World Vision Ignite



Clean water access: A case study

A problem-solving challenge in engineering

worldvision.org/ignite

World Vision Ignite helps shape students to be global leaders with a biblical worldview.



STEP 1

IDENTIFY AND ADDRESS THE PROBLEM

Families in the village of Kulmado in the Dosso Region of Niger lack access to clean water. What type of water system would you propose as the solution to creating access to clean water in this community?

STEP 2

LEARN ABOUT THE REGION

Create a brochure of Niger and include details about the following aspects of the region:

- Geography/location
- Climate/weather
- Populations/ethnic groups
- Natural resources
- Religion
- Political/government structure
- Livelihoods/economy
- Health issues/mortality rates
- Current events
- Humanitarian organizations currently providing support in the region



STEP 2

LEARN ABOUT THE REGION

(continued from page 2)

Make it personal

Read an article about one family in Kulmado who lacks access to clean water and the impact it has had on their lives: "Two sisters: Two worlds."

Make connections

Learn why access to clean water is so critical and explore how it connects to other critical aspects of life and the well-being of families. Explain how access to clean water relates to each of the following areas:

- Health and mortality rates
- Learning environments and education
- Gender equality
- Food insecurity and hunger
- Economics and livelihoods



STEP 3

RESEARCH

Answer

Based on what you've learned so far, address the following questions:

- What is the best way to create sustainable access to clean water for this community—would it be providing filters? A borehole? A well? Irrigation from a nearby river? A combination of methods? Explain your reasoning.
- Which groups of people do you need to consult and collaborate with prior to making final decisions about how to bring clean water access to the community?
- Who are the some of the major providers of clean water access around the world who can provide funding or other forms of support (World Vision is one, but who else?)
- What types of engineering tests or feasibility surveys need to be conducted before you can determine the best approach to creating access to clean water?
- In addition to proposing a primary main water source, where would you place additional water points to help improve the well-being of families in communities? (See "Make connections" section as a point of reference and consider the aspects of life mentioned.)



STEP 3

RESEARCH

(continued from page 4)

Estimate

Estimate the following if your strategy were implemented:

- The costs involved
- The number of people that will be reached with clean water access
- Resources needed for construction
- The best approach to implementing these resources and equipping community members with clean water access
- Potential ways to partner with the community and other organizations to help plan, build and maintain the water source
- Safety and sustainability of the proposed solution (ensuring the water access continues to be a source of clean water) in the future



STEP 4

PRESENT YOUR SOLUTION

Communicate your proposed solution for equipping Kulmado with clean water access:

- Choose your presentation format: create a 3D model, a PowerPoint presentation with images, or a five-minute video.
- Share your strategy and why you chose this solution.
- Include materials/resources needed and the proposed costs.
- Discuss how this clean water access can impact the well-being of families in the community.
- Explain how your solution will be safe and sustainable.

Problem-solving strategies must be completed by: _____

How to submit your presentation

- Upload all documents/presentations in PDF format to a storage drive (Google Drive, Dropbox, etc.).
- Upload any videos to YouTube/Vimeo (unlisted setting).
- Email links of all elements of the project to casestudy@worldvision.org. Please include your school, teacher/email, and individual/group members' names in the body of the email.



STEP 5

EVALUATION

After submitting your strategy to World Vision, learn how World Vision experts approached the problem and implemented a solution in the community.

Then answer the following:

- How did your findings align with those of World Vision's engineers?
- In what ways did your proposed solution differ from World Vision's?
- What surprises you about the strategy World Vision employed?
- In what ways did your solution align with World Vision's?
- What considerations did you leave out, or what mistakes did you make?
- How did World Vision make this project sustainable?
- How does World Vision's solution show that partnerships are important?

Dig deeper

Reflect on your research and answer the following questions:

- What aspects of the research have been the most meaningful to you?
- How did the research open your eyes to the realities of the world?



STEP 6

GO THE EXTRA MILE

Add impact by joining World Vision in helping people gain access to clean water.

Discover ways to put what you've learned into action:

- Learn more about World Vision's work to equip vulnerable communities with clean water access.
- Organize/get involved in a fundraiser using this fundraising tool.
- Explore other student-led projects that can inspire you to make a difference.
- Look through World Vision's Gift Catalog to help fund access to clean water.
- Use your voice to speak up for children and families in need around the world. Learn more about becoming an advocate through World Vision Advocacy.

World Vision®

Ignite

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World Vision is a Christian humanitarian organization dedicated to working with children, families, and their communities worldwide to reach their full potential by tackling the causes of poverty and injustice. Motivated by our faith in Jesus Christ, we serve alongside the poor and oppressed as a demonstration of God's unconditional love for all people. World Vision serves all people, regardless of religion, race, ethnicity, or gender.

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