

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

## Forward Education

### Harnessing the Sun's Energy with Solar Panels

**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-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>

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>

LEARNING OUTCOME      2-AP-15. Seek and incorporate feedback from team members and users to refine a solution that meets user needs. (P2.3, P1.1)

<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)

**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>
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<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)

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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)