

## Foundations of Technology Spring 2023

*Northwest Cabarrus High School*

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### **Policies:**

Grades in this course will be based on mastery of course content (assignments & tests) as well as active participation in class activities and projects. I will make accommodations as needed, please contact me if you need to discuss them. Students will have a one week grace period to turn in any late assignment without penalty. After a week, students will lose 5 points per day that an assignment is late.

If you are ever absent, please check out Canvas for any work you may have missed, and definitely speak to me if you have any concerns about work you've missed, or if you have questions about your grades or the class in general. I am reachable by email, and also via Remind.

During this course, students will work with hands-on projects. They will use electrical batteries and motors, as well as build gear trains with moving parts. They will also use simple tools, including ones with sharp blades. Before any activity, students will review safety procedures, but some risk is inherent in using robots. Please contact me if you have any questions or concerns about your student using simple tools.

### **Course Overview:**

Foundations of Technology is a course to explore the sciences and technologies related to the following topics and disciplines: society, environment, history, design, engineering, research and development, inventions and innovations, problem solving, maintenance, medicine, agriculture and biotechnology, energy and power, information and communication, transportation, manufacturing, and construction.

In this course, students will:

- determine what constitutes "technology"
- examine the development of technology as a process
- trace the evolution of technology over time
- investigate how technology has impacted human societies in the past and in the present
- hypothesize how technology may impact society in the future
- understand the components of the design process and the engineering design process
- creatively implement the design and engineering processes

Students will be working on hands-on projects, independently and in teams. Every week we will be building, crafting, designing, and testing our creations. Our focus will be on learning how to problem solve, think critically, and apply the design cycle. This course gives students a solid foundation of STEM concepts so they are prepared for the NCHS STEM program.

### **STEM Program Information:**

Each student and parent need to sign up for their designated STEM Remind group. Important announcements about events, field trips, volunteer opportunities, scholarships, and more are made through the Remind app. Please visit the NCHS STEM website for more information.

Program Choice Expectations:

- Maintain an overall grade average of 80% (based on the final average of all courses taken each year).
- Pass all courses.

Any student not meeting expectations will return to their home school if:

- A student does not meet magnet criteria of an overall 3.0 GPA at the end of the school year following a probation period.
- A student fails a semester-long course mid-year or end of year (no probation period necessary)
- A student does not meet the behavior and attendance standards following a probation period.