

## 8<sup>th</sup> Grade Industrial Technology - Mr. Herrera

This is an introductory level class designed to give the 8<sup>th</sup> grade student an in depth overview and basic skill development in Technical Drawing, Architectural Drafting, Woods, Transportation, creativity, problem solving and critical thinking. Students will progress through a series of small projects that teach each of the before mentioned concepts. The course gives the student an overall exposure to the woodworking and design aspects of the Industrial Technology department.

### Class expectations:

- **Attendance** is an important part of learning, because of the class and project work; students must attend regularly and absent time may be made up before or after school.
- **Bring a pencil to class every day.** Everything we do in class is done in pencil so we can make changes and corrections without scribbling.
- **Patience** is necessary for success. By learning patience, students can be more productive, helping each other and being individually helped by the teacher.
- **Being successful is the result of consistent hard work.** All students are able to be successful, but without putting forth effort on a daily basis, it won't happen.
- **A Positive Attitude** is an important part of success. Say that you will do it, not just try. What is not done today WILL be done tomorrow.
- **Cooperation** helps everyone learn. When students cooperate, teaching can be successful. Students can work cooperatively with each other and the teacher. The teacher encourages students to work cooperatively with each other. When students help each other in class, there is one extra teacher for each group working together.
- **Respect yourself and others in the class** by treating each other appropriately and following instructions from Mr. Herrera.
- **Students will maintain a portfolio** of handouts and projects. Keeping track of daily and weekly work will help you practice organizational skills you will use throughout your academic career.
- **Personal integrity** is VERY important. Academic dishonesty is an obstacle to learning and to reaching your full potential. Make sure that you understand your responsibilities as stated in the handbook.
- **Communication** is another success skill, if you do not know, ask. It is very likely that if you do not understand others are in the same boat with you. Anytime that you have a question, politely ask it, either quietly to the teacher or by raising your hand and asking aloud. We are here together to become successful. Students and Parents can contact Mr. Herrera at anytime via email at [jherrera@esu2.org](mailto:jherrera@esu2.org) or by phone at 402-443-4332 Extension 3214

### Learning outcomes:

- Students will demonstrate an understanding of design principles and production techniques.
- Students will demonstrate an understanding of safety as it applies to their individual and group work.
- Students will demonstrate an understanding of how to solve problems and create solutions.
- Students will demonstrate an understanding of measurement and layout procedures.
- Students will demonstrate an understanding of how materials are selected and specified for various applications.
- Students will learn to work in a professional, cooperative environment, collaborating as individual projects are produced.
- Students will become part of the learning process by participating in lectures and demonstrations. They will work interactively with the teacher as various procedures are demonstrated for the class.

## Grading Procedures

Your grade is made up of projects that are three categories:

Participation: Being Prepared, Participation in discussions, following safety rules

Project Work: Daily work, drawings, projects in the shop

Tests/Quizzes: Safety and measurement tests

### **Coursework: Students attend every other day on a rotating A-B Schedule.**

- Unit 1: (2 Weeks)      Introduction to measurement
- Define the parts of an inch.
  - Understand how measurement affects our daily lives.
  - Discuss measurements in metric and standard form.
- Unit 2: (4 Weeks)      Technical Drawing
- Prepare a border/title block for a technical drawing
  - Create a single view drawing centered on the paper.
  - Show an understanding of mechanical drafting by creating orthographic and isometric drawings.
- Unit 3: (2 Week)      Shop Safety
- Observe safety procedures and demonstrations.
  - Pass all safety tests with 100%.
  - Demonstrate safe use of the machines required for this class.
  - Demonstrate proper classroom behavior while working in the Wood Shop
- Unit 4: (8 weeks)      Co2 Cars
- Sketch 10 thumbnail sketches for a CO2 car.
  - Create two rough designs from of a CO2 car.
  - Produce a final full sized metric drawing of your CO2 car applying the idea of lift and drag.
  - Produce a CO2 car from a 42 x 70 x 305mm block of balsa.
  - Sand and apply a finish to the Co2 Car.
  - Race the Co2 car in the class competition.
- Unit 5: (2 Week)      Acrylic Dice
- Use shop tools to produce a sanded finish on a block of acrylic plastic.
  - Sand and polish the block to a transparent shine.
  - Measure and layout the sides of a dice.
  - Drill 1/8" holes at an appropriate depth to finish the dice.
  - Paint the holes to finish the appearance of the dice.

#### Assessment Strategies:

All assignments will receive Points based on the scale above. Additional projects will be assigned as needed to enhance instruction. To provide for special needs students, modifications will be made to projects as well as extending additional lab time to any students for the completion of projects. All grading will be done using Powerschool and will available to the student and parents through the school's home page.

#### **For additional help:**

**Please feel free to contact Mr. Herrera at school at 402-443-4332 Ext 3214. You can also email at [jherrera@esu2.org](mailto:jherrera@esu2.org) I am available in the mornings before school, and once football season has ended, I am available every night after school. Please let me know if there is a time when you would like to meet to make up work or to talk.**

**Lets have a great semester in the woodshop!**

**Mr. Herrera**