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OH-Kids: A model to ensure a next generation of geoscientists, engineers and technologist

Roberta Karinne Mocva-Kurek (1,2), Adrián Pedrozo-Acuña (2), Alejandra Amaro-Loza (1,2), Roxana Ivonne Fonseca-Rodríguez (1,2), Jorge Blanco-Figueroa (2), Juan Alejandro Sánchez-Peralta (2), and Jorge Alberto Magos-Hernández (2)

(1) Programa de Maestria y Doctorado en Ingeniería, Universidad Nacional Autónoma de México, (2) Instituto de Ingeniería, Universidad Nacional Autónoma de México

Geosciences, engineering and technology affect each person every day in some way. The impact of human activity on the biophysical world raises myriad challenges for sustaining Earth system processes, ecosystem services, and human societies. Therefore, inspiring young people to take part in the discovery and delivery of geosciences is of paramount importance not only for their well-being but also for the future human development. However, not many geoscientific projects funded by research councils consider in their outcomes, an initiative to introduce science and the role of the scientist in the creation of a better and sustainable way of life. The present paper introduces the work of an ongoing project entitled OH-Kids, which provides an opportunity for primary school learners to meet 'real' geoscientists, at the same time as they can receive the take-home message that anyone can get involved in problem-solving activities related to geosciences, whatever their ability or subject of interest. This initiative, is part of the real-time Hydrological Observatory of the National Autonomous University of Mexico (OH-IIUNAM), which comprises a research project aimed at the real-time monitoring of precipitation in Mexico City. The system represents a smart water solution comprised by the application of information and communications technologies (ICTs) within an urban environment. Notably, the framework highlights the integration of geoscientists from hydrology, meteorology and geology, as well as a variety of practical engineering specialisms (hydraulic, electronic). The argument behind this effort, is that in order to produce the next generation of problem-solvers, education should ensure that learners develop an appreciation and working familiarity in the context of coupled human-environmental systems. The OH-Kids initiative illustrates how a research project, through workshops, activities and talks carefully designed may introduce geoscience, engineering and technology as well as the role of the researcher to 5–11 year olds learners. Illustrating the importance of technology for observing and monitoring precipitation and highlighting a range of environmental issues. Examples of the application of these activities in different primary schools and one science fair in Mexico will be introduced.