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msundblad@shakopee.k12.mn.us

6th GRADE REQUIRED GATEWAY COURSE- PROGRAMMING IS ELECTRIC

Ext: 4317

Schedule: 1 quarter Fee: \$20

Fee: Materials fee will apply

Mr. Mike Sundblad

We will explore the science of electricity, digital electronics and how they interact with computer programming. Students will develop electronic devices that will have to be programmed to solve a problem. We will acquire knowledge and skills in basic circuitry design and ex amine the logic behind computer programing.

7th and 8th GRADE ELECTIVE COURSE-APP CREATIONS

144

Schedule: 1 semester Fee: \$5

Students will learn the basics of computer science through mobile app development (PLTW). Students will start with basic concepts of programming in "Blockly," a simple drop-and-drag programming language using MIT's App Inventor. Students will then progress to "Python" in which they learn introductory elements of text-based programming and language syntax.

Students will explore the impact of computing in society and the application of computing across career paths.

7:00-3:00

7th and 8th GRADE ELECTIVE COURSE -THE INVISIBLE WORLD OF SCIENCE AND TECHNOLOGY

Schedule: 1 semester Fee: \$25

Invisible particles are running rampant through our world! You press the pedal, and the car goes; you flip the switch, and the light comes on; you hit the button, and the screen lights up. Have you thought about where you get your power from? How do tiny pieces of matter change the way we live? Electrons power our iPhones, air particles allow planes to fly from continent to continent, and greenhouse gases intensify natural disasters. Scientists and Engineers have developed ways to harness these particles to power our world. Join us in exploring the good, the bad, and the ugly impacts of these small-scale fragments.

Important Info for your student's success:

Part of this class focuses on the use of Microsoft office suite. You will need to have access to Infinite Campus Student Portal for the final grade, but we will use Canvas (shakopee.instructure.com) to download, turn in files, and see rubrics about our grades. All Extra Credit, missing, or incomplete work must be in by the 2nd to the last day of the quarter.

Shop Lab Fee: See Couse for Fee Details

Shop Lab fee students. (Pays for safety glasses, and their projects)

- *Checks made out to "West Middle School" (write the student's name on the memo line)
- *<u>Cash</u> in an envelope (write student's name on envelope)
- *If you cannot afford this fee, please email your child's teacher and we will work out a plan.

Required Tools and Supplies:

Pencil Ipad Engineering notebook

Student Responsibilities:

- 1. Act in any way that does not create a problem for you or anyone else on earth.
- 2. Students are expected to act safely in the shop. Alternate book assignments will be assigned in place of projects.
- 3. **Project participation**: 80% of my grade will be based on projects, assignments, and clean-up. Safety tests and unit quizzes are also worth 20%. There is no penalty for late assignments due to technology errors that can occur. Students are just required to finish outside of class time during after school open shop (varies by teacher) if they need more time on an assignment. Work ethic and effort put forth will be considered in the final grade.
- 4. Students are responsible for their project materials and safety glasses. Storage is provided in the classroom. Safety glasses replacement cost is \$5.00.
- **5. Safety tests for each tool must be passed** before they can be used (95% or better).

Behavioral Consequences:

1. Students will be asked to fix any problem they have created. If they cannot fix it, the teacher will. The time and energy used by the teacher will need to be made up.

Rev. 09/01/17