

## Subject Area - 3: Science and Technology and Engineering Education

### Standard Area - 3.4: Technology and Engineering Education

#### Organizing Category - 3.4.A: The Scope of Technology

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See Grades 8  
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	GRADE 3	GRADE 4	GRADE 5	GRADE 6	GRADE 7	GRADE 8
Characteristics of Technology	<b>3.4.3.A1:</b> Identify <u>how the natural made world and the human made world are different.</u>	<b>3.4.4.A1:</b> Understand that <u>tools, materials, and skills are used to make things and carry out tasks.</u>	<b>3.4.5.A1:</b> Explain how <u>people use tools and techniques to help them do things.</u>	<b>3.4.6.A1:</b> Identify <u>how creative thinking and economic and cultural influences shape technological development.</u>	<b>3.4.7.A1:</b> Explain how <b>technology</b> <u>is closely linked to creativity, which has resulted in <b>innovation</b> and invention.</u>	<b>3.4.8.A1:</b> Analyze the <u>development of <b>technology</b> based on affordability or urgency.</u>
Core Concepts of Technology	<b>3.4.3.A2:</b> Identify <u>that some systems are found in nature and some systems are made by humans.</u>	<b>3.4.4.A2:</b> Understand that <u>systems have parts and components that work together.</u>	<b>3.4.5.A2:</b> Understand that <u>a <b>subsystem</b> is a <b>system</b> that operates as part of a larger <b>system</b>.</u>	<b>3.4.6.A2:</b> Describe <u>how systems thinking involves considering how every part relates to others.</u>	<b>3.4.7.A2:</b> Explain how different <b>technologies</b> <u>involve different sets of processes.</u>	<b>3.4.8.A2:</b> Explain how <u>controls are steps that people perform using information about the <b>system</b> that causes <b>systems</b> to change.</u>
Technology Connections	<b>3.4.3.A3:</b> Identify <u>how the study of technology uses many of the same ideas and skills as many other subjects.</u>	<b>3.4.4.A3:</b> Describe how <u>various relationships exist between <b>technology</b> and other fields.</u>	<b>3.4.5.A3:</b> Describe how <u><b>technologies</b> are often combined.</u>	<b>3.4.6.A3:</b> Explain how <u>knowledge from other fields of study (<b>STEM</b>) integrate to create new <b>technologies</b>.</u>	<b>3.4.7.A3:</b> Explain how <u>knowledge gained from other fields of study has a direct effect on the development of technological products and <b>systems</b>.</u>	<b>3.4.8.A3:</b> Compare how a <u>product, <b>system</b>, or environment developed for one setting may be applied to another setting.</u>