

**General Course Information**

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| **Course Title** | Makerspace |
| **Description** | **This course is designed as an introduction to making and creative thinking.** Students will practice problem-solving through experimentation, observation, prototyping, and using analytical skills such as math and science to improve craftsmanship and function of design.  Design thinking and the scientific method will be combined with studio art disciplines to explore electricity, radio waves, kinetic design, and functional craft. |
| **Room Number** | The Big Room |
| **Faculty Name** | Ms. Brown |
| **Contact Information** | 517-545-0828  rbrown@kwoods.org |
| **Course Website** | www.rbrown.kwoods.org |

**Introduction**

**This year, we are excited to have the opportunity to test out a new kind of class, based in a culture of making and engineering. Students will practice using their education as a tool for empowerment, shaping their creative ideas and inspirations with cross-curricular techniques.**

**Course Expectations**

You are expected to work hard and try your best. You are also expected to be respectful and responsible students inside and outside of the art classroom (studio). This includes respectful and responsible behavior towards your class work, classmates, me and classroom.

Students are expected to keep up with projects and assignments that will be worked on daily in class as well as with work that may be needed to be done outside of class. Class work will be consisted of daily activities and longer-term projects where students will learn about and practice concepts and techniques required of them. Class time will also consist of class discussions about artwork (students’ and working artists) as well as discussions about art and contemporary issues. Students are expected to be active participants in all discussions and will be held responsible accordingly. At times, work may need to be completed or worked on outside of class, and students will be expected to complete the work as necessary. Students will also be assigned sketchbook assignments that will be due at regular intervals of the semester that should be completed at home or in class when finished with other projects.

To be successful with this class, you must work continually. It is very easy to leave larger projects until the last minute, but art making is a process. It takes time to evolve ideas and techniques and by working continually on your projects and sketchbooks, you will find yourself a much more successful artist.

**Studio Environment**

I expect you to challenge yourself with your ideas and not be afraid to take risks. It’s ok if a project doesn’t work the first time. Things can be revised, modified, and improved through reflection and effort and a project can become successful. I feel the most important part of making an artwork is not the result but the process of problem-solving towards a variety of solutions. The studio should be a safe place for all artists, so you are expected to be respectful and constructive with your comments about others’ work. Everybody enters this classroom with different experiences and ability levels and it is the goal of this class to improve you to the best of your ability. Everybody can learn how to do the things we will do in this classroom and be successful if they put forth their ideas, a positive attitude and effort. Although art is a visual medium, your ideas are equally important to your technique.

**Technology in the Classroom**

In this class, we will use various types of technology to help us research, share ideas and reflect. This includes, but is not limited to: internet use, email, Google programs and video. When technology based assignments are given, students will be expected to complete them on time and make plans accordingly if internet access is not available at home. Students will be provided with access to any technology needed to complete the requirements of this course through Kensington Woods High School.

**Essential Standards of Learning**

In this course, learning objectives (targets) have been aligned to the Michigan Merit Curriculum, Common Core Curriculum, College Readiness Skills, National Art Standards and expectations of the art department at Kensington Woods High School. These learning targets are designed to also prepare students for success in projects of all disciplines.

Listed below are 10 essential learning standards for Makerspace. To find success in this course, students must obtain mastery of these standards. This is not a complete list of learning objectives in this course, but instead, a list of the most essential standards.

Students will be able to:

1. Generate and conceptualize artistic ideas and work (National Visual Arts Standards)
2. Develop and analyze personal creative process, using acquired knowledge and skills (National Visual Arts Standards).
3. Refine and complete artistic work (National Visual Arts Standards) using tools such as the Design Thinking process and Studio Habits of Mind.
4. Perceive and analyze artistic work (National Visual Arts Standards) through the lense of cultural aesthetic and constructed environments.
5. Evaluate the quality and effectiveness of one’s work through a variety of methods (writing, speaking, visual) based on aesthetic, technical and conceptual choices.
6. Explore social and global issues through the application of the creative process (National Visual Arts Standards, 21st Century Learning).
7. Explore the impact of design culture on society (National Visual Arts Standards, 21st Century Learning).
8. Apply criteria to evaluate the quality of design work (National Visual Arts Standards).
9. Balance experimental freedom with responsibility and safety while working in a studio setting (National Visual Arts Standards).
10. Through collaboration and synthesis of ideas, develop and refine concepts within a design team (21st Century Learning).

**Prerequisite knowledge/skills for success in this course**

Students do not need to have any prior experience in art to find success in this course. Instead, students are expected to work thoughtfully and purposefully, developing their technical, conceptual, and aesthetic skills throughout the year.

Students will also work on developing the following skills that will help them find success in this course.

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| **Mastery Level** | **Work habits**: Students will be able to work effectively independently and in groups. Students will be able to work thoughtfully and with purpose.  **Academic integrity:** Students will act honestly and ethically in their work.  **Study skills**: Students will adhere to assignment deadlines.  **Reflection**: Students will be able to reflect about their own and others work in and thoughtful and purposeful manner.  **Technology (both manual and computer based)**: Students will develop a deep understanding of technologies used in class |
| **Familiarity Level** | **Research**: Students will develop research skills (computer and book based) to research fabrication techniques and trouble shoot projects.  **Technology (both manual and computer based)**: Students will develop familiarity with technologies used in class, including 3-D printing and power tools. |

**Course Materials**

Much of the materials needed for the class will be provided by Kensington Woods. You will be taught proper usage of studio materials, computers and programs and are expected to treat them respectfully.

Students who request special materials for modified projects may be asked to obtain the supplies for themselves.

The makerspace is always accepting donations, including (but not limited to) scrap wood, tools, fasteners, spray paint, PVC pipe, and fabric.

**Grading**

Grades will be based on how well you meet specified course objectives/learning targets through class projects and assignments. Before each unit, you will be given the things I expect you to be able to accomplish by the end of the unit. You will often be assessed by both you and me throughout the unit. If you struggle with a target, you will have opportunities to improve grades as desired by meeting with me and discussing what knowledge and skills you need to work on to meet the goals of the assignment and class. This topic will be discussed at further length in coming weeks. If you have any questions about grading, please don’t hesitate to contact me.

**KWHS follows the following grading scale:**

A= 95-100 (4.0)

A- = 90-94 (3.7)

B+ = 87-89 (3.3)

B = 83-36 (3.0)

B- = 80-82 (2.7)

C+ = 77-79 (2.3)

C = 73-76 (2.0)

C- = 70-72 (1.6)

F = below 70 (0.0)

**Your grade will consist of assessment of the following:**

90% Summative Assessments (summative means assessments that sum up your learning)

Includes major projects and reflections

10% of your summative grade will be your Sketchbook Assignments)

10% Summative Final Project/reflection

End of semester project/reflection

You and your parents can check your progress at any time using MISTAR, our online grading and record keeping program. For more information about MISTAR, visit the school’s website, www.kwoods.org.

**Late Work**

All assignments are expected to be turned in on the due date. Students

However, if you are struggling with a project, or need more time, please talk to me in advance of the due date. If you are working and putting in your best effort, the due date can be extended for you. However, know that the class will move on and you will be expected to come in and work on the project outside of class (before school, after school, lunch). I am often available during all of those times with advance notice.

Please keep in mind that you must talk to me BEFORE the due date to be granted an extension.

**Revision**

I expect you to put in your best effort on your work and master the content. If you do not master the content of a unit/project by receiving at least a 70% on the work, I expect that you will revise the project until you get at least a 70%. We will work on that process on a one-on-one basis if necessary.

If you receive a 70% or above but are still not happy with your grade, you are more than welcome to revise your projects at any point during the semester and submit them for a revised grade.

**Classroom Expectations**

**Absences**

If you are absent, you are responsible for obtaining and making up missed work.

**Material Use**

Students are expected to use materials responsibly and with respect. That means putting things away where they belong, cleaning up after themselves and not wasting materials. Students not treating materials with respect will lose the privilege to use them.

Tool Standard Operating Procedures

As a new tool is introduced in the Makerspace, students will be taught the safe and proper operating procedures for the tool. Tools that require S.O.P.s also require direct teacher supervision, and may not be used alone or with other students at any time.

S.O.P.s will be available in a binder alongside each tool. Students will be required to review S.O.P.s prior to each tool use.

Failure to follow S.O.P.s will result in a warning. If you continue misuse, you will lose tool privileges for the unit and an email will be sent home. Your tool privileges will not be reinstated until I receive an “okay” from your guardian.

**Cell Phones/Mp3 players**

Cell phones and mp3 players/music players are not allowed out during class without teacher permission. At times, you may use them for music or research with teacher permission, but never during whole class or group activities. Both headphones should be out of the ear during whole class or group activities.

**Being out of Class**

Students are expected to be responsible about being out of class. Students may not leave class the first 15 minutes while the class is getting started. Students are asked to alert the teacher when they need to use the restroom but are asked not to leave class when whole class or group activities are in progress. Only one student is allowed to be out of the class at a time to use the restroom. If a student is out of class more than 15 minutes (unless they are with another teacher), it will result in an absence.

**Coming Prepared to Class**

All students are expected to come prepared to class, which means you come with your assignments completed, ready for the day’s challenge.

**Extra work time**

If you need more time to work on a class project, you are expected to take the initiative and schedule time in advance with me to work on your assignment before school, after school, during lunch or during advisory, leaving you enough time to complete the assignment on time. If you need time beyond that, please talk to me in advance to make appropriate arrangements.

**Computer Labs**

There is absolutely no food or drink in the computer labs. While in class and in the labs, you are expected to follow all rules of the computer labs and your Computer Use Agreement.

**Respect**

My primary goal in classroom management is that a respectful classroom environment is created. This means respect for all members of the classroom community, respect for the materials and respect for the room through your actions, words and thoughts. This includes appropriate language and behavior. Students who are not able to participate in the class respectfully will be dealt with appropriately. This includes following school rules regarding cell phones, students out of class and other policies.

It is my goal that this course provides you with the knowledge and tools to create a lifelong appreciation of art and design. If you ever have any questions or concerns, please feel free to contact me. I am always available to answer questions or provide help to both students and parents. I look forward to a great year!

**Schedule**

This is an overview of the year to give you an idea of what topics we will be covering. Please note that some things may change!

Most units contain multiple projects. All Units and majority of projects will include a critique and reflection. Critiques Reflections are completed using a variety of methods (including, but not limited to: writing, presentation, small group discussion, peer review, video, blogging)

**All units will cover the following major skills and concepts:**

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| * Creative Process * Development of technical skills * Reflection  (oral, written) * Analyzing and critiquing work * Justification of opinion | * Discussion * Art/Design History * Art/Design Context * Learning about/from artists * Communication of ideas * Problem solving |

**Unit 1 – The Design Process**

**Media: woodworking**

**Unit 2 – Problem Solving**

**Media: Makey Makey, robotics**

**Unit 3 – Importance of Technical Skill**

**Media: RC Plane**

**Semester 1 final project and reflection**

**Unit 3 – Communication**

**Media: Radio and sound tech**

**Unit 4 – Design Team**

**Media: Soap box derby design**

**Unit 5 –Sustainability and global design issues**

**Media: Renewable energy**

**Semester 2 final project and reflection**

**Tool Use Permission**

**My student has permission to learn and use the following tools (check all to which permission applies):**

* Hand tools (hammer, screwdriver, box saw, etc.)
* Rivet tools
* 3D printer
* Makey-Makey robotics sets
* Power drill/screwdriver
* Soldering iron
* Dremel
* Propane torch
* Miter saw
* Circular saw
* Jig saw

**I have read and agree to abide by Ms. Brown’s Makerspace syllabus. I understand that any questions may be directed to** [rbrown@kwoods.org](mailto:rbrown@kwoods.org)**.**

**Student Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_- Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Guardian Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

**Comments or Concerns:**