

## 2025 Summer Engineering Program

The Durham Catholic District School Board in collaboration with Queen's University, McMaster University, and Ontario Tech University.

### About the Program

Our program is committed to creating a supportive, community-centered learning environment where Black youth can confidently explore STEM, coding, and engineering design. We emphasize Black representation among our instructors and mentors, ensuring students see themselves reflected in the leadership guiding their learning. During this week, students will dive into a range of engineering disciplines while building valuable digital skills and expanding their understanding of innovation and problem-solving.

### Theme:

Introduction to Engineering

### Engineering Streams:

- Electrical
- Mechanical
- Software

### What to Expect –

Students will take part in dynamic, hands-on STEM experiences designed to spark curiosity and build real-world skills. Activities include:

- **Designing and constructing mechanical systems**, such as hydraulic or lever-powered devices, to explore force, motion, and simple machines.
- **Programming and experimenting with robotics**, using sensors and basic coding to complete interactive challenges.
- **Solving real-world problems through the engineering design process**, encouraging teamwork, creativity, and critical thinking.
- **Learning about STEM careers** by stepping into the roles of engineers and technologists through immersive activities.

In addition to the hands-on workshops, students will also have the opportunity to visit the Ontario Tech University campus and tour some of our engineering labs and facilities, offering a glimpse into the world of post-secondary STEM education and innovation.

