

SUGGESTED SKILL

 *Environmental Solutions*

7.D

Use data and evidence to support a potential solution.



AVAILABLE RESOURCES

- Classroom Resource > [AP Environmental Science Teacher's Guide](#)
- External Resource > [Environmental Literacy Council's AP Environmental Science Course Material](#)
- The Exam > Chief Reader Report (2018, Q3, 2017, Q1)
- The Exam > Samples and Commentary (2018, Q3, 2017, Q1)
- Classroom Resource > [Quantitative Skills in the AP Sciences \(2018\)](#)

TOPIC 8.9

Solid Waste Disposal

Required Course Content

ENDURING UNDERSTANDING

STB-3

Human activities, including the use of resources, have physical, chemical, and biological consequences for ecosystems.

LEARNING OBJECTIVE

STB-3.K

Describe solid waste disposal methods.

ESSENTIAL KNOWLEDGE

STB-3.K.1

Solid waste is any discarded material that is not a liquid or gas. It is generated in domestic, industrial, business, and agricultural sectors.

STB-3.K.2

Solid waste is most often disposed of in landfills. Landfills can contaminate groundwater and release harmful gases.

STB-3.K.3

Electronic waste, or e-waste, is composed of discarded electronic devices including televisions, cell phones, and computers.

STB-3.K.4

A sanitary municipal landfill consists of a bottom liner (plastic or clay), a storm water collection system, a leachate collection system, a cap, and a methane collection system.

STB-3.L

Describe the effects of solid waste disposal methods.

STB-3.L.1

Factors in landfill decomposition include the composition of the trash and conditions needed for microbial decomposition of the waste.

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LEARNING OBJECTIVE

STB-3.L

Describe the effects of solid waste disposal methods.

ESSENTIAL KNOWLEDGE

STB-3.L.2

Solid waste can also be disposed of through incineration, where waste is burned at high temperatures. This method significantly reduces the volume of solid waste but releases air pollutants.

STB-3.L.3

Some items are not accepted in sanitary landfills and may be disposed of illegally, leading to environmental problems. One example is used rubber tires, which when left in piles can become breeding grounds for mosquitoes that can spread disease.

STB-3.L.4

Some countries dispose of their waste by dumping it in the ocean. This practice, along with other sources of plastic, has led to large floating islands of trash in the oceans. Additionally, wildlife can become entangled in the waste, as well as ingest it.