STEM AT JICS

It has been wonderful to be a part of the JICS community for over 14 years! In addition to my 10 years of teaching Special Education at JICS, I've always tried to bring my passion in tech to my work with the students wherever possible. In the past, this was through collaborations with fellow classroom teachers or through extra-curricular clubs. I am very happy to be teaching my own specialty subject this year to students from grade 1 to grade 6!

My vision of a successful technology program is one that grows with a student through their time at JICS. Students participate in projects that develop both their soft skills (such as collaboration, problem solving, and adaptability) and technical skills, which are built on each year.

Technical areas of the curriculum include:

- Coding with a variety of programming languages
- Circuitry
- 3D design and printing
- Media editing (audio and video)
- Robotics

Philosophy

Technology education in Ontario is typically/commonly/currently taught by siloing skills to focus on each individually. Skills are developed sequentially by completing relevant tasks.

My view, however, is that technology shouldn't be considered a subject of its own, but rather a tool to improve learning in many other areas.

My philosophy of technology education is not focused on particular programs or kits, but rather the broad application and integration of technology skill sets to everyday life. Technology is inherently engaging to children because of the bustling technology-laden world we live in. There is an initial attractiveness to technology because, especially at these young ages, it can sometimes appear to be almost magical. With this in mind, it would be a disservice not to give students exposure to these topics. How else can they discover if they

like it or not if they don't have the chance to try? Elementary is the perfect time for children to explore different skills and areas of tech to see what resonates with them.

Approach

Open-ended project work, focused on **creative expression** and **collaboration**. Students learn a lot more than just technical skills by working with others. Project work involves a high probability for inter-peer problems to arise; knowing how to solve these challenges with different classmates is an important skill to practise. Open-ended projects also give students more opportunity for creative expression than working through a set lesson.

Computational thinking - Working through tech projects requires a type of logical thinking that isn't typically required in other subjects, but widely applicable in the real world.

Play - The benefit of incorporating play in tech is that there's less risk and less pressure of getting things "perfect" – because when you work with tech, things are going to go wrong a lot. Play removes the fear of being wrong and makes it easier for students to explore freely.

The belief that children are capable - We often underestimate the ability of young children to pick up technological skills, seeing it as too complicated or too abstract. Through working with these students, however, I have found that although they may not have the language to explain their understanding, they can often instinctively comprehend many technological processes.

Flow - I strive to provide opportunities for students to discover states of flow while immersed in tech projects. It's so beneficial for students' cognitive development to have the feeling of being entirely focused and positively engaged in the work they're doing.

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