

# J.H. Hull Middle School

Home of the Hawks

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# **Elective Course Descriptions**

# **Project Lead the Way (PLTW) Courses**

#### **Automation & Robotics/Design & Modeling**

These two Gateway Foundation classes are taught in conjunction with each other as an introduction to engineering. The AR curriculum utilizes the VEX Robotics platform to get hands on experience in the design, building and programing of automated and robotic machines as well as on overview of their history, development and influence in our daily lives. The DM curriculum utilizes the Autodesk design software in the application of the design process to solve problems and to generate virtual images of their solutions to design challenges. (Yearlong Course-7th & 8th Graders)

#### **Introduction to Computer Science 1 & 2**

During the first part of this class, students learn about basic programming and design. They will focus particularly on creativity and design processes and will create their very own apps using the MIT App Inventor Software. These apps can be downloaded onto their own Android device. In Part 2 of this class, students will continue to explore the fundamentals of programming by using the programming language Python. With Python, they will learn the structure and flow of text programming. They will also create an app to collect data from people and then analyze that data. The topic of the app is up to the student. (Yearlong Course-7th & 8th Graders)

## **Shop/Flight & Space / Green Architecture**

The first semester of this class is Shop. Students will learn the proper and safe use of hand and power tools through the basic projects of the compressed air fired Rocket and the CO2 Race Car. They will also gain an understanding of the conventions of drafting and measurements. The next class is in conjunction with each other as an in-depth exploration of the science of aeronautics and sustainable habitats. The FS curriculum offers hands on experience in the design, construction and testing of an airfoil and the utilization of simulation software to allow students to experience space travel. The GA curriculum is designed to give the students the hands on experience of measuring, dimensioning and the basic tenants of CAD drafting utilizing the Autodesk 3D design software.

(Yearlong Course-7th & 8th Graders)

# Magic of Electrons & Energy and the Environment

These two specialization courses comprise a semester long curriculum which, through the use of hands on projects, allow students to explore the parts and behavior of atoms, electricity, how to utilize it in various electronic circuits utilizing the Elenco Snap Circuit kits. Students will also explore how to generate electricity utilizing sustainable "Green" solutions through the utilization of alternative energy sources such as photovoltaic, wind and concentrated solar thermal. (Semester Course – This class switches with the Life Management class – 7th Graders only)

### **Fine Arts Courses**

#### **Ceramics**

This Fine Arts class exposes students to the history and various types of pottery making and through hands on experience gives them some basic techniques for the construction of the various physical projects they must complete. These include pinch pot, coil forms, slip casting, slab work and sculpture.

(Semester Course – This class switches with the Gourmet Foods class – 8th Graders only)

## **Home Economics Courses**

#### Life Management

This class is designed to teach students about various areas that are related to Home Economics. Students enrolled in Life Management will explore basic instruction in the following areas: 1) Fabrics, patterns, and sewing; 2) Character Education; 3) Foods, safety, sanitation, kitchen equipment, recipes, and measuring; 4) Human development, interpersonal and social relationships; 5) Family relationships, child development, and parenting; 6) Life planning and careers. Lab experiences will include making a sewing project and food labs.

 $(Semester\ Course-This\ semester\ class\ switches\ with\ the\ Magic\ of\ Electrons/Energy\ and\ the\ Environment\ class-7th\ Graders\ only)$ 

#### **Gourmet Foods**

This class is designed to expand the student's basic food preparation skills and to explore various cultural cuisine dishes. Students enrolled in Gourmet Foods expand their knowledge in the following areas; 1) Safety and sanitation; 2) Measurements, equivalents, and conversions; 3) Etiquette and table setting; 4) Menu planning and nutrition; 5) Food appearance, and quality presentation; 5) Cultural foods; 6) Careers related to the foodservice industry. Lab experience will include food labs.

 $(Semester\ Course-This\ class\ semester\ class\ switches\ with\ the\ Ceramics\ class-8th\ Graders\ only)$ 

# **World Language**

## Spanish 1

Learn Spanish and explore the Spanish/Latin American cultures as seen through its art, heard in its music and tasted in its cuisine. Expand your knowledge of the Spanish language through literature, grammar and vocabulary. This class is the same class as high school Spanish 1 and students receive high school credit. Prerequisite for this class is A or B in your English Language Arts class AND your English teacher's recommendation is required.

### **Music Courses**

#### **Vocal Music**

Open to all students, this class focuses on the voice and its many musical applications. Students will be expected to sing daily, practice on their own time and participate in extracurricular performances throughout the year. Students will learn how to breathe and use their diaphragm to sing, understand the basic elements of the voice and vocal pedagogy, as well as, learn and perform multiple vocal pieces.

(Year-long Course – 6-8<sup>th</sup> Graders)

#### **Beginning Band**

This class is the prerequisite for advanced band. In this class, students will learn to read music, interpret and analyze musical performances, as well as, build a basic foundation on a musical instrument. Instrument choices include: trumpet, trombone, tuba, saxophone, flute, percussion, clarinet, guitar, bass guitar and piano. Students are expected to practice outside of class, have an attentive attitude in class and participate in classroom activities every day. (Year-long Course – 6-8<sup>th</sup> Graders)

#### **Advanced Band**

The prerequisite for this class is beginning band. Students will need to have a strong grasp on reading and interpreting music from multiple genres and styles. Students will also be expected to practice daily, participate in class every day, as well as, attend extracurricular performances, such as The Central Area Music Festival, and The Torrance Armed Forces Day Parade. Students who wish to enroll in this class must have a strong command of their musical instrument. Students who have not completed the prerequisite may audition for the Advanced Band in special circumstances, to be determined by the band director.

(Year-long Course – 6-8<sup>th</sup> grade)