Gateway to Technology Syllabus

**Program Description**
Welcome to Centennial Middle School’s Gateway to Technology (GTT) program. Students and parents always ask me, “What is GTT?” Simply put, it is a project-based, hands-on approach to STEM learning that includes both individual and team activities/projects which allow students to use the latest technology for problem solving.

**Technology Student Association**
In conjunction with GTT curriculum, we offer students an opportunity to be involved with the Technology Student Association (TSA) to further enhance their skills. Any student enrolled in the GTT program is automatically a member of TSA and may choose to actively participate by attending meetings and competitive events. Meeting times and involvement information may be found on my staff website and through daily announcements on the school’s website.

**Course Descriptions**
each of the following courses are one semester in length.

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<th>Course Description</th>
<th>Grade Level</th>
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<tbody>
<tr>
<td><strong>GTT-I (6th Grade)</strong></td>
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<td><strong>Flight &amp; Space:</strong></td>
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<td>During this unit, students delve into the history of flight and space, discover the science behind aeronautics, and explore traveling and living in space. Students are then challenged to use their knowledge to design, build, and test various aerospace technologies.</td>
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| **GTT-II (7th Grade)**        |             |
| **Design & Modeling:**        |             |
| Students apply the engineering design process to solve problems and understand the influence of creativity and innovation in their lives. They work in teams to design real-world objects, capturing research and ideas in their engineering notebooks. Using Autodesk® design software, students create a virtual image of their designs and produce a portfolio to showcase their innovative solutions. |

| **GTT-III (8th Grade)**       |             |
| **Automation & Robotics:**    |             |
| Students trace the history, development, and influence of automation and robotics as they learn about mechanical systems, energy transfer, machine automation, and computer control systems. Students use the VEX Robotics® platform to design, build, and program real-world objects such as traffic lights, toll booths, and robotic arms. |

| **App Creators & Computer Science for Innovators & Makers:** |             |
| This unit will expose students to computer science as a means of computationally analyzing and developing solutions to authentic problems through mobile app development and will convey the positive impact of the application of computer science to other disciplines and to society. Students will learn about programming for the physical world by blending hardware design and software development, allowing students to discover computer science concepts and skills by creating personally relevant, tangible, and shareable projects. |
**Safety**
Due to the nature of some activities, it is necessary for each student to approach these activities with a safe attitude. NO student will be allowed to participate in these activities until he or she has been instructed in the safe use of lab equipment and has achieved a 100% test score on a general safety test.

Unsafe practices during lab activities will not be tolerated and could result in removal from the activity.

**Student Responsibilities**
Students are expected to be in class and in their assigned seat before the appointed time. Students are expected to bring a pencil to class each day and have their Engineering Notebooks in class. Students are to RESPECT other students’ right to learn and RESPECT the teacher’s right to teach. Students are to be attentive and participate in the learning process. If a student misses class, it is his or her responsibility to follow classroom management procedures to find out what they missed and schedule make-up work.

**Grading System**
Students will earn grades through daily bell work, individual/team assignments & projects, team work, tests, and a comprehensive semester test.
- **55% of Final Grade – Projects**
  - Comprised of individual and team projects.
- **25% of Final Grade – Classwork**
  - Individual assignments and engineering notebook documentation.
- **10% of Final Grade – Daily Work**
  - Comprised of daily bell work.
- **10% of Final Grade – Semester Test**
  - Comprised of a comprehensive final over concepts and curriculum covered during the semester.

**Make-up work for Absences or Incomplete Work**
Because of the specialized nature of the programs and activities associated with GTT, most work missed must be completed within the GTT classroom. If a student is absent, it is the student’s responsibility to obtain information from the teacher about what type of work was missed. The following rules and procedures have been established for makeup work.

- **Project & Class Work**
  - Missed projects or class work due to absences or incomplete class work due to lack of proper use of class time will be evaluated on a case-by-case basis.
  - Upon evaluation, the instructor will decide whether the grade will be dropped, or the student may make-up the work.
  - Final determination will depend on several criteria (reason for incomplete class work, number of days absent, etc.)
  - If work is missing due to improper use of class time, there will be a 10% reduction of the earned grade.

- **Daily Bell Work**
  - Daily Bell Work is to help keep the student academically engaged from bell to bell. Bell Work is work that is done at the beginning of class; therefore, if a student is in class and chooses not to complete the bell work, it cannot be made up.
  - If student is absent, the week’s Bell Work is posted on the SmartBoard daily and on Canvas and will need to be completed for credit.
• Engineering Notebook
  • The purpose of an Engineering Notebook is to document, in a time-sequential format, a student’s progress, ideas, notes, sketches, questions, and thoughts.
  • It is evidence of the work the student has completed. If a student is in class and fails to document his/her work in the Engineering Notebook, it cannot be made up.
  • If a student is absent, the documentation must be recorded upon return to the classroom by obtaining the information from the teacher or a peer.
• Tests
  • Missed tests must be made up before or after school by appointment.

**Classroom Rules and Procedures**
I believe every student in the classroom has an obligation and the ability to behave in an appropriate manner. Rude behavior or misuse of property will not be tolerated. Behavior that interferes with the teaching and learning process in the classroom is not acceptable.

**Discipline**
If a student chooses not to follow classroom procedures, or disrupts the learning process, a behavior ticket will be issued. Tickets and consequences are generally given in the following order; however, the teacher reserves the right to assign consequences as she deems necessary according to the severity of the offense.
  • 1st ticket – Written warning.
  • 2nd ticket – Before school detention & parent contact.
  • 3rd ticket – After school detention & parent contact.
  • 4 or more – Administration referral.