

ROBOTICS FOR GRADES 3 - 5

Instructor: Mrs. Denise Kuhn dkuhn@mtctampa.org

COURSE DESCRIPTION

Welcome to STREAM! STREAM stands for Science, Technology, Religion, Engineering, Arts, and Math. This course puts students on a path towards a fundamental understanding of STREAM subjects and promotes social skills through teamwork and collaboration. Through challenging inquiry-based lessons, students design, build, investigate, problem solve, discuss and evaluate scientific principles in action. All of the lessons are aligned to national standards, including ITEEA, NSES, NCTM, NGSS and Common Core.

- **THIRD GRADE:** Introduction to Bridge Building
Students will:
 - develop their understanding of STREAM concepts by igniting their natural curiosity and creativity, as well as working together. STREAM concepts include bridge types, compression, tension, load, force, stress, cantilever construction, suspension technology and more.
 - build 13 fully functioning replicas of real-world bridges which demonstrate key bridge types, such as truss, arch, cantilever, beam, suspension, movable/bascule, and cable-stayed.

- **FOURTH GRADE:** Introduction to Simple Machines: Wheels, Axles & Inclined Planes
Students will:
 - be introduced to basic scientific concepts as they create two types of simple machines: wheels and axles and inclined planes.
 - build 7 fully functioning replicas of real-world machines to gain an understanding of the principles that make them work.
 - Understand the STREAM concepts of making work easier, mechanical advantages, wedges, screws, energy transfer, mechanical systems and more.

- **FIFTH GRADE:** Roller Coaster Explorations
Students will:
 - boost their understanding of the STREAM concepts associated with a real-life amusement park ride.
 - build a battery powered working replica of a roller coaster and 2 additional models to gain an understanding of the principles that make them work.
 - will have 3 after-build experiments that teach STREAM concepts such as speed, time, distance, interpreting data and more.

GRADING

The final grade will be comprised of formative hands on and written assignments completed in class.

Grading Scale:

- A - 90 - 100
- B - 80 - 89
- C - 70-79
- D - 60 - 69
- F - 59 and below

BEHAVIOR

<p>Teacher interventions for behavior will be communicated to parents through the RenWeb Behavior Management System.</p> <ul style="list-style-type: none">· Using the RenWeb Behavior Management System, parents access their child's behavior history for all classes in a single location.	<p>Conduct Reporting for Report Cards</p> <ul style="list-style-type: none">· 0 – 3 Notifications = 4· 4 – 6 Notifications = 3· 7 – 9 Notifications = 2· Greater than 9 notifications = 1
<p>Intermediate ATL Reporting</p> <ul style="list-style-type: none">· ATL's can be tracked by subject on RenWeb.· ATL notes will be posted regarding incomplete classwork and homework assignments.· All students will begin with a four and the grade will be reduced as infractions occur during the trimester.	<p>ATL Reporting for Report Cards</p> <ul style="list-style-type: none">· 0 – 3 Notifications = 4· 4 – 6 Notifications = 3· 7 – 9 Notifications = 2· Greater than 9 Notifications = 1

TRIMESTER DATE:

- Trimester 1: 8/12/19-11/8/19
- Trimester 2: 11/11/19-2/21/20
- Trimester 3: 2/24/20-5/28/20