

CAREER CLUSTER: Arts, A/V Technology, & Communication	DURATION: Approximately 20 sessions, but can be modified to fit classroom schedules. (Session = 45 to 50 Minutes)	TEACHER:	U.N. SUSTAINABLE DEVELOPMENT GOAL: #6 — Clean Water and Sanitation
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GLOBAL ISSUE OVERVIEW

Around the world, access to proper sanitation facilities and potable water varies greatly. According to the *Report from the Secretary-General in the Sustainable Development Goals 2018*, “29% of the global population lacked safely managed drinking water supplies, and 61% were without safely managed sanitation services.” In some areas, individuals may have access, but the facilities are in such disrepair that use of the water or facility poses a public health problem. For example, open defecation and dumping of hazardous materials contribute to the issue of poor water quality. The absence of proper handwashing stations only adds to the public health issue. Many people also lack access to sanitation and water due to poor infrastructure or water scarcity as a result of environmental conditions. In 22 countries, mostly in northern Africa as well as western, central, and southern Asia, the water stress level, a measure of competition over water resources, is above 70%, indicating a strong probability of future water scarcity. Lack of clean water and sanitation cannot only hinder the socio-economic progress of a community but can also propel it into a public health crisis.

While there is wide recognition of these issues, there is still much debate as to how to achieve equal access to clean water and sanitation around the world. The United Nations agreed that by 2030 the following were targets to be achieved:

- Universal and equitable access to safe and affordable drinking water for all.
- Access to adequate and equitable sanitation and hygiene for all and an end to open defecation, paying special attention to the needs of women and girls and those in vulnerable situations.
- Improve water quality by reducing pollution; eliminating dumping, and minimizing the release of hazardous chemicals and materials; halving the proportion of untreated wastewater; and substantially increasing recycling and safe reuse globally.
- Substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity.
- Implement integrated water resource management at all levels, including through transboundary cooperation as appropriate.

Improvement of sanitation facilities and water quality around the world requires education, engineering, and financial support. Community health educators need relatable and easily administrable educational materials to deliver in areas that lack proper sanitation

and water. Such tools can inform the public of health hazards due to these failing systems and provide insight into alternative methods of sanitation and water management. Local governments also have a responsibility to seek proper infrastructure planning and engineering. Both of these tasks require funding, so financial assistance to these areas is imperative. Collaborative efforts such as these are crucial to ensuring safe water and effective sanitation systems for all.

Global Competencies Addressed:

- *Investigate the World:* Initiate investigations of the world by framing questions, analyzing and synthesizing relevant evidence, and drawing reasonable conclusions about global issues.
- *Recognize Perspectives:* Recognize, articulate, and apply an understanding of different perspectives.
- *Communicate Ideas:* Select and apply appropriate tools and strategies to communicate and collaborate effectively — meeting the needs and expectations of diverse individuals and groups.
- *Take Action:* Translate ideas, concerns, and findings into appropriate and responsible individual or collaborative actions to improve conditions.

STANDARDS ADDRESSED

Career/Technical Knowledge and Skills	Academic Knowledge and Skills	21 st Century Skills
<p>Common Career Technical Core Career Ready Practices</p> <p>4. Communicate clearly and effectively and with reason. 6. Demonstrate creativity and innovation. 7. Employ valid and reliable resource strategies. 12. Work productively in teams while using cultural global competence.</p> <p>Arts, A/V Technology, and Communications Career Cluster</p> <ul style="list-style-type: none"> • ARC02. Use oral and written communication skills in creating, expressing and interpreting information and ideas including technical terminology and information. • ARC03. Solve problems using critical thinking skills (analyze, synthesize, and evaluate) independently and in teams. 	<p>Common Core Academic Standards ELA/Literacy:</p> <ul style="list-style-type: none"> • RST.11-12.7. Integrate and evaluate multiple sources of information presented in diverse formats and media (e.g., quantitative data, video, multimedia) in order to address a question or solve a problem. • RST.11-12.8. Evaluate the hypotheses, data, analysis, and conclusions in a science or technical text, verifying the data when possible and corroborating or challenging conclusions with other sources of information. • RST.11-12.9. Synthesize information from a range of sources (e.g., texts, experiments, simulations) into a coherent understanding of a process, phenomenon, or concept, resolving conflicting information when possible. 	<p>Learning & Innovation Skills:</p> <ul style="list-style-type: none"> • Creativity & Innovation • Critical Thinking & Problem Solving • Collaboration • Communication • Accounting

Solve problems using creativity and innovation.

- **ARC04.** Use information technology tools specific to the career cluster to access, manage, integrate, and create information.

PROJECT DEFINITION & GOALS/OBJECTIVES

This project stems from the United Nations Sustainable Development Goals (SDGs) initiative. The SDGs are a set of 17 goals that aim to end poverty, fight inequality, and stop climate change. Specifically, this project focuses on Global Goal #6: Clean Water and Sanitation, which aims to ensure access to water and sanitation for all. The project goal is to introduce the global issues that correspond to water availability and sanitation by engaging students in a communications campaign targeting a government in a country that is experiencing these issues. Students will research sustainable and affordable alternatives as well as impactful policies and create a campaign advocating that the government implement their ideas to address the issue in their country. Some examples of what the project could be are: a public service announcement posted on YouTube, a poster campaign using impactful images and messaging, a radio broadcast public service announcement, or a communications campaign commercial. Students could also choose to create an art piece, movie, or play that encourages the country to take action.

Goals:

- Students will solve problems using critical thinking skills, creativity, and innovation.
- Students will research areas around the world that face issues in sanitation and disposal of human waste.
- Students will engage in the development of an impactful communications campaign or art piece meant to state a position or persuade the audience.
- Students will learn how to launch an impactful communications campaign through the use of A/V equipment.

Objectives:

- Select a community that faces challenges in sanitation. In particular, select an area where members of the community practice open defecation and/or face challenges to proper sanitation practices.
- Research sustainable and affordable alternatives to open defecation.
- Research public policies that have a positive effect on sanitation.
- Develop a communications campaign or artistic piece advocating that the government (of the chosen country) implement suggested changes to address the issue in their country.

SCENARIO OR PROBLEM: What scenario or problem will you use to engage students in this project?

In 2015, it was found that 61% of the world population was without safely managed sanitation services, and 892 million people practiced open defecation. According to the most recent water, sanitation, and hygiene (WASH) data from the Joint Monitoring Programme (JMP) by the World Health Organization and UNICEF, the practice of open defecation was increasingly concentrated in a small number of

countries. A non-profit organization that works with populations facing public health crises has contacted your communications and/or marketing firm to create a communications campaign to educate the general public about the severity of this issue. As a team, choose a country impacted by this issue, conduct research on this global issue, and share what you have learned in a way that will have an impact, create communication, and spread awareness. Research sustainable and affordable alternatives. Then create a campaign advocating the use of these alternatives by the government of the country you chose. Consider how you might use audio/visual equipment and/or art to communicate your message. Once complete, launch your project in a way that reaches as many people as possible. You could also choose to create an artistic piece to convey your position such as a movie, play, painting, or sculpture.

Essential Questions	Grade Level Adaptations
<ul style="list-style-type: none"> • What makes effective communication? • In what ways can A/V technology or art enhance a message? • What parts of the world face challenges in the area of sanitation? • How does this affect the socio-economic development of the community? • How does this affect the health and well-being of the community? • What type of infrastructure changes would positively affect these communities? • How will education and distribution of new technology be accomplished given the specific cultural elements of these areas? 	<p>For younger students, basic sanitation practices should be reviewed prior to the start of the project. The focus here would be on basic sanitation and human needs related to public health. Students could participate in raising awareness at their school and participate in a drive that collects soap, toothbrushes, toilet paper, and other sanitary items and donate them to a local, national, or global group in need. Students could work in small groups to create posters, YouTube videos, or even hold a school wide assembly to launch their advocacy campaign. Students could collect certain items on certain days and communicate to the other students on total collection amounts through morning announcements or a school newspaper.</p>

ASSESSMENT: How will you determine what students have learned? (Check all that apply.)

FORMATIVE		SUMMATIVE	
Quizzes/Tests		Multiple Choice/Short Answer Test	
Notes/Graphic Representations	X	Essay Test	
Rough Draft	X	Written Product with Rubric	X
Practice Presentation	X	Oral Presentation with Rubric	X
Preliminary Plans/Goals/Checklists of Progress	X	Other Product or Performance with Rubric	X
Journal/Learning Log		Self-Evaluation or Reflection	X
Other:		Evaluation by Authentic Audience	
		3D model	

MATERIALS, RESOURCES, or CONSTRAINTS: What materials and resources will be needed? Are there any perceived challenges?

Materials:

- Computers with internet access
- A/V equipment
- Computer design program

Websites:

- [U.N. Sustainable Development Goals](#)
 - [Goal #6: Clean Water and Sanitation](#)
- UNICEF’s report, “[Progress on Household Drinking Water, Sanitation, and Hygiene, 2000 - 2017](#)”
- Rutger Willem Hofste, Paul Reig, and Leah Schleifer’s article, “[17 Countries, Home To One-Quarter Of The World’s Population, Face Extremely High Water Stress](#)”
- [Gates Notes: Toilets/Sanitation](#)
- Manuel Canales’ article, “[These New Toilets Could Solve a Global Problem](#)” (*National Geographic*)
- Lexie Schapitl’s article, “[By 2040, Most of the World Won’t Have Enough Water to Meet Demand Year-round](#)” (*Vox*)
- Video resource: “[Mr. Toilet: The World’s #2 Man](#)”

Challenges:

- Discussion of human waste is a potentially sensitive subject to some students.
- Information on sanitation in relationship to open defecation practices of other cultures may be difficult to research. See above resources for assistance.
- May not have access to design software to develop an impactful communications campaign.

SUPPORT, MODIFICATIONS, AND EXTENSIONS: What is needed to provide support for students who have difficulty learning the content, modify for students with special learning needs, or to provide enrichment for advanced students?

Support and Modifications

- Students may be given a sample of a successful communications campaign related to this issue.
- Students should be allowed to present their communications campaign or artistic piece to the teacher and peers and be allowed to make revisions before final project is presented.

Extensions:

- Challenge students to develop communications campaigns or artistic pieces for two different geographical areas that have a need for improved sanitation. Compare and contrast the approach of each and the possible effects they might have on their respective governments.
- Compare and contrast how communications change depending on purpose and/audience. How might communications campaigns differ based on desired outcomes? How much the artistic medium change?

CALENDAR OF MAJOR LEARNING ACTIVITIES: What are the learning activities or tasks for each day? Are there any project milestones? When will formal assessment activities occur?

Week 1

Monday	Tuesday	Wednesday	Thursday	Friday
<p>Initiating: Show an introductory video on sanitation practices throughout the world. Discussion to follow: How are sanitation practices different and similar in other parts of the world?</p>	<p>Initiating: Review of SDG #6. Discussion of statistics regarding failing sanitation systems and practices. Create a list of challenges and barriers to effective sanitation systems.</p>	<p>Planning: Form teams in class, and allow the teams time to research communities that face challenges in sanitation using the JMP WASH report.</p>	<p>Planning: Teams choose a geographical location/community to base their project on. Students share the community they chose and discuss the challenges this community faces in sanitation.</p>	<p>Planning: Teams continue research on their chosen community. Define the challenges in sanitation. What are the socio-economic factors that create barriers to proper sanitation systems in this community? Discuss potential solutions.</p>

Week 2				
<p>Planning: Teams continue research on their chosen community and defining the challenges in sanitation. What are the socio-economic factors that create barriers to proper sanitation systems in this community? Discuss potential solutions.</p>	<p>Planning: Teams continue to research and begin to think of ideas of how they could implement a cost-effective, sustainable alternative.</p>	<p>Planning: Teams begin to develop a suggested list of sustainable solutions and think deeply on their best approach for their communications campaign/arts piece.</p>	<p>Planning: Teams begin to develop sustainable solutions and think deeply on their best approach for their communications campaign/art piece.</p>	<p>Executing: Teams will have a chance to present what they have learned about sustainable and affordable solutions as well as strategies for an impactful product.</p>
Week 3				
<p>Planning: Students share their project ideas so far and begin compiling a list of effective strategies. What makes them successful?</p>	<p>Executing: Teams will begin to create their product with any A/V equipment they need.</p>	<p>Executing: Teams will begin to create their product with any A/V equipment they need.</p>	<p>Executing: Teams will begin to create their product with any A/V equipment they need.</p>	<p>Executing: Teams will share the first draft of their products and discuss what went well and what could be improved.</p>
Week 4				
<p>Executing: Teams will share the first draft of their products and discuss what went well and what could be improved.</p>	<p>Executing: Teams will make adjustments to their products and prepare for final presentations.</p>	<p>Closing: Teams will present the following:</p> <ul style="list-style-type: none"> • Background on their selected community; and sanitation challenges. • Present products to class and teacher. 	<p>Closing: Teams will present the following:</p> <ul style="list-style-type: none"> • Background on their selected community; and sanitation challenges. • Present products to class and teacher. 	<p>Closing: Teams will present the following:</p> <ul style="list-style-type: none"> • Background on their selected community; and sanitation challenges. • Present products to class and teacher. <p>Don't forget to reflect on projects (see activities below) and celebrate success!</p>

STUDENT REFLECTION ACTIVITIES: How will students reflect on their work? Add reflection questions and/or activities here.

Students could engage in reflection and discussion focused on how we can use A/V equipment to create impactful awareness and solutions for communities around the world. How would they continue to support their campaign? How might they change their approach to reach different audiences? What else could be done to make their projects more impactful?

Other ideas could include:

- Provide a prompt at the end of each session and have students write reflections in their journals.
- Using a site like [Flipgrid](#), allow students to post video reflections of their work and development.
- Guide summary activities at the end of research days such as:
 - Two Dollar Summary: Students write summaries of what they learned with each word they write hypothetically costing ten cents.
 - Gallery Walk: Students write or draw what they learned on large sheets of paper then walk through the gallery reading each other's charts.
- Allow students to create a blog that details the problem they are trying to solve and the process they are engaged in for solving it.

Adapted from:

- “Sustainable Development Goals: Goal 6: Ensure Availability and Sustainable Management of Water and Sanitation for All,” 2018, New York: The United Nations. Retrieved from <https://sustainabledevelopment.un.org/sdg6>
- “Unit Planning Template” by the Southern Regional Education Board, n.d., Atlanta: Southern Regional Education Board.