

**Main Criteria:** Forward Education  
**Secondary Criteria:** Common Core State Standards  
**Subjects:** Mathematics, Science, Technology Education  
**Grades:** 7, 8, Key Stage 3

## Forward Education

### Wildfire detection with Autonomous Vehicles

#### Common Core State Standards

##### Mathematics

Grade 7 - Adopted: 2010

STRAND / DOMAIN		Mathematical Practices
CATEGORY / CLUSTER	CCSS.Math.Practice.MP1	Make sense of problems and persevere in solving them.
CATEGORY / CLUSTER	CCSS.Math.Practice.MP2	Reason abstractly and quantitatively.
CATEGORY / CLUSTER	CCSS.Math.Practice.MP3	Construct viable arguments and critique the reasoning of others.
CATEGORY / CLUSTER	CCSS.Math.Practice.MP4	Model with mathematics.
CATEGORY / CLUSTER	CCSS.Math.Practice.MP6	Attend to precision.
CATEGORY / CLUSTER	CCSS.Math.Practice.MP7	Look for and make use of structure.
CATEGORY / CLUSTER	CCSS.Math.Practice.MP8	Look for and express regularity in repeated reasoning.
STRAND / DOMAIN		Expressions and Equations
CATEGORY / CLUSTER	CCSS.Math.Content.7.EE.B	Solve real-life and mathematical problems using numerical and algebraic expressions and equations.
STANDARD	CCSS.Math.Content.7.EE.B.4	Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.

EXPECTATION	CCSS.Math.Content.7.EE.B.4.a	Solve word problems leading to equations of the form $px + q = r$ and $p(x + q) = r$ , where $p$ , $q$ , and $r$ are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach. For example, the perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?
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**Common Core State Standards**

**Mathematics**

Grade 8 - Adopted: 2010

STRAND / DOMAIN		Mathematical Practices
CATEGORY / CLUSTER	CCSS.Math.Practice.MP1	Make sense of problems and persevere in solving them.
CATEGORY / CLUSTER	CCSS.Math.Practice.MP2	Reason abstractly and quantitatively.
CATEGORY / CLUSTER	CCSS.Math.Practice.MP3	Construct viable arguments and critique the reasoning of others.
CATEGORY / CLUSTER	CCSS.Math.Practice.MP4	Model with mathematics.
CATEGORY / CLUSTER	CCSS.Math.Practice.MP6	Attend to precision.
CATEGORY / CLUSTER	CCSS.Math.Practice.MP7	Look for and make use of structure.
CATEGORY / CLUSTER	CCSS.Math.Practice.MP8	Look for and express regularity in repeated reasoning.

STRAND / DOMAIN		Expressions and Equations
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CATEGORY / CLUSTER	CCSS.Math.Content.8.EE.B	<b>Understand the connections between proportional relationships, lines, and linear equations.</b>
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STANDARD	CCSS.Math.Content.8.EE.B.5	Graph proportional relationships, interpreting the unit rate as the slope of the graph. Compare two different proportional relationships represented in different ways. For example, compare a distance-time graph to a distance-time equation to determine which of two moving objects has greater speed.
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**Common Core State Standards**

**Science**

Grade 7 - Adopted: 2010

STRAND / DOMAIN	CCSS.ELA-Literacy.RST.6-8	Reading Standards for Literacy in Science and Technical Subjects
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CATEGORY / CLUSTER		Key Ideas and Details
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STANDARD	CCSS.EL A- Literacy.R ST.6-8.2	Determine the central ideas or conclusions of a text; provide an accurate summary of the text distinct from prior knowledge or opinions.
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STANDARD	CCSS.EL A- Literacy.R ST.6-8.3	Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.
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<b>STRAND / DOMAIN</b>	<b>CCSS.EL A- Literacy. RST.6-8</b>	<b>Reading Standards for Literacy in Science and Technical Subjects</b>
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<b>CATEGORY / CLUSTER</b>		<b>Craft and Structure</b>
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STANDARD	CCSS.EL A- Literacy.R ST.6-8.4	Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 6-8 texts and topics.
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STANDARD	CCSS.EL A- Literacy.R ST.6-8.5	Analyze the structure an author uses to organize a text, including how the major sections contribute to the whole and to an understanding of the topic.
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<b>STRAND / DOMAIN</b>	<b>CCSS.EL A- Literacy. RST.6-8</b>	<b>Reading Standards for Literacy in Science and Technical Subjects</b>
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<b>CATEGORY / CLUSTER</b>		<b>Integration of Knowledge and Ideas</b>
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STANDARD	CCSS.EL A- Literacy.R ST.6-8.9	Compare and contrast the information gained from experiments, simulations, video, or multimedia sources with that gained from reading a text on the same topic.
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<b>STRAND / DOMAIN</b>	<b>CCSS.EL A- Literacy. RST.6-8</b>	<b>Reading Standards for Literacy in Science and Technical Subjects</b>
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<b>CATEGORY / CLUSTER</b>		<b>Range of Reading and Level of Text Complexity</b>
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STANDARD	CCSS.EL A- Literacy.R ST.6-8.10	By the end of grade 8, read and comprehend science/technical texts in the grades 6-8 text complexity band independently and proficiently.
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<b>STRAND / DOMAIN</b>	<b>CCSS.EL A- Literacy. WHST.6-8</b>	<b>Writing Standards for Literacy in Science and Technical Subjects</b>
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<b>CATEGORY / CLUSTER</b>		<b>Text Types and Purposes</b>
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<b>STANDARD</b>	<b>CCSS.E LA- Literacy. WHST.6- 8.2</b>	<b>Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.</b>
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EXPECTATION    CCSS.EL    Use precise language and domain-specific vocabulary to inform about or explain the topic.  
 A-  
 Literacy.W  
 HST.6-  
 8.2.d

<b>STRAND / DOMAIN</b>	<b>CCSS.EL A- Literacy. WHST.6-8</b>	<b>Writing Standards for Literacy in Science and Technical Subjects</b>
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<b>CATEGORY / CLUSTER</b>		<b>Production and Distribution of Writing</b>
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STANDARD        CCSS.EL    Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.  
 A-  
 Literacy.  
 WHST.6-  
 8.4

STANDARD        CCSS.EL    Use technology, including the Internet, to produce and publish writing and present the relationships between information and ideas clearly and efficiently.  
 A-  
 Literacy.  
 WHST.6-  
 8.6

**Common Core State Standards  
 Science  
 Grade 8 - Adopted: 2010**

<b>STRAND / DOMAIN</b>	<b>CCSS.EL A- Literacy. RST.6-8</b>	<b>Reading Standards for Literacy in Science and Technical Subjects</b>
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<b>CATEGORY / CLUSTER</b>		<b>Key Ideas and Details</b>
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STRAND / DOMAIN	CCSS.EL A- Literacy. RST.6-8	Reading Standards for Literacy in Science and Technical Subjects
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CATEGORY / CLUSTER		Integration of Knowledge and Ideas
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