



Sciences: A Global Perspective

As an IB World School, Henrico HS embraces a global perspective that is more than flags, food, and festivals. Each subject area has created its own Global Perspective Statement in order to raise awareness of how internationalism permeates all that we do in the classroom.

Global issues in Science:

Sciences courses are designed to introduce students to the study of biology, chemistry, physics, and environmental science through a global lens. These courses explore how science is applied to solve local and global problems and the implications that may result from action and inaction. The following problems and issues are addressed during a student's progression through the sciences courses: AIDS epidemic, genetic engineering of food, climate changes, gene therapy, industrial processes, and The Human Genome Project.

Global thinking in Science:

Students are guided in thinking systematically and critically about the nature of the science and the ways in which we study the natural environment. Students will understand that science is a human endeavor with conventional methods for research, collaboration and communication to better society as a whole.

Science in the global community:

Students are taught the importance of scientific research by analyzing and responding to dire global issues within and beyond the local community. The importance of sharing and publishing data is emphasized in order to help the students to understand that gaining new perspectives is paramount.

Global practice of ethics as reflected Science:

Sciences teachers offer students the opportunity to consider the ethical dimensions of topics and address controversial issues, providing an arena for reflective development of personal morals and professional ethics in science. In the classroom, we analyze shared data to address the reliability and validity of our experiments, hypotheses, and results.

Teaching and learning from different perspectives in Science:

Our courses offer open and guided inquiry in the safe space of the classroom. Students are instructed through the lens of global concepts such as change, relationships, time, and systems. This unifies a student's understanding of the various disciplines of science creating a more meaningful and lasting learning experience. Students will also learn the language of science as it is unique to the disciplines

(biology, chemistry, and physics). Though assessments are individual tasks, peer-review will be a regular practice. Students will also have opportunities to employ “trial and error” as part of the inquiry process.

The search for identity in Science:

Students are taught to understand that the quest to uncover the secrets that lie within us is trapped in our genetic code. They learn that many of the secrets of the genetic code have been revealed through the Human Genome Project. This project has given the scientific world and the world at large a new perspective and hope in terms of eradicating many of the disease states that plague our world.

Global action in Science:

IB Science courses offer the students the flexibility to pose their own questions but allows for them the guidance and safety of the classroom that is necessary at this level of their academic career. Today’s students are bombarded with scientific controversial issues through various media outlets. Students are encouraged to explore scientific journal publications that deal with the concepts or issues at hand and to hypothesize and develop research projects that could possibly lead them to the answers that they seek. This is an important step towards teaching students to be inquisitive and to use the tools that they have acquired over the course of their scientific education. Our purpose is to facilitate their becoming confident enough to delve into scientific research with the goal of finding the answers to today’s problems and beyond.