

Students in the Lower School Power Up Club use the design process to create "squishy circuits" using Play-doh, LEDs and a battery power pack



(left) Fifth graders in Mr. Fiedler's class test parachutes on the playground as part of an engineering design challenge



(right) Members of the Upper School Robotics Club compete at the NC First Tech Challenge Robotics Tournament at Cardinal Gibbons High School

## HOW IS RAVENSCROFT SHAPING TOMORROW'S TECHNOLOGY INNOVATORS?

**R**AVENSCROFT HAS INVESTED IN TECHNOLOGY instruction across all three divisions, giving our budding engineers, programmers, designers and researchers access to the tools and information they need to become the next generation of tech trailblazers.

### Early and frequent exposure to design thinking and coding

Even the youngest Ravens are introduced to micro robotic Hexbugs and kid-friendly coding programs including Kodable, Minecraft and Light-bot. As they move up, they complete visual block coding lessons through code.org and Hour of Code - Learn. Older students are also challenged with digital "breakout" activities that require critical thinking, creativity, collaboration and communication to open a series of digital locks.

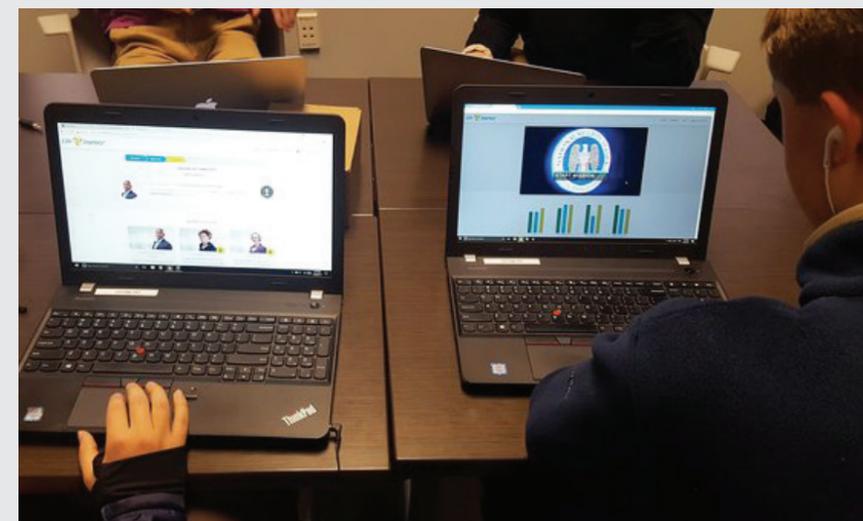
### Strategies and processes for investigating and solving problems

Middle School engineering students design solar panels and craft blades for a wind turbine, incorporating creativity into the engineering design process and learning to collect data to test and refine their products. Computer science students take apart a computer to see how it works and develop games, art and movies to become proficient in computational thinking, learning along the way to think of themselves as tech creators as well as consumers.

### Hands-on learning and real-world applications of knowledge

As their understanding of math and science deepens, Upper School engineering and computer science students take on increasingly challenging projects. From creating a digital music player to writing programs that encrypt and decrypt messages to programming robots to compete in constrained environments, Ravenscroft students explore the practical applications of technology and revel in how many different ways there are to approach a real-world challenge. *R.*

Middle School engineering student ASHLEY PASSMORE '23 explores Marbles Kids Museum's hands-on STEM exhibit during a class field trip



Upper School computer science students participate in a cybersecurity simulation as part of Computer Science Education Week

To see short videos of our students engaged in hands-on STEM+ activities, visit [www.ravenscroft.org/springmagazine2018](http://www.ravenscroft.org/springmagazine2018) or scan the QR code.

