge, and skills of (the) students and build(ing) on their questions and ideas” (NRC 1996).

We need to build upon children’s curiosities to encourage question asking, hypothesis building, and development of reasoning skills. By making learning relevant to children’s interests, we not only make learning more meaningful for them, but we also promote science as a discipline worth pursuing. Especially given that attitudes toward science as a field of study are developed by age nine (Joyce and Farenga 1999), educators need to build upon students’ curiosity to support investigations and other activities that encourage inquisitiveness.

Science Is Social

Later in the story, the narrator learns that the Little Prince comes from a different planet. He traveled to Earth from a distant asteroid named B-612. His description of the history of the asteroid alludes to the effect of political influences on scientific research:

This asteroid has only once been seen through the telescope (from Earth). That was by a Turkish astronomer, in 1909. On making his discovery, the astronomer had presented it to the International Astronomical Congress, in a great demonstration. But he was in Turkish costume, and so nobody would believe what he said.

Grown-ups are like that...
The tale continues:

Fortunately, for the reputation of Asteroid B-612, a Turkish dictator made a law that his subjects, under pain of death, should change to European costume. So in 1920 the astronomer gave his demonstration all over again, dressed with impressive style and elegance. And this time, everybody accepted his report (p. 15–16).

This anecdote challenges us to consider the various interactions between science and society. Because science is susceptible to various human influences, it is not free from biases or political value judgments. Accordingly, scientists who practice science, policy makers who implement the results of scientific research, and teachers who teach science are all in positions to influence the direction of scientific research and the implementation of the results.

The Prince’s asteroid story illustrates societal influences on the perceived validity of scientific research. While Western ideas have had a heavy influence on science throughout history, we must be careful not to bill traditional forms of science from non-Western cultures as being less scientific. We must be aware of our own ethnocentricities and biases when exposed to unfamiliar practices.

In the classroom, measures of validity for scientific research from both Western and non-Western cultures should be discussed, and discussions about alternatives to Western science—such as Chinese medicine or various methods of agriculture—should be included in the curriculum. It is important for students to be exposed to cases of bias in the scientific world so that they can think critically about their own backgrounds and the assumptions that may arise from those backgrounds.

This is in accordance with the current science standards, which state that it is the teachers’ charge to “clarify different aspects of scientific inquiry, the human aspects of science, and the role that science has played in the development of various cultures” (NRC 1996).

Caring for the Environment

The Little Prince also alludes to the consequences of human control over nature and science. As the awestruck pilot talks with the prince, he slowly begins to recognize the values the prince holds most dear. Among the Little Prince’s priorities is his responsibility to his planet:
Indeed, as I learned, there were on the planet where the Little Prince lived—as on all planets—good plants and bad plants. In consequence, there were good seeds from good plants, and bad seeds from bad plants. But seeds are invisible. They sleep deep in the heart of the Earth's darkness, until some one among them is seized with the desire to awaken. Then this little seed will stretch itself and begin—timidly at first—to push a charming little sprig inoffensively upward toward the Sun. If it is only a sprout of radish or the sprig of a rose-bush, one would let it grow wherever it might wish. But when it is a bad plant, one must destroy it as soon as possible, the very first instant that one recognizes it. (p. 20–21)

This passage touches upon the significance of human control over the planet and over the science that takes place on it. Especially in recent years, environmental science has become an important topic for scientists, educators, and students. Because there is often conflict between the financial interests of a community and the environmental upkeep of the planet, it is difficult to nurture one without compromising the other. It is our role as educators to make students aware of conflicts such as those between large corporations and environmental groups and to convey to students how our daily actions affect the environment.

Learning by Doing

The Little Prince also unwittingly speaks to the cause for hands-on science. For example, on one of the planets he visits, the Little Prince meets an elderly geographer-cartographer. When the Little Prince asks about the places the cartographer is mapping, the scholar replies that he knows nothing of the nature of the mountains or rivers that exist on his planet because:

I am not an explorer... It is not the geographer who goes out to count the towns, the rivers, the mountains, the seas, the oceans, and the deserts. The geographer is much too important to go loafing about. He does not leave his desk. But he receives the explorers in his study. He asks them questions, and he notes down what they recall of their travels. And if the recollections of any one among them seem interesting to him, the geographer orders an inquiry into that explorer’s moral character. (p. 63–64)

The science that this geographer is practicing is second-hand, or armchair, science. Instead of dirtying his hands with the messy processes of exploring his planet, his job is to receive information from his sources.

The Little Prince is puzzled by the geographer’s lack of interest in his surroundings. A similar perplexity can be said to overcome students who are asked to learn science solely through textbooks and lectures. These types of secondhand resources are limiting their appreciation for the complexities, wonders, and beauties of science.

In order to foster critical inquiry, students must be active participants in the discovery of science. Students must learn that science is not cut and dry, nor is it a discipline that can be learned from books alone. While it is at times impossible to “return to basic phenomena” (NRC 1996), the teaching and learning of science are made much more meaningful when traditional methods are supplemented by laboratory exercises and fieldwork. Even when secondary sources must be used, teachers can take an inquiry-based approach to using these materials” (NRC 1996).

Implications for Teachers

The connections between the philosophies of The Little Prince and issues in science education are pertinent to teaching elementary school students. Given the push for interdisciplinary education and for including literature in various disciplines, teachers might be spurred to develop activities based on insights gleaned from the story or explore other literary works that include references to education and the worldviews of children.

Mika Munakata (munakatam@mail.montclair.edu) is an assistant professor at Montclair State University in Montclair, New Jersey.

Resources


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