

## CURRICULUM

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EV3

<http://curriculum.cs2n.org/ev3/>

Teacher Guide:

<http://www.education.rec.ri.cmu.edu/content/lego/ev3/files/EV3%20teachers%20guideWEB.pdf>

VEX IQ

<http://curriculum.cs2n.org/vexiq/>

Teacher Guide:

[http://education.rec.ri.cmu.edu/products/teaching\\_robotc\\_vexiq/VEXIQ-TeacherGuide.pdf](http://education.rec.ri.cmu.edu/products/teaching_robotc_vexiq/VEXIQ-TeacherGuide.pdf)

NXT-G course (must sign in)

<http://learn.cs2n.org/course/view.php?id=62>

NXT Robotics Engineering Vol 1

<http://www.hsmdallas.org/Robotics/>

More from Portland State University

<http://stemrobotics.cs.pdx.edu/browse-courses>

## TEAM RESOURCES

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FLL

<http://techbrick.com/>

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VEX

<http://botsnstuff.com/>

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FIRST

<http://www.ortop.org>

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ICEBREAKERS

<https://www.howtosmile.org/>

# *A few of* MY FAVORITE ROBOTICS RESOURCES

## Astra Zeno

Young Women's College Preparatory Academy  
Houston, TX

[azeno@houstonisd.org](mailto:azeno@houstonisd.org), (713) 581-4936



## PROGRAMMING

<http://cs2n.org/>

<https://www.udemy.com/java-tutorial/learn/#/>

<https://www.codecademy.com/learn/learn-java>

## A COMPARISION OF ROBOTICS PLATFORMS

	VEX IQ	VEX	FLL	FTC	FIRST	BEST	SeaPerch
<b>approximate cost for 1 kit</b>	\$299.99	\$799.99	\$440	\$1,270	\$1,000	no cost	\$169 + \$235 reusable tool bag
<b>cost for field</b>	\$199.98 + \$99.99 for each season's game elements	\$799.98 + \$499.99 for each season's game elements	\$75 each year	\$889+ \$450 for each season's game elements	\$21,500		\$50-\$100
<b>registration cost</b>	\$100 first team, \$50 each additional team	\$100 first team, \$50 each additional team	\$225	\$275	\$6,000		none
<b>average competition cost</b>	\$25-\$50 per team	\$25-\$50 per team	\$100	\$125-\$170	typically included		\$150
<b>funding sources</b>	<a href="http://www.roboticseducation.org/for-participants/team-grants/">http://www.roboticseducation.org/for-participants/team-grants/</a>	<a href="http://www.roboticseducation.org/for-participants/team-grants/">http://www.roboticseducation.org/for-participants/team-grants/</a>	<a href="http://firstintexas.org/grants">http://firstintexas.org/grants</a>	<a href="http://firstintexas.org/grants">http://firstintexas.org/grants</a>	<a href="http://firstintexas.org/grants">http://firstintexas.org/grants</a>		<a href="http://www.seaperch.org/order_kit">http://www.seaperch.org/order_kit</a>
<b>build season</b>	year-round new game announced every April	year-round new game announced every April	August-March	year-round new game announced every September	January-March	August - December	September - May
<b>UIL</b>	no	no	no	yes	yes	yes	no
<b>final competition of season</b>	VEX Worlds - April	VEX Worlds - April	World Festival - April	World Festival - April	World Festival - April	National Champions hip - April	May
<b>programming languages</b>	ROBOT C, Modkit, Python/Blockly	ROBOT C, Easy C, Python/Blockly	Mindstorms NXT, EV3, or RoboLab	Android Studio (Java), MIT App Inventor	Java, LabView, C++	ROBOTC, EasyC	N/A
<b>driver control/ autonomous</b>	both	both	autonomous	both	both	driver control	driver control
<b>team size</b>	no limit	no limit	two-ten	no more than ten are recommended	10-30 students recommended	no limit	no limit
<b>robot size</b>	13" X 20" X 15"	18" X 18" X 18"	must fit in "base", no taller than 12"	18" X 18" X 18"	Fram perimeter <= 120" Starting height <= 54"	24" X 24" X 24"	
<b>field size</b>	4' X 8'	12' X 12'	4' X 8'	11'9" X 11'9"	54'3" X 26'3"	23'8.75" X 23'8.75"	pool depth - 7'
<b>grade levels</b>	K-8	6-college	grades 4-8, ages 9-14	grades 7-12, ages 12-18	grades 9-12, ages 14-18	grades 9-12	K-12th