

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 Carbon Cycle and the Connection to Human Activity

Guide for Curriculum Unit 15.03.01 by Terry M. Bella

This unit can be used to cover the Connecticut high school science content requirements concerning: human energy use; chemical reactions; carbon chemistry; element cycling on Earth; resource use and the effect on the environment; and recycling of materials. Carbon is of integral importance today and will be for the life of our students because of its likely impact on climate and the finite nature of the carbon resources we rely upon.

This unit provides up-to-date information about the volume of the Earth's carbon stores and the amount of carbon that is moving among stores annually. The unit also frames the scientific material to facilitate organized instruction. Carbon stores are defined and divided into two categories, long term and short term.

Lastly, some easy-to-do classroom activities are provided to help deliver the content and apply the concepts to the real world.

(Recommended for Physical Chemistry and General Science, grade 9)

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