



Course Syllabus for Inventor's Lab

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I would like to welcome all of you to Inventor's Lab at Pacific Cascade Middle School! I am happy to have all of you in my class and am looking forward to an exciting and challenging trimester of exploration and invention. We will tinker and get our hands involved in problem solving. Inventor's lab is a place to create, experiment, and innovate. In this course, we will use the tech design process to invent, build, and test our creations.

During this course you will:

- build physical inventions to meet diverse challenges, using the tech design process
- learn basic Scratch or Snap programming and apply it to physical designs you build
- read about and analyze other inventions that have impacted the world
- watch and be inspired by weekly videos of inventors/inventions, sparking in-class project ideas
- solve mini puzzles and create their own
- work independently and in groups
- demonstrate persistence through iterations of designs
- actively reflect on their design/build process and submit/discuss in various formats (inventor's notebook, short video)
- learn basics of EV3 Lego Robotics programming; build and design robot to accomplish given task(s)
- share ideas and mentor 5th grade class at Clark Elementary over video chat, for a design challenge

Grading:

There will be around 5 projects (one every two weeks). Some of the projects will be individual, others will be done in groups. Projects can receive a **1. Beginning**, **2. Needs improvement**, or **3. Mastery grade**. To earn an 'A', all assignments must receive a mastery score. To earn a 'B', you must have at least three mastery scores, and at most, 2 needs improvement scores. To receive a 'C', you earn 3 or more needs improvement scores. A grade below 'C' will be assigned if you have any incomplete projects or any beginning grades assigned. With this said, I believe all of you can achieve mastery, so everyone will have the opportunity to redo a project, before end of trimester grade closing.

Mastery is defined as understanding the design process, documenting the concept and all of its iterations, and reflections/analysis in written or picture/video format. In other words, is the project:

- beautiful
- thoughtful
- personally meaningful
- sophisticated
- shareable with a respect for the audience
- moving
- enduring (have an impact on you and others – make a contribution to knowledge or be a source of pride)

Smaller mini assignments (article responses) will be graded on thoughtfulness, effort, and application.

This is a brand new course. As such, the class is in need of many materials with which everyone can tinker and create. Please feel free to donate items (used and new). I will post a running list on my website- www.nicholsd.com

Thank you for partaking in this exciting journey.

DAILY SUPPLIES

These supplies are your responsibility to bring **Inventor's Lab** class:

- graph paper spiral (for homework and class work)
- 3-ring binder (for worksheets and notes)
- Planner
- Pencil or mechanical pencil
- Eraser
- Creativity
- 'junk' items from our list of supplies (when you can)

EXPECTATIONS

In order to be successful, everyone needs to feel like the classroom is a safe place to learn, experiment, and make mistakes without worry. To this end, I will hold you to the following expectations at all times:

READINESS *I am responsible for being prepared*

- Be prepared for class each day with needed materials and completed assignments.
- Be ready to learn, with a positive attitude and hard work.

RESPECT *I treat materials and people with respect*

- Respect the classroom by handling materials and supplies properly
- Respect your classmates by listening, working cooperatively and refraining from negative comments and actions.
- Respect the teacher by listening carefully.

Learning *I am responsible for my own learning*

- Complete all homework, projects, and assignments on time.
- Keep track of assignments in your planner.
- Make-up all work missed due to absence.
- Participate in class discussions and activities.
- Try your hardest and do your best work at all times!

Parent Contact Information

Please read over the syllabus as a family. Parents/Guardians, please detach, fill out, and sign this page. Students, please sign this page. This sheet is due to Mr. Nichols by **Friday, September 11, 2015**. If you have any questions, comments, or concerns at any time during the year, I can be reached through the contact information given at the top of the syllabus. I am looking forward to working with you and your family this year!

Student's Name (print) _____ Period _____

Home Phone Number _____

Mom's/Guardian's Name _____

Cell Number _____

Work Number _____

E-mail Address _____

Dad's/Guardian's Name _____

Cell Number _____

Work Number _____

E-mail Address _____

Which email/phone number from above is the best way to reach a parent/guardian? _____

Do you have internet access at home? (check one box) Yes No

Please use this space to help me understand your child as a tech. learner: _____

Student Signature _____

Parent/Guardian Signature _____