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Dufferin youth win O?Botz competition for innovative ideas

Written By **Sam Odrowski**

Three local elementary school students won the Science Case Competition put on by O'Botz Orangeville, which is a multi-disciplinary robotics program offered in Dufferin County.

Ella Young, Alya Young, and Sarah Weingartner were the winners of the contest out of the many entries put forward by Dufferin participants. They were chosen for their in-depth and innovative ideas on how to help the Great Barrier Reef, which was the focus of the contest for grades 4, 6, and 7.

?They were encouraged to think of any solution they could, whether it be an anti-pollution program or a more technical solution, such as a robotics invention,? said Sanskriti Shindadkar of O'Botz Orangeville.

Ella Young's idea for the great barrier reef, which won in the presentation category, was to strengthen the relationship between coral and algae through the use of limestone dust (Ca2) in the water to increase calcium ion concentrations.

?This would actually support the reaction that makes calcium carbonate, which is essential for strong coral skeletons,? noted Shindadkar.

?The reason her entry really stood out to us is because she actually wrote the balanced chemical equation for this reaction, which is high school chemistry. So, she had an innovative idea, she explained it really well, and she went over the implications, which was really incredible.?

Alya Young's submission, which won for the poster category, involved rescheduling boating times and relocating boating docks away from the Great Barrier reef. She also had some ideas involving changing anchor areas so the reef is less impacted.

?It was a lot of really, really good ideas with beautiful visuals in her poster. So that was really incredible. I was amazed by the creativity she showed,? said Shindadkar.

Sarah Weingartner won in the brochure category and was focused on carbon offsets for supporting the Great Barrier Reef. She went into depth about current efforts, implications and limitations when using carbon offsets to fight the issue.

?She also discussed some of the drawbacks in great detail, which was incredible for any young scientist, not just a young scientist her age,? noted Shindadkar.

?It was quite incredible to see how she went into detail about what the government is doing as well, what corporations are doing, what regular people are doing ? it was just really wonderful.?

The Science Case Competition, hosted by O'Botz, integrates the Ontario science curriculum, so participants are using what they learn in school to come up with creative ideas.

Parents and students across Dufferin County were encouraged to participate.

Registration for the Science Case Competition opened in early May and the submissions were due in mid-June.

Shindadkar noted that with the robotics program offered by O'Botz Orangeville, youth have the opportunity to build skills in STEAM, which is Science, Technology, Engineering, Art, and Math.

?We encourage kids to build prototypes, experiments, which are applicable to real world science problems, technology, and engineering ? robotics itself,? Shindadkar explained. ?Art is used for the design component and math for all the calculations that we do.?

The program is also very effective in helping participants build problem solving skills, she added.

?For instance, when you're building a robotics device or circuit, if it doesn't happen to work the first time, you need to go back, retrace your steps, figure out what went wrong, and then improve upon that,? said Shindadkar.

?It also builds resilience because you keep on trying and trying until we create something amazing and it works.?

Looking ahead, O'Botz Orangeville will be hosting another Science Case Competition in the fall.

As well, in August the organization is hosting a free robotics and science camps for kids in Dufferin County, which is great for eliminating barriers to STEAM education.

?We know that a lot of kids in our community haven't had an opportunity to explore science, technology, engineering, art and math, outside of school or even in school due to the difficult online learning conditions, so we want to offer that experience,? Shindadkar noted.

?It's just so important for kids in our community to not only get involved in STEM, or STEAM, but also gain the skills and experience which STEAM teaches ? critical thinking, creative thinking, innovation ? these are all essential in the future for whatever they decide to do.?

To learn more about O'Botz visit https://www.obotz.ca/