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*Westport Warhawks Robotics* ***2018-2019*** *Syllabus*  ***Copy of this document is on the robotics website***

**Robotics Coach: Mr. Sells** (Email: nathan.sells@jefferson.kyschools.us ) <https://westportrobotics.weebly.com/> **WEBSITE**

**Course Description:**

Robotics is a lab-based course that uses a hands-on approach to introduce the basic concepts of robotics, focusing on the construction and programming of autonomous and driven mobile robots. Course information will be tied to lab experiments; students will work in groups to build and test increasingly more complex mobile robots, culminating in an end-of-semester robot contest. We will be using VEX Robotic Design System as our platform in 8th grade and eventually 7th grade, EV3 in 7th grade, and NXT robots primarily in 6th grade. Students will be divided into table groups and complete a variety of robot construction and programming activities within the confines of these groups.

**Course Objectives:** In this course, students will:

1. Explore the broad scope of robotic applications

2. Learn the basic components and building blocks of robots

3. Develop the robot construction skills

4. Learn to program the robots

5. Program autonomous and student driven mobile robots to achieve challenging tasks.

**Essential Questions:**

1. How can robotics technology further impact our future in a positive way?

2. What are the required components, factors and skills to build a high performance functioning robot?

3. How to construct an autonomous mobile robot.

4. How to program an autonomous mobile robot.

**Items needed for class:**

1. Pen
2. Engineering journal: a wide ruled composition notebook (9 ¾ x 7 ½ in).
3. RobotC program (provided by school).
4. Robot parts and materials (provided by school).

**Course Format:** 1. Lectures. 2. Video and multimedia presentations. 3. Group work and discussions. 4. Laboratory investigations. 5. Group competitions and activities. 6. Mini- and term projects. 7. Homework assignments.

**Grading Policy:** 1. Homework assignments (10%) 2. Class participation (10%) 3. Quizzes and tests (20%) 4. Laboratory contributions and results (25%) 5. Project deliverables and presentations (35%)

**Expectations:** 1. Attend class daily, on time and ready to work. 2. Participate and contribute to group assignments and projects. 3. Maintain a daily, complete, organized engineering journal. 4. Have all assignments done and submitted when they are due. 5. Review work done each day. 6. Spend an appropriate amount of time preparing for tests. 7. Exercise safety and common sense at all times. 8. Have a mutual respect for fellow students and their right to an education.

**Classroom Rules: I, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, agree to uphold all of the following rules below and understand the discipline process.**

1. Be in the lab, ready to work and learn when the bell rings.
2. Follow directions the first time they are given.
3. Treat the robot kits with care and respect; they will be used for years to come!
4. Respect your fellow students' right to a quiet & productive learning environment.
5. Do ***NOT*** touch any of the machinery, tools or non-LEGO parts in the lab!
6. Act like an adult, treated as an adult. Act like a child, treated as a child.
7. Coach Sells dismisses the class, not the bell or clock.

As always, the school's student conduct expectations are upheld.  See the *School Handbook for Parents and Students* for more detail on our school website.

**Classroom Procedures:**

* **Start of class:**
	+ Get out robots and kits (not the first week of school)
	+ Set-up work tables (already arranged the first week)
	+ Attain and complete engineering journal (not the first week)
* **End of class: (LAST 5 minutes)**
	+ Put away/secure robots and kits (all extra parts in storage box, robot in cubby-hole)
	+ Finish and store engineering journal
	+ Log out of computer, push in chairs, pick up trash
* **Robot kits**
	+ You will be assigned a numbered kit which you must sign for. Sign: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	+ If you lose or damage any kit pieces, you must pay for the replacement. Sign: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	+ All robot kits and parts must stay in the lab or designated area at all times. Sign: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	+ If you do not turn in a complete kit at the end of the term, you will receive an incomplete until the full kit is complete. Sign: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* **Computer work**
	+ Computers are to be used for class work / projects.
	+ No food, gum, or drinks allowed in the room by students or around the computers.
* **Late work:**
	+ NO LATE work will be accepted unless a student has an excused absence.
	+ Depending on the number of days of excused absences, students will receive the same number of days to make up the work missed.
* **Absences and Tardiness**
	+ The school's absence & tardiness policies are followed.  See the *School Handbook for Parents and Students* for more detail.
	+ Be responsible - find out what you missed and make it up.
* **Use it and lose it**
	+ Cell phones, iPods, and the like, ...; use it in class and you lose it for the day.

Parent/Guard. Signature: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Parent phone number(s): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Email(s): \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Would you prefer a Text? \_\_\_\_\_\_\_\_\_