"We cannot always build the future for our youth, but we can build our youth for the future."

-Franklin Delano Roosevelt, 32nd President of the United States of America,

Our names are Maria Sati and Zeinab Mukhtar and we are motivated high school seniors from Seattle, Washington, and Washington, DC, respectively. As young Sudanese girls, we have grown up with an understanding that life in Sudan is not easy: from underfunded schools and struggles with public health to the threats of corruption and lack of political representation, we have always felt an obligation and responsibility to use our positions of privilege to aid our beloved Sudan. With this in mind, we decided to found CRESUA (CReate, SUpport, Aspire) International, an organization that centers around a three-day interactive STEM program[The Water Project] with the potential to be implemented in any high school classroom! Our motivation stems from our recognition of the recent 2019 Revolution's impact on the development of Sudan. While civilians were fighting for their right to political representation and against corruption, students were deprived of their right to continue their education peacefully, and we felt the need to help! In terms of our program, we decided to develop a water-filtration kit, which incorporates skills in environmental science, biology and chemistry. In our student-centered program, students will explore The Water Crisis and thoroughly understand the concept of filtration through hands-on learning**. The CRESUA three-day program will equip Sudanese high school students with collaboration, reflection, discussion, observation, and critical thinking/reading skills which will further expand their cognitive abilities, promote problem-based assessment, and encourage students to take initiative in Sudan to solve public health issues.**

In our program, inquiry-based learning will promote the development of many essential skills in the students who complete our program successfully: collaboration, reflection, discussion, observation, and critical thinking/reading. When conducting a survey to gather the students' perspective on the type of learning they are receiving and what they lack in terms of resources, we were able to understand and cater to their needs, motivating us to create a program

that contains important skills to further their education beyond the set limits. These skills can impact students in numerous ways ranging from sparking their interest in learning STEM to considering it as a potential career path. In fact, according to research conducted by The Stanford Mobile Inquiry-based Learning Environment(SMILE), "the participating community can collectively generate, solve, evaluate, and discuss questions and possible solutions in real-time. In the long run, the questions become shareable with a much larger community at the global level as well. Unlike traditional prescribed surveys, SMILE helps gather questions and solutions that are considered more important to the local community." which can further support the benefits of implementing our program into the science curriculum. This is because it allows students to address prominent issues in their communities: in this case, The Water Crisis. As high school students studying in the United States, we were fortunate enough to receive this type of learning and support in our STEM educations, which is why we hope to spread and share this learning environment to the classroom's in Sudan. Water has always been an issue in many parts of the world, and water sanitation has not been enforced most efficiently in those places. The extent of the lack of access to clean water is baffling, to say the least. Alarmingly, according to the World Health Organization, 3.4 million people die every year due to diseases caused by drinking unsanitized water, and in Africa, less than 50% of the people have access to improved drinking water and sanitation. Improvements are urgently needed in order for us to fight to end The Water Crisis. The Water Project will help teach students more about the importance of clean water accessibility, the concept of creating an apparatus system and using inquiry-based skills to improve their cognitive abilities.

Our program will promote problem-based learning for students, which can enhance the students' abilities to analyze problems and find solutions. These skills are crucial for students to understand and implement water filtration in a scientific way. According to a study conducted by the National Library of Medicine under the National Science for Biotechnology Information, "Problem-based learning (PBL) is an instructional approach that utilizes problems or cases as a context for students to acquire problem-solving skills. It promotes communication skills, active learning, and critical thinking skills. It encourages peer teaching and active participation in a group." In fact, this study found that problem-based learning was effective in medical students,

with an average of 65% of students admitting that this method of learning increased their understanding and drastically improved their results. Therefore, given that graduate-level medical school students were successful in their use of problem-based learning, imagine how introducing this style of learning into Sudanese high school educational environment will early prepare them to be successful leaders of the future! Students will be able to take the "problem "of the Water Crisis and use their understanding of filtration to fuel their assessment skills. By doing so, they will be able to generate critical and applicable solutions that can be the foundation of a long-term idea! In conclusion, the skills obtained from the "problem-based" assessment style of learning will strengthen the educational environment, further their cognitive development, and prepare them for the real world.

Finally, and most importantly, our three-day program will also encourage students to take initiative in Sudan to solve public health issues. Our three-day program will begin by shedding light on the extent and complexities of the issue of access to clean water through a highly-interactive and question-based lecture and discussion on the first day of the program. As a result, students will thoroughly understand the causes, effects (political, cultural, scientific), etc. of the water crisis both domestically (in Sudan) and internationally. As a result of this understanding, we want to inspire students to be the leaders of their own initiatives that will ensure that the future of Sudan is bright, filled with development, and filled with national growth in all aspects ranging from education to public health. Furthermore, this activity will leave students with a broadened understanding of their potential and their role as citizens, equipping them with the skills to be the future leaders of their country, and for their country.

Water sanitation is and will always be an essential part of improving a country's education system and is vital in providing skills to prepare the next generation of brilliant individuals to make an impact in Sudan. By educating students on this topic, we will be able to inspire them to think big and dream big: using skills that will prepare them for life. It is also important to recognize what type of thing Sudan's education system lacks. So our curriculum will serve its purpose by bringing inquiry-based learning to the traditional class setting, introducing new, and creative ways for STEM to be taught in the classroom. We want the future of Sudan to be filled with resilient and bright individuals who will bring change to improve

education. We ask for the implementation of our program in the public high school system as a trial, a new beginning, for STEM education. Together we shall impact the youth of the future, who will bring the necessary change for Sudan.

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