



Science is an adventure in life

Students experience science as a human activity and its relevance to society and to one's own personal, intellectual framework. Students learn how to gain knowledge, think critically and to grow as thinking, aware, and concerned human beings. Through meaningful and motivational experiences, students identify their unique traits and where they fit in life.

From tips and insights to personal reflections, teachers inspire the minds of the next generation of scientists and spark in our students a lifelong curiosity of science and the natural world, forming creative and thinking adults who can work both independently and collaboratively.



Engage



Connect



Integrate



Extend



Reflect

Engage!

"In order to achieve full and equal access to and participation in science for women and girls, and further achieve gender equality and the empowerment of women and girls, the United Nations General Assembly declared 11 February as the International Day of Women and Girls in Science in 2015" UN,2022.



Ahliyyah & Mutran students engaged with this occasion and shared their thoughts about the role of the school to empower women in **STEM** fields and hosted 5 distinguished Jordanian women in the science career who have great accomplishments; Dr. Abeer Bawab, Dr.Lara AbuGhazaleh, Dr.Majd Batarseh, Dr.Nancy Rakkad, and Dr. Rana Dajani.

Link: https://asgbsa-my.sharepoint.com/personal/khadeejeh_alfakeer_ahliyyahmutran_edu_jo



Extend!

نادي السنونو لمراقبة الطيور a club initiated by the science and educational transformation departments arranged the second trip to Ajloun in partnership with Jordan Bird Watch. The purpose of this field trip was to engage in an experience that allowed participants to connect with nature and birds through bird watching. We were excited that this trip was for the school's community "Parents, Students, and Teachers". The main activities in the trip were hiking, birdwatching and eating lunch prepared by locals. Looking forward to many more activities!





How Fast My Robot Can Go!

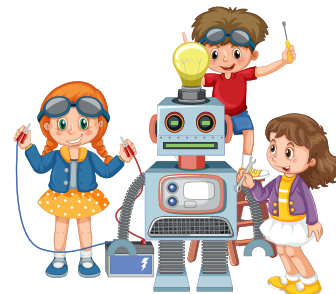
The Middle Years Program (MYP) is designed to facilitate interdisciplinary teaching and learning. As such, the structure of the program offers a variety of opportunities for students to make connections between subjects, including the STEM subjects.

Grade 6 students combined robotics and programming with scientific investigations to facilitate learning and promote transfer of skills.

This learning experience demonstrates the transition from “traditional” lab investigations to the world of robotics, new advance technological hardware and software, and substitutes traditional laboratory equipment with an advanced technological hardware (EV3) to design an authentic assessment. **Sense-Plan-Act**



Grade 7 students played the role of **electrical engineers**; they were asked to design a sketch-up or a physical prototype to implement photovoltaic modules on a roof top of their houses with given dimensions, that synthesizes knowledge to communicate purposeful interdisciplinary understanding between the science and the math. They decided to carry out an **energy audit inspection** to determine the energy consumption and design an accurate model with suitable number of photovoltaic modules on the rooftop. During their inspections they collected data from the devices that were used in this house under investigation.



By being health advocates **Grade 8 students integrated** Science and Physical and Health Education to promote awareness and understanding of five pillars (Sleep, Nutrition, Exercise, Preventive Medicine, and Mental Health); though collecting information from varied sources, analyzed data and reported on improving immunity of adolescents in order to influence practice.





Connect!



Through hosting external speakers, schools provide a safe space for students to engage with a variety of real-life issues and situations and hear different perspectives.

Grade 8 learners hosted Ms. Zaina Sahyoun as an integral part of their primary research, in which students inquired about the impact of 5 pillars “**Nutrition, Sleep, Preventive Medicine, Exercise, Mental Health**” to boost their immune systems. Ms. Zaina Shayoun is the CMO and head of ‘Community Building’ at MedLabs Laboratories.



Grade 7 students hosted Mr. Maher Maymoun as an integral part of their primary research, in which students inquired about Energy Efficiency and Solar Energy. Mr. Maher Maymoun is a Jordanian innovator, scientist, entrepreneur, and environmental leader.



Reflect!

By **being health advocates Grade 7 students** developed understanding of a certain nutrient deficiency, its implications and how to intervene to reduce the deficiency through menu development, students chose a nutrient deficiency by conducting interviews with their teachers. Students worked collaboratively and communicated their findings through presenting a menu that comprises four meals. The menu considered ingredients containing the nutrient under investigation.



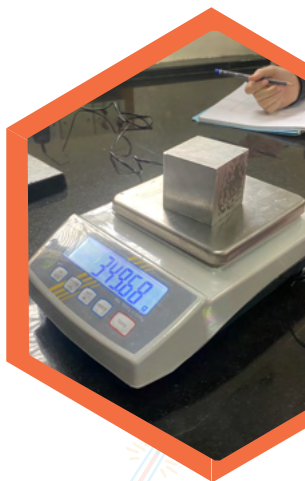
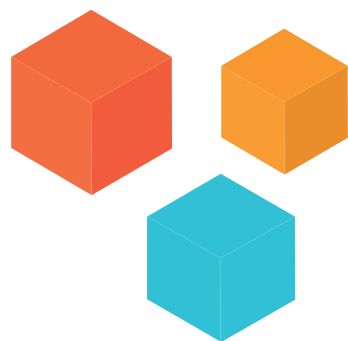
Engage! "Learn with Models"

At its heart, science is about understanding how components in a system interact with each other. As simple as it may sound, the number and variety of interactions, and the many scales over which those relations operate make science highly complex. Systems in science are highly complex ranging from the smallest cell extending to the wide universe. Because of this complexity, models are essential tools for studying science.

"Models are bridges that connect concrete learning by using physical objects to correspond to abstract ideas. Moving from concrete to abstract thinking means perceiving the likeness of parts in a situation that at first glance may appear to be unlike each other." (Carrejo & Reinhartz 2014, p.11)



Experiential learning is an engaged learning process whereby students "learn by doing" and by reflecting on the experience. Such learning experiences could be brought into classroom through onventional physical lab setups or virtual tools. As more and more technology is brought into the classroom virtual labs also provide rich and dynamic learning experiences. They can be incredibly supportive of the current teaching methodology when combined with proper preparation and structure.



THANK YOU!

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