KidsTeam E-Textiles

What is 'E-Textiles'?
'E-textiles' (or Electronic textiles) are fabrics that enable digital components such as a battery, a button, and a light, and electronics to be embedded in them.

How can we teach kids programming or coding in a familiar way?

Sponsor's questions for it:
- How can you design an e-textiles project that is fun for kids to do?
- What activities will help kids understand basic programming concepts/logic?
- What skills do kids need to be good at creating e-textile projects?
- What kid-friendly techniques can we use to learn about electricity and circuits?

Process

Meeting **with sponsors and advisors** → Lesson Planning → Having sessions @SPL Broadview → Design Feedback and recommendations

Lesson Models for E-Textiles project

To make e-textiles project fun, we applied co-designing methodology to our project, and planned self-directed practice sessions and final e-textiles project that can be applied to real-life.

Techniques

YouTube video and 'Big Paper' technique for exploring Lilypad are used to learn about electricity and circuits.

Skills

Sewing (basic & for e-textiles) and basic Arduino skills are required for e-textiles project.

Activities

Practicing Lilypad basic examples and customizing the examples activities for making kids understand and be familiar with programming and Arduino.

Challenges & Feedback

- Kids liked YouTube video, but they wanted more interesting one about electricity and conductivity.
- Having many more different types of tools for craft activities such as glue guns will be needed.
- Checking the latest version of the software will be needed not to get in trouble when doing programming activity.

- Need to be more flexible with time schedule because we found the time that each group used for the activities was different.
- Many kids enjoyed the practicing programming session and wanted more exercise. As we missed 4 of 9 sessions because of the COVID-19, they might satisfy with the e-textiles project if we had not missed those sessions.