

SUGGESTED SKILL

 *Data Analysis*

5.C

Explain patterns and trends in data to draw conclusions.



AVAILABLE RESOURCES

- Classroom Resource > [AP Environmental Science Teacher's Guide](#)
- The Exam > [Chief Reader Report 2018, Q1](#)
- The Exam > [Student Performance Q&A 2014, Q2](#)
- The Exam > Samples and Commentary (2018, Q1, 2014, Q2)

TOPIC 6.8

Solar Energy

Required Course Content

ENDURING UNDERSTANDING

ENG-3

Humans use energy from a variety of sources, resulting in positive and negative consequences.

LEARNING OBJECTIVE

ENG-3.J

Describe the use of solar energy in power generation.

ENG-3.K

Describe the effects of the use of solar energy in power generation on the environment.

ESSENTIAL KNOWLEDGE

ENG-3.J.1

Photovoltaic solar cells capture light energy from the sun and transform it directly into electrical energy. Their use is limited by the availability of sunlight.

ENG-3.J.2

Active solar energy systems use solar energy to heat a liquid through mechanical and electric equipment to collect and store the energy captured from the sun.

ENG-3.J.3

Passive solar energy systems absorb heat directly from the sun without the use of mechanical and electric equipment, and energy cannot be collected or stored.

ENG-3.K.1

Solar energy systems have low environmental impact and produce clean energy, but they can be expensive. Large solar energy farms may negatively impact desert ecosystems.