GEMS مدرسة ليجيمس
LEGACY SCHOOL

GEMS
EDUCATION

The STEAM Years

NOMINATION FOR GREEN ACTION SCHOOL- INNOVATION AWARDS 2023

GEMS Legacy's Version of a Jet pack

Problem Statement

In the event of an earthquake, it can be challenging and dangerous to rescue people from disaster areas. The traditional rescue methods involving human personnel can be slow, risky, and sometimes ineffective. Therefore, there is a need for a safe and efficient system to rescue people from disaster areas.

Our version of a Jet Pack – Wings of H.O.P.E.

We at GEMS Legacy believe that when there is HOPE in the future, the present becomes extremely powerful. H.O.P.E.- Help out Possibly Everyone, Everywhere is about leading a more inclusive, kinder and healthier life for all of our GLS families and its larger communities.

To solve the crisis mentioned in the problem statement, we have developed a drone-based rescue system called Wings of H.O.P.E. It has been equipped with robotic arms that can lift and transport people from disaster areas to safety. The drone can be programmed to fly autonomously to the location of the victims and use the robotic arm to safely lift and transport them. This system can significantly reduce the risk to human rescue personnel and provide a faster and more effective means of rescue. Additionally, this hybrid drone can be equipped with sensors to identify victims' locations and monitor the disaster area for potential dangers, aiding in the rescue process.

The Mechanics

On detecting an earthquake, the rescue team will deploy the drone-based rescue system- Wings of H.O.P.E. to the affected area. The drones equipped with sensors will fly over the disaster area and map the location of the victims using thermal imaging cameras, and other sensors. It will then identify the location of the victims and communicate their location to the control room. The Wings of H.O.P.E. are equipped with a robotic arm and will fly to the victim's location and use the arm to lift the victim gently and transport them to a safe location. The Wings of H.O.P.E. will then continue to repeat the process until all victims have been rescued. The control room will coordinate the rescue process and monitor the status of the rescue missions. The drone-based rescue system will use advanced algorithms and machine learning to improve its performance over time and enable quicker and safer rescue operations. The Wings of H.O.P.E. rescue system can help save lives in disaster areas by providing a safer and more efficient means of rescue.

Video Link of The GEMS Legacy Jet Pack

Storyboard Link of The GEMS Legacy Jet pack

Quote from the Principal

Mrs. Asha Alexander

Principal - GEMS Legacy School, Dubai

Executive Leader – Climate Change, GEMS Education

"As the epicenter of learning, schools must teach students how to think critically, solve problems and use creativity, thereby enabling students to work in career areas that are predicted to experience significant growth. At GEMS Legacy School, we have integrated technical subjects with the arts (STEAM) to create a comprehensive educational approach so that students can improve their cognitive abilities, and develop empathy and cultural sensitivity while learning skills relevant to the 21st century. We aim to develop students who possess complex problem-solving skills that will lead them to transform society with innovation and sustainable solutions for the pressing problems of climate change, poverty, hunger, gender inequity, and sustainable development among others using the STEAM approach."

Quote from the Chief Digital and Innovation Officer

Mrs. Bhawna Sajnani
Chief Digital and Innovation Officer, GEMS Legacy

“Our STEAM curriculum equips students with the skills and knowledge they need to thrive in the 22nd century workplace, where innovation and technology are rapidly changing the landscape."

QUOTE FROM THE STUDENTS OF GRADE 7

(From Left to Right) Danell Gijo, Angelin Premji, Adrian Menezes
Grade 7 Students, GEMS Legacy

"STEAM approach in learning allows us to experiment, to test ideas, and to make mistakes, and it encourages us to be creative and think outside the box, preparing us for a future where innovation is the key to success. In short, STEAM empowers us to be the problem solvers and leaders of tomorrow."