

TOPIC 1.10

Energy Flow and the 10% Rule

Required Course Content

ENDURING UNDERSTANDING

ENG-1

Energy can be converted from one form to another.

LEARNING OBJECTIVE

ENG-1.C

Determine how the energy decreases as it flows through ecosystems.

ESSENTIAL KNOWLEDGE

ENG-1.C.1

The 10% rule approximates that in the transfer of energy from one trophic level to the next, only about 10% of the energy is passed on.

ENG-1.C.2

The loss of energy that occurs when energy moves from lower to higher trophic levels can be explained through the laws of thermodynamics.

SUGGESTED SKILL

 *Mathematical Routines*

6.C

Calculate an accurate numeric answer with appropriate units.



AVAILABLE RESOURCES

- Classroom Resource > [An Energy Primer for the AP Environmental Science](#)
- Classroom Resource > [Quantitative Skills in the AP Sciences \(2018\)](#)
- Classroom Resource > [AP Environmental Science Teacher's Guide](#)
- External Resource > [Environmental Literacy Council's AP Environmental Science Course Material](#)
- Classroom Resource > [Outdoor Education Experiences and AP Environmental Science](#)
- The Exam > [Chief Reader Report 2018, Q2](#)
- The Exam > [Samples and Commentary 2018, Q2](#)