Name_____

Assigned Mentor_____

Term One Morning Seminars/Workshops

Time	Option 1	Option 2	Option 3	Option 4
8:03-9:20	**Using the Fab Lab to Explore Measurement, Forces, Motion, and Energy Dynamics** In this seminar students will explore scientific measurement, forces, motion, and energy dynamics through classical experimentation and engineering. This seminar is paired with the **Intro to Fab Lab Skill Development** workshop and is mandatory for all freshmen. It is worth up to 0.5 credits in physical science and will be led by Mr. Peterson.	**Globalization in the 21st Century** In this seminar, students will explore the following questions: 1.) How has Globalization been a driver of both positive and negative change in our world? 2.) What is a contemporary issue dealing with Globalization? 3.) What can be done about it? This seminar is mandatory for all 11-12th grade students and will be worth up to 0.5 credits of World History. It will be led by Mr. Tebo.	**Writing Workshop** During this time, all sophomore students will be working on developing their research and writing skills. Students will focus on both technical and creative writing aspects during this time through a series of writing prompts and assignments. This workshop is worth up to 0.5 credits in English 9/10 and will be led by Ms. Raether.	**Introduction to Fab Lab Skill Development** In this morning workshop, students new to NLRA who have not yet developed Fab Lab skills will learn how to utilize the Fab Lab equipment and software. This workshop will be worth up to 0.5 credits in Computer Aided Drafting and Design and will be led by Mr. Beise.
9:30-10:30	**Intro to Fab Lab Skill Development** In this workshop, all new NLRA students will learn to utilize the NLRA Fab Lab with a focus on the laser engraver, 3D printers, and the vinyl cutter. Students will be creating projects associated with the adjoining seminar. This workshop will be worth up to 0.5 credits in Computer Aided Drafting and Design or Introduction to Engineering and Design and will be led by Mr. Beise.	**Junior/Senior Project Research** In this writing and research focused workshop, 11-12th grade students will be conducting background research on one larger project they will conduct this year. Each student must produce their junior/senior paper during this time as well as iron out their project proposal details. Seniors will be planning their capstone project plan for the year during this time. This workshop is worth up to 0.5 credits in English 11/12 and will be led by Ms. Raether.	**Studies in Ecosystems** All 10th grade students will explore how humans impact local ecosystems. Students will use both a research oriented and experimental approach to studying ecological issues both locally and globally. This seminar will be worth up to 0.5 credits in Biology and will be led by Mr. Peterson.	

Term Two Morning Seminars/Workshops

Time	Option 1	Option 2	Option 3
8:03-9:20	**Interactions with Matter** In this seminar students will study fundamental principles in chemistry including the atomic theory, the periodic table, properties of matter, and reaction prediction. A highly experimental approach will be made. It is worth up to 0.5 credits in physical science/chemistry and will be led by Mr. Peterson. This seminar is mandatory for all juniors and seniors needing to fulfill physical science learning targets. This will be led by Mr. Peterson.	**Human Rights** In this seminar, students will explore human rights issues both historically and in modern times. Students will take both a historical and a literacy approach to this. This seminar is mandatory for all freshmen and sophomore students and will be split into two sections that will rotate between Mr. Tebo and Ms. Raether. It will be worth up to 0.5 credits in US History.	**Project Support/APEX** Any student wishing to develop their own seminar/project or work on an online APEX course during this time will have the opportunity to do so with Mr. Beise.
9:30-10:30	**Video Game Design** In this workshop students will learn how to use Drag and Drop programming to create video games. They will create up to eight standard game types and then will use this time to create a video game related to their morning seminar. This will be led by Mr. Peterson.	**Advanced Solidworks** In this workshops, students will explore advanced operations in Solidworks 3D modeling scenarios. This includes learning how to do advanced assembly drawings and 3D prints. Any student interested in becoming CSWA certified should take this workshop. The end project for this seminar will be tied to the students morning seminar. This seminar is worth up to 0.5 credits in Solidworks and will be led by Mr. Beise.	**Poetry** Students will explore various forms of poetry. They will utilize a poetic form to demonstrate their learning in an above seminar. This workshop will be worth up to 0.5 credits in English and will be led by Ms. Raether.

*In this quarter, all morning seminar choices will not be tied directly to a specific workshop. Students will have a choice as to how they demonstrate their learning in the morning seminar using a skill that they chose to develop in one of the later morning workshops.

Term Three Morning Seminars/Workshops (Electives)

Time	Option 1	Option 2	Option 3	Option 4
8:03-9:20	**How to Build Almost Anything** In this seminar/workshop, students will learn about traditional and modern manufacturing. Students will be introduced to several manufacturing tools, ranging from the Fab Lab tools, to a metal lathe and mill, along with woodworking tools like the bandsaw and table saw. Safety of operating tools will be emphasized. Students will complete a teacher led project, but then will have up to six weeks to design and build their own project utilizing the knowledge they gained in weeks 1-3. This seminar/workshop will be led by Mr. Beise and will be worth up to .5 credit in student selected areas based on their project choice. This may include, Manufacturing, C.A.D. and Engineering courses.	**A Historical Look at Industrialization** In this seminar, students will explore the following driving questions: 1.) What is industrialization? 2.) How did industrialization change America and the world? 3.) How have Industries changed over time? This seminar will be led by Mr. Tebo and will be worth up to 0.5 credit in US History	**Anatomy and Physiology Studies** In this seminar, students will explore human anatomy and physiology through numerous simulations and dissections. Students will dive deep into how the structure anatomy is related to its biological function. **Students in this seminar will be required to join the afternoon lit circle, Stiff: The Curious Life of Human Cadavers by Mary Roach.** This seminar and literature circle will be led by Ms. Olson and will be worth up to 0.5 credits in Anatomy.	
9:30-10:30	**How to Build Almost Anything** In this seminar/workshop, students will learn about traditional and modern manufacturing. Students will be introduced to several manufacturing tools, ranging from the Fab Lab tools, to a metal lathe and mill, along with woodworking tools like the bandsaw and table saw. Safety of operating tools will be emphasized. Students will complete a teacher led project, but then will have up to six weeks to design and build their own project utilizing the knowledge they gained in weeks 1-3. This seminar/workshop will be led by Mr. Beise and will be worth up to .5 credit in student selected areas based on their project choice. This may include, Manufacturing, C.A.D. and Engineering courses.	**Cinematography 101** In this seminar, students will explore the history and relevance of films through the 20th and 21st century. Students will be identifying and analyzing significance of filming techniques/storyline through this course. This seminar will be led by Ms. Raether and will be worth up to 0.5 credits in English and/or Introduction to Film.	**WITC Articulated Course Support** During this time, students interested in working on self-paced curriculum to earn dual NLRA and transcripted credit through WITC in Office Basics, Accounting, or Personal Finance will work with Mr. Adams.	**Project Support** This time slot is set up for students to gain added support in the independent projects that they might be working on. This includes online courses using APEX, ALEX or online courses in Computer Science, etc. This time can also be used for working on Junior projects or Senior Capstone projects. Students could also use this time for their personal wellness goals. Mrs. Olson will be leading this workshop

Term Four Morning Seminars/Workshops

Time	Option 1	Option 2	Option 3	Option 4
8:03-9:20	**Entrepreneurship** This seminar will focus on product development, product design and also product production. Students will use the vision of the NLRA student led business, STUDENTS IN INNOVATION, to market and advertise a product to generate profit. This profit will be split amongst the workers and the school activity fund. Students participating in this seminar will apply for and be assigned positions in the company. This will simulate a real life work experience. The seminar will also involve looking at successful entrepreneurs on both a local and national level. Several guest speakers will be presenting to the participants in order to share their knowledge and expertise of the risks and rewards of being an entrepreneur! This seminar will be led by Mr. Beise and will be worth .5 credit in Entrepreneurship.	**Cross Training for a Healthier You** In this seminar, students will take part in a variety of physical fitness activities including walking, biking, swimming, kayaking, and utilizing weight equipment at SNAP Fitness. Students will create personal learn to create personal fitness goals and will learn to create healthy recipes. Weekly topics in health will be discussed. This seminar is aimed at students needing physical education credit and can be tied to their personal wellness plan. Up to 0.5 credits in physical education will be earned and this will be led by Mr. Peterson.	**Ancient Civilizations** This seminar is open to any student but is geared at juniors and seniors who need to fulfill World History credits. Students will explore questions such as:1.) How did civilizations of the past thrive? 2.) What features make a "civilization"? Are there any exceptions to the "rule"? 3.) What major features were they able to create? How did they create them? This seminar will be worth 0.5 credits in World History and will be led by Mr. Tebo.	
9:30-10:30	**School Garden Set Up** In this workshop, students interested in helping set up the school garden will begin start plants and prepare the garden for summer planting. Students will utilize *Square Foot Gardening* by Mel Bartholomew as a text and guide to sustainable, raised-bed, organic farming methods. Students interested in maintaining a plot for their family over the summer months should consider taking this initial workshop. This will be led by Mr. Peterson and will be worth up to 0.5 credits in Horticulture.	**Art for Amateurs** This workshop will be for the beginning artist. Several entry level art projects will be completed. This includes artwork in the areas of: Painting Drawing Collage Pinterest Project Ms. Raether will lead this workshop and it will be worth up to .5 credit in Art.	**Careers** During this time all junior students will be required to complete this workshop. Students will explore various career options and career pathways as well as organize various job shadows. This workshop will be worth up to 0.5 credits in Careers and will be led by Mr. Adams.	**Project Support** This time slot is set up for students to gain added support in the independent projects that they might be working on. This includes online courses using APEX, ALEX or online courses in Computer Science, etc. This time can also be used for working on Junior projects or Senior Capstone projects. Mr. Beise will be leading this workshop.