

**Main Criteria:** Forward Education  
**Secondary Criteria:** CSTA K-12 Computer Science Standards  
**Subjects:** Mathematics, Science, Technology Education  
**Grades:** 7, 8, Key Stage 3

## Forward Education

### Wildfire detection with Autonomous Vehicles

**CSTA K-12 Computer Science Standards**  
**Technology Education**  
Grade 7 - Adopted: 2017

<b>LEVEL</b>	<b>CST A.2.</b>	<b>Level 2 (Ages 11-14)</b>
<b>STRAND / COURSE</b>	<b>2-DA.</b>	<b>Data &amp; Analysis</b>
<b>LEARNING OUTCOME / STRAND</b>		<b>Inference &amp; Models</b>

LEARNING OUTCOME      2-DA-09. Refine computational models based on the data they have generated. (P5.3, P4.4)

<b>LEVEL</b>	<b>CST A.2.</b>	<b>Level 2 (Ages 11-14)</b>
<b>STRAND / COURSE</b>	<b>2-AP.</b>	<b>Algorithms &amp; Programming</b>
<b>LEARNING OUTCOME / STRAND</b>		<b>Variables</b>

LEARNING OUTCOME      2-AP-11. Create clearly named variables that represent different data types and perform operations on their values. (P5.1, P5.2)

<b>LEVEL</b>	<b>CST A.2.</b>	<b>Level 2 (Ages 11-14)</b>
<b>STRAND / COURSE</b>	<b>2-AP.</b>	<b>Algorithms &amp; Programming</b>
<b>LEARNING OUTCOME / STRAND</b>		<b>Control</b>

LEARNING OUTCOME      2-AP-12. Design and iteratively develop programs that combine control structures, including nested loops and compound conditionals. (P5.1, P5.2)

<b>LEVEL</b>	<b>CST A.2.</b>	<b>Level 2 (Ages 11-14)</b>
<b>STRAND / COURSE</b>	<b>2-AP.</b>	<b>Algorithms &amp; Programming</b>
<b>LEARNING OUTCOME / STRAND</b>		<b>Modularity</b>

LEARNING OUTCOME      2-AP-13. Decompose problems and subproblems into parts to facilitate the design, implementation, and review of programs. (P3.2)

<b>LEVEL</b>	<b>CST A.2.</b>	<b>Level 2 (Ages 11-14)</b>
<b>STRAND / COURSE</b>	<b>2-AP.</b>	<b>Algorithms &amp; Programming</b>

<b>LEARNING OUTCOME / STRAND</b>		<b>Program Development</b>
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LEARNING OUTCOME 2-AP-18. Distribute tasks and maintain a project timeline when collaboratively developing computational artifacts. (P2.2)

<b>LEVEL</b>	<b>CST A.2.</b>	<b>Level 2 (Ages 11-14)</b>
<b>STRAND / COURSE</b>	<b>2-IC.</b>	<b>Impacts of Computing</b>
<b>LEARNING OUTCOME / STRAND</b>		<b>Social Interactions</b>

LEARNING OUTCOME 2-IC-22. Collaborate with many contributors through strategies such as crowdsourcing or surveys when creating a computational artifact. (P2.4, P5.2)

<b>LEVEL</b>	<b>CST A.2.</b>	<b>Level 2 (Ages 11-14)</b>
<b>STRAND / COURSE</b>	<b>2-IC.</b>	<b>Impacts of Computing</b>
<b>LEARNING OUTCOME / STRAND</b>		<b>Safety, Law, &amp; Ethics</b>

LEARNING OUTCOME 2-IC-23. Describe tradeoffs between allowing information to be public and keeping information private and secure. (P7.2)

**CSTA K-12 Computer Science Standards  
Technology Education  
Grade 8 - Adopted: 2017**

<b>LEVEL</b>	<b>CST A.2.</b>	<b>Level 2 (Ages 11-14)</b>
<b>STRAND / COURSE</b>	<b>2-DA.</b>	<b>Data &amp; Analysis</b>
<b>LEARNING OUTCOME / STRAND</b>		<b>Inference &amp; Models</b>

LEARNING OUTCOME 2-DA-09. Refine computational models based on the data they have generated. (P5.3, P4.4)

<b>LEVEL</b>	<b>CST A.2.</b>	<b>Level 2 (Ages 11-14)</b>
<b>STRAND / COURSE</b>	<b>2-AP.</b>	<b>Algorithms &amp; Programming</b>
<b>LEARNING OUTCOME / STRAND</b>		<b>Variables</b>

LEARNING OUTCOME 2-AP-11. Create clearly named variables that represent different data types and perform operations on their values. (P5.1, P5.2)

<b>LEVEL</b>	<b>CST A.2.</b>	<b>Level 2 (Ages 11-14)</b>
<b>STRAND / COURSE</b>	<b>2-AP.</b>	<b>Algorithms &amp; Programming</b>

<b>LEARNING OUTCOME / STRAND</b>		<b>Control</b>
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LEARNING OUTCOME      2-AP-12.      Design and iteratively develop programs that combine control structures, including nested loops and compound conditionals. (P5.1, P5.2)

<b>LEVEL</b>	<b>CST A.2.</b>	<b>Level 2 (Ages 11-14)</b>
<b>STRAND / COURSE</b>	<b>2-AP.</b>	<b>Algorithms &amp; Programming</b>
<b>LEARNING OUTCOME / STRAND</b>		<b>Modularity</b>

LEARNING OUTCOME      2-AP-13.      Decompose problems and subproblems into parts to facilitate the design, implementation, and review of programs. (P3.2)

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<b>LEARNING OUTCOME / STRAND</b>		<b>Social Interactions</b>

LEARNING OUTCOME      2-IC-22.      Collaborate with many contributors through strategies such as crowdsourcing or surveys when creating a computational artifact. (P2.4, P5.2)

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<b>STRAND / COURSE</b>	<b>2-IC.</b>	<b>Impacts of Computing</b>
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LEARNING OUTCOME      2-IC-23.      Describe tradeoffs between allowing information to be public and keeping information private and secure. (P7.2)