STUDENT IMPACT PROJECT IDEAS



Sustainability Ambassadors

Rapidly advancing a more sustainable future

WASTEWATER TREATMENT

Take action at home, at school or in the community. Communicate your impact to peers, stakeholders, and policy makers to urge collective action. Post your actions on the map.

TOP TEN: If you are especially proud of the impact of your project, and it meets our criteria, we invite you to submit your work to our Annual Top Ten Impact Projects.

Don't flush things down the toilet to dispose of them. Only flush the 4 P's - Pee, Poop, Toilet Paper, Puke.

Not this stuff...

- 1. Never flush old medicines (they end up in the ecosystem impacting the food web)
- Never flush hair (it does not break down and creates a structure that collects F.O.G.
- 3. Do not put F.O.G down the drain (fats, oils, grease)
- 4. Never flush household chemicals (like bleach). Use only natural cleaners.
- 5. Never flush facial tissues (They don't break down fast enough in the treatment system)
- 6. Never flush wipes, diapers, nursing pads (They twist up and clog pumps in the treatment system which is very expensive to fix)
- 7. Never flush tampons or pads (The clog the pumps)
- 8. Never flush condoms (They have to be removed at the treatment plant)

Campaigns on What Not to Flush

- 1. Design a campaign to educate families and businesses about **what not to flush** down the toilet. This is simple and fundamental. Everyone can help.
- 2. **Teach younger students** about wastewater management systems and what not to flush down the toilet.
- 3. Teach **senior citizens** in retirement homes about wastewater management systems and what not to flush down the toilet.

4. Submit a letter to the editor educating readers on what not to flush down the toilet.

Learn the BIG Issues and Take Simple Action

- 1. Develop a timeline **history** of our <u>wastewater treatment system.</u>
- 2. Develop a timeline for the **future** of our wastewater treatment systems. Learn how Singapore is leading the world on an <u>integrated water management system.</u> Learn about King County's <u>Clean Water Plan</u>
- 3. Develop recommendations for more ways to use our own <u>recycled water</u>. See Singapore's story about <u>NEWater</u>.
- 4. Develop recommendations for more ways to use our own biosolids.
- 5. Develop a campaign to persuade more people to purchase <u>Grow-Co Compost</u> made from human biosolids.
- 6. Develop recommendations for more ways to use the <u>energy we can capture</u> from processing our own biosolids.
- 7. Outline the issues and opportunities related to how King County is updating their <u>Clean</u> <u>Water Plan</u>. Decide on **a role you can play** in helping to guide and implement elements of this plan.
- 8. Draft an **integrated water systems management plan** for King County for the year 2050. Based on your analysis of <u>Singapore's model</u>, what does or does not apply to our situation in King County?
- 9. Research the wastewater treatment system in **Victoria**, **British Columbia** and prioritize a list of recommendations for actions you think the government there should take.
- 10. On February 9, 2017, an accident at the West Point Wastewater Treatment Facility caused an estimated 180 million gallons of stormwater and wastewater to pour untreated into Puget Sound. Design a model to ensure that this problem does not happen again. Read the article in the <u>Seattle Times</u> about what happened. Learn about the <u>King County West Point</u> Restoration Update
- 11. Apply the <u>principles of green chemistry</u> to design a product that reduces the kind of environmental toxins typically found in wastewater.
- 12. Educate your family on **green cleaning products** that reduces the kind of environmental toxins typically found in wastewater. Analyze these companies to learn more: Seventh Generation | ECOS
- 13. Survey the number of students in our school who have septic tanks at home and find out how they are maintaining them.

- 14. Develop a fact sheet that describes what your family pays for wastewater treatment and where that money goes. How can we be part of guiding and implementing King County's Clean Water Plan.
- 15. Research <u>career opportunities</u> in King County wastewater management and publish a fact sheet for your school college counselor. Analyze wastewater management job descriptions and create a list of skills, training and knowledge you would need to acquire.
- 16. Re-engineer your city for at least 25% of the water supply to come from <u>recycled water</u>. What are the issues and opportunities with this approach? See Singapore's story about <u>NEWater</u>.
- 17. Design a comprehensive plan to solve the CSO problem in Seattle.

INTERNATIONAL: Get involved in the United Nations 2030 Sustainable Development Goal #6: Clean Water and Sanitation

Background

- 1. United Nations website on the 2030 Agenda for Sustainable Development https://sustainabledevelopment.un.org/post2015/transformingourworld
- 2. Read selected sections of the full 2030 Agenda. Includes an inspiring preamble as well as sections on each of the 17 goals and their individual targets.
- 3. United Nations website on Sustainable Development http://www.un.org/sustainabledevelopment/
- 4. Find Goal #6 and click on Facts | Targets | Links
- 5. United Nations website with infographics on each of the 17 Sustainable Development Goals for 2030 https://sustainabledevelopment.un.org/sdgs

Call to Action Ideas

- 1. Create a data base of the top 10 international efforts or organizations working to meet the UN 2030 SDG #6...
 - Water1st International https://water1st.org/
 - World Water Day http://www.unwater.org/worldwaterday
 - Water.org http://water.org/
 - Splash.org http://splash.org/
 - World Toilet.org http://worldtoilet.org/ (World Toilet Day, November 19)
 - WaterAid.org http://www.wateraid.org/us
 - Gates Foundation- Reinvent the Toilet Challenge http://www.gatesfoundation.org/What-We-Do/Global-Development/Reinvent-the-Toilet-C
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 - WorldVision.org http://www.worldvision.org/

- World Bank Water and Sanitation Program http://water.worldbank.org/related-topics/water-and-sanitation-program
- Water Supply and Sanitation Collaborative Council http://wsscc.org/
- End Open Defication.org http://opendefecation.org/news/
- UNICEF's initiative to break taboo on Open Defecation
 http://unicef.in/PressReleases/13/Take-Poo-to-the-Loo-the-New-Youth-Mantra-against-o-pen-defecation-has-people-marching-to-the-tune-of-India-s-First-Poo-Song

Database Template

- Name of Organization
- Mission
- Goals
- Programs
- Progress they are making towards achieving their goals (with data)
- How people can get involved

Learn more...

- 1. Wall Street Journal article on Take Poo to the Loo Campaign http://www.wsj.com/articles/SB10001424052702304732804579420713511634106
- 2. Take Poo to the Loo Facebook page: https://www.facebook.com/poo2loo/
- 3. Take Poo to the Loo animated YouTube video https://www.youtube.com/watch?v= peUxE BKcU
- 4. UNICEF's initiative http://unicef.in/PressReleases/13/Take-Poo-to-the-Loo-the-New-Youth-Mantra-against-open-defecation-has-people-marching-to-the-tune-of-India-s-First-Poo-Song
- 5. Carefully analyze the videos at this site. Review each one and provide an annotated list of recommended videos for our class this year and for future years. http://www.un.org/sustainabledevelopment/blog/category/video-water-and-sanitation/
- 6. Use the resources above (and more!) to organize an annotated list of resources that best support each of the 8 targets for <u>UN 203 SDG Goal #6.</u> Identify case studies from each of the regions we studied this year to show water systems issues and opportunities, especially where you can identify promising improvements in one or more of the 8 targets for goal #6.
- 7. Create a donation campaign to support one of the top 10 organizations working to ensure safe water and sanitation. Post on social media. Ask ASB and Green Team to engage in the campaign.
- 8. Create a World Water Day Assembly that will report progress and recommended next steps to the whole school every year.
- 9. Establish a distance learning partnership with a school in a country challenged with the lack of clean water and proper sanitation. Learn together and decide on collective action.

| 10. | Report data to appropriate stakeholders that proves the impact that you, your class, or school made and share your recommendations for how others can get involved. |
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