



Curriculum Units by Fellows of the Yale-New Haven Teachers Institute  
2015 Volume III: Physics and Chemistry of the Earth's Atmosphere and Climate

---

## **The Physics of Robotic Construction and Operation**

Guide for Curriculum Unit 15.03.02  
by Jonathan Cap

In this unit we will discuss and learn about the physics and chemistry that go into robotic construction and operations. We will also see how robots are used in the Earth's atmosphere and how they can help us understand the climate. We will consider the design process that is used to robotically manufacture items that are better for the environment and climate. Students will research different human activities that are affecting the climate and atmosphere and come up with hypothetical solutions using our design process. This will be tied into students' math courses, strengthening the use of physics by taking their formulas from paper to the construction of robots in school. Students' participation will increase as they will be working together to build robots, and working on the mathematics relating to physics problems that must be solved.

(Recommended for Robotics and Engineering, grades 11 and 12)

---

<https://teachersinstitute.yale.edu>

©2019 by the Yale-New Haven Teachers Institute, Yale University  
For terms of use visit <https://teachersinstitute.yale.edu/terms>