

**Main Criteria:** Forward Education  
**Secondary Criteria:** CSTA K-12 Computer Science Standards  
**Subjects:** Mathematics, Science, Technology Education  
**Grades:** 5, 6, Key Stage 2

## Forward Education

### Smart Farming with Automated Watering

**CSTA K-12 Computer Science Standards**  
**Technology Education**  
 Grade 5 - Adopted: 2017

<b>LEVEL</b>	<b>CST A.1B.</b>	<b>Level 1B (Ages 8-11)</b>
<b>STRAND / COURSE</b>	<b>1B-AP.</b>	<b>Algorithms &amp; Programming</b>
<b>LEARNING OUTCOME / STRAND</b>		<b>Program Development</b>

LEARNING OUTCOME      1B-AP-13.      Use an iterative process to plan the development of a program by including others' perspectives and considering user preferences. (P1.1, P5.1)

LEARNING OUTCOME      1B-AP-16.      Take on varying roles, with teacher guidance, when collaborating with peers during the design, implementation, and review stages of program development. (P2.2)

LEARNING OUTCOME      1B-AP-17.      Describe choices made during program development using code comments, presentations, and demonstrations. (P7.2)

<b>LEVEL</b>	<b>CST A.1B.</b>	<b>Level 1B (Ages 8-11)</b>
<b>STRAND / COURSE</b>	<b>1B-IC.</b>	<b>Impacts of Computing</b>
<b>LEARNING OUTCOME / STRAND</b>		<b>Social Interactions</b>

LEARNING OUTCOME      1B-IC-20.      Seek diverse perspectives for the purpose of improving computational artifacts. (P1.1)

**CSTA K-12 Computer Science Standards**  
**Technology Education**  
 Grade 6 - Adopted: 2017

<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>Algorithms</b>

LEARNING OUTCOME      2-AP-10.      Use flowcharts and/or pseudocode to address complex problems as algorithms. (P4.4, P4.1)

<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>
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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>
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<b>STRAND / COURSE</b>	<b>2-IC.</b>	<b>Impacts of Computing</b>
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<b>LEARNING OUTCOME / STRAND</b>		<b>Social Interactions</b>
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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)