



TOILETS (OR A LACK THEREOF)

LEARNING GOALS

- To understand the value of toilets and the potential effects of a lack of adequate sanitation.
- To evaluate sanitation systems that are adapted to suit different social, economic, and geographic contexts.
- To practice drawing connections between local challenges and global contexts and best practices.

ASSIGNMENT

Estimated Time: ~21 min

- Watch "[Lack of water, sanitation and hygiene \(WASH\) and its effects on nutrition](#)" (3:21)
- Watch "[Sanitation | Reframing the problem](#)" (3:41)
- Read "[A \\$350 toilet powered by worms may be the ingenious future of sanitation that Bill Gates has been dreaming about](#)" (~5 min)
- Watch "[World Toilet Day: Growing Momentum for Sanitation in Cambodia](#)" (1:51)
- Read "[Cesspools in Paradise](#)" (~7 min)

TERMINOLOGY

- **Sanitation** – conditions relating to public health, especially the provision of clean drinking water and adequate sewage disposal.
- **Latrine toilet** – a very simple toilet facility, usually just a pit or trench in the ground.
- **Open defecation** – the practice of defecating outside ("in the open") rather than into a toilet. People may choose fields, bushes, forests, ditches, streets, canals or other open space.
- **Cesspool** – underground storage for liquid waste, either a holding tank (sealed at the bottom) or a soak pit (not sealed at the bottom).
- **Septic Tank** – a basic onsite waste treatment system. Anaerobic (oxygen-free) bacterial processes provide a moderate treatment efficiency, but groundwater pollution can still be a problem.
- **Advanced Treatment Unit (ATU)** - a small biological treatment system more effective than a traditional septic system. ATUs add air (oxygen) to help break down organic matter.

KAHOOT QUIZ

- Go to Kahoot.it or use the Kahoot mobile app and enter the pin 02460275
- Or, use [this link](#)



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DISCUSSION QUESTIONS

- Have you used toilets that are different from those that we are used to in Hawaii? Share your experience! Analyze how sanitary it was and how that toilet impacted the environment.
- According to the videos, how might sanitation issues impact a family's quality of life, including health, education, economic growth, and labor?
- What is open defecation and why is it so common in the Global South?
- The Gates Foundation wants to take toilets "off-grid." What does this mean and why is it important in designing toilets for the developing world? What other limiting factors might need to be considered?
- What is the Tiger Toilet and how does it work?
- The Business Insider article mentions that in India, even people that have access to a toilet sometimes don't use it. How does the NGO Watershed featured in the Al Jazeera video attempt to engage communities and increase toilet use in Cambodia?
- How do toilets and sanitation intersect with issues of gender equality?
- Would you install a Tiger Toilet or one of the other toilets mentioned in the Sea Grant article in your home? Why or why not? How is this judgement tied to what Kaaumoana calls 'place-based solutions'?

ADDITIONAL RESOURCES

- ["How The Toilet Changed History"](#) (7:14)
This video by PBS tells a brief history of toilets and how modern sanitation became the most important medical advancement since 1840.
- ["For India, Toilets are a \(Mostly\) Serious Issue"](#)
The New York Times reports on the success of "Toilet, A Love Story" a popular Bollywood film that mirrors India's struggle with access to toilets and the government's campaign to improve sanitation.
- Other Toilets Around The World:
 - ["Bathrooms Around the World"](#)
This Insider magazine article describes different toilet setups in different parts of the world.
 - ["Three Groundbreaking New Toilets"](#) (5:31)
This Youtube channel explains in more detail how three of the toilets developed for Bill Gates challenge function.
- Toilets in Hawaii
 - ["Bill Gates wants to bring a new kind of technology to Hawaii: The reinvented toilet"](#)
The Honolulu Civil Beat introduces a pilot program for alternative toilets in Hawaii. Note: As of August 2020, the [bill establishing the pilot program](#) has yet to be passed.
 - ["Tackling A Crappy Situation"](#) Hawaii Business Magazine covers the origins and importance of Hawaii's cesspool problem. "This story is about cesspools in Hawai'i, a problem that was kicked down the road for decades but one we are finally dealing with. We also look at the common ways to replace cesspools and one bold new technology."



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ADDITIONAL RESOURCES (continued)

- [“Honolulu to Reopen Public Bathrooms, State Keeps Them Closed”](#)
The Honolulu Civil Beat reports on how the closure of public restrooms during the pandemic affects sanitation among Hawaii’s homeless.

IDEAS FOR ACTION

Easier

- Identify the components of your own sanitation system at home. Where does the water that you flush and wash your hands with come from? Where does waste go and how is it treated?

Medium

- Research alternative toilets like the Tiger Toilet. How do they compare? How are their field trials and pilot programs progressing? Write an article about which system you recommend and why.
- Inventing a new toilet is great, but how will it be implemented and accepted in the host community? Research the importance of local engagement in development programs and different strategies NGOs use to ensure changes are fully integrated and sustainable in the community.
- Spread awareness of the importance of sanitation management. Organize a webinar with a panel of speakers-- government personnel, sanitation engineers, toilet designers, etc. to discuss their work and how they got started in the field.

Hard

- Policy advocacy: research bills in the city council and state legislature related to cesspools, public restrooms, or sanitation. Write and submit testimony.

HAWAII DOE SUBJECT STANDARDS LINKS (High School)

Hawaii Core Standards for Social Studies (HCSSS)

- Content Standard [SS.WH.8.12.1](#)
- Content Standard [SS.US.12.8.1](#)
- Action Projects link to [SS.PID.5.7.1](#)

National Health Education Standards

- NHES.1.1.2.1
- NHES.1.1.2.3
- NHES.2.1.2.2
- NHES.2.1.2.6
- NHES.2.1.2.10

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