Correlation with the Kentucky Overview of Technological Systems, Communication Systems, Transportation Systems, Bio-Related Systems, Construction Technology, Graphics Communication Technology, Special Problems in Technology Education courses, SCANS, National Standards of Technological Literacy, and Responses to Technology Education Evaluation Tool
## Overview of Technological Systems

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<tbody>
<tr>
<td>1.2, 1.11</td>
<td>Students will:</td>
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<tr>
<td></td>
<td>• define technology.</td>
<td>SE: 18</td>
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<td>TAE: R 18</td>
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</table>
| 1.1-1.3                | • evaluate the consequences of technological inventions and innovations on people, society, culture, and the environment. | SE: 18-21, 29, 92-95, 187, 204, 435-436, 548  
  *Tech Report: 70-71, 304-305*  
  TAE: AT 204  
  CT 187, 436  
  E 92, 93, 95, 548 |
| 2.16, 2.18             | • analyze current and emerging issues (e.g., ethical, social, legal, environmental, political, and privacy) related to technology. | SE: 19-21, 29, 39, 84-85, 92-95, 110, 186-187, 203-205, 315-316, 435-437, 538-541, 548, 551-552  
  *Directed Activity: 64-67*  
  *Tech Report: 70-71*  
  TAE: AT 204  
  CT 39, 110, 436  
  E 85, 92, 548 |
## Overview of Technological Systems

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| 1.1-1.4                | • explore technological concepts and processes in the contexts of communication, transportation, production, bio-related, and emerging technological systems. | **SE:** 20, 23-26, 74-95, 107-111, 114-115, 125-133, 137-139, 189-190, 201-203, 230-243, 250-251, 276-288, 420-437, 441-461, 465-477, 481-503, 528, 530-541, 547-552  
*Design and Problem-Solving Activity:* 173-175  
*Science Connection:* 22, 529  
*Tech Report:* 524-525 | **TAE:** E 138, 505  
R 25, 92 |
| 2.3                    | • apply core knowledge and technological concepts to solve technical problems. | **SE:** 33-40  
| 6.1, 6.3               | • understand the dynamic nature of technology and analyze and interpret historical events, conditions, trends and issues to develop perspective on the impacts of technology on people, society, culture, and the environment. | **SE:** 18-21, 23-27, 29, 92-95, 138, 186-189, 203-204, 434-436, 534-535, 548  
*Tech Report:* 70-71, 304-305 | **TAE:** AT 204  
CT 187, 436  
E 92, 93, 95, 548  
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## Overview of Technological Systems

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| 1.16, 2.17            | • identify opportunities, characteristics, and preparation requirements for current and emerging technological occupations. | **SE**: 81-82, 428  
*Career File*: 30, 42, 58, 96, 118, 140, 168, 206, 228, 244, 258, 268, 290, 326, 346, 358, 378, 400, 438, 462, 478, 508, 542, 568  
*Directed Activity*: 62-63  
**TAE**:  
*CT*: 346, 478  
*E*: 206, 244, 268, 326, 438, 462, 542 |
| 2.36-2.38             | • develop strategies and work habits that will lead to success and prepare the student for a future in a technological world. | **SE**: 30, 35-36, 36-37, 37-38, 38-39, 40, 43  
**TAE**:  
*DT*: 35  
*E*: 36, 38  
*AT*: 36  
*EN*: 37  
*CT*: 38, 39  
*R*: 40 |
| 5.1-5.5               | • understand technological systems (e.g., communication, production, transportation, bio-related and other emerging systems) and the interrelationship between the resource/input, process, output, and feedback elements of these systems. | **SE**: 46-50, 52-55, 56, 80-89, 193, 195-201, 311-323, 427-429, 431-432, 535  
**TAE**:  
*E*: 48, 54, 81, 82  
*AT*: 47  
*EN*: 54, 82  
*CT*: 46, 53, 195  
*R*: 46, 48, 52, 80, 83  
*LA*: 201  
*B*: 311, 323, 431  
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| 2.37, 5.4              | • develop competencies in the safe and efficient use of tools, machines, materials, and processes. | SE: 11-13, 36-37, 42, 52, 86, 256, 357  
TAE: E 36, 86  
AT 36  
EN 42, 256  
R 357  
RS 52 |
| 2.17                   | • demonstrate employability and social skills relative to careers. | SE: 10, 30, 34-39, 81-83  
Directed Activity: 62-63  
Career File: 244  
TAE: DT 35  
E 30, 34, 35, 38, 82  
AT 35  
EN 30, 37, 81, 82  
CT 38, 39  
R 63, 83  
NS 62 |
| 2.38                   | • develop personal and professional leadership skills through participation in Kentucky Technology Student Association (KTSA) student organization activities. | SE: 40 (TSA)  
TAE: R 40 |
### Overview of Technological Systems

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| 6.2, 6.3               | • apply concepts from mathematics, science, and communications in the context of technology education. | **SE:** 28, 58, 59, 303, 404-407, 509  
*Mathematics Connection:* 28, 41, 61, 63, 194, 242, 252, 273, 354, 394, 430, 453, 475  
*Science Connection:* 28, 69  
**TAE:** CA 404  
R 59, 509  
E 58 |

### Communication Systems

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| 6.2, 1.11              | **Students will:**  
• understand and appreciate both the importance and the dynamic nature of communication technologies. | **SE:** 21, 22, 76-80, 87-88, 126-127, 277-288  
*Design and Problem Solving Activity:* 173-175, 299-300  
**TAE:** E 22, 76, 88, 173  
AT 126  
EN 278  
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### Communication Systems

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| 1.3, 6.2               | • understand the concept of appropriate technologies as it relates to multi-cultural and global perspectives. | **SE:** 18-19, 29, 186-187, 191, 192-193  
**TAE:** E 19, 186, 187  
AT 186  
EN 186, 192, 193  
CT 187  
R 18  
RT 186, 192  
RS 18 |
| 2.36                   | • identify opportunities, characteristics, and preparation requirements for current and emerging communication technology-related occupations. | **SE:** 81-82  
*Career File:* 30, 42, 96, 118, 140, 244, 478  
*Directed Activity:* 62-63  
**TAE:** CT 478  
E 81, 244 |
| 1.1                    | • explore and experience the organization and management structure of communication-related industries. | **SE:** 79-80, 80-89, 90-91, 91-94, 95  
*Career File:* 30, 42, 96, 118, 140, 244, 478  
**TAE:** E 82, 84, 244  
EN 81, 82, 84, 85  
CT 91, 478  
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| 1.13                   | • apply core knowledge and technological concepts. | SE: 33-40  
  TAE: DT 35 |
| 5.1, 6.2               | • develop creative problem-solving, critical thinking, teamwork, leadership and personal responsibility skills through collaborative application of communication technologies and the solution of technical problems. | SE: 34-36, 37-39, 60-61, 68-69, 146-147, 173-175  
  TAE: DT 35  
  E 34, 36, 38, 61  
  AT 36  
  EN 37  
  CT 38, 39, 146  
  NS 60  
  CA 68, 173 |
| 1.16                   | • use computer-based technologies to communicate, process, manipulate, collect, and apply information to solve technical problems in communication. | SE: 100-108, 109-114, 115-118, 147, 179-181  
  *Tech Report:* 70-71  
  *Directed Activity:* 170-172, 176-178, 179-181  
  TAE: E 100, 102  
  AT 102, 112, 114  
  EN 104  
  CT 110, 111, 147  
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| 2.35, 2.17             | • apply the systems approach to analyze and solve communication systems-based technical problems. | SE: 46-50, 54-57, 68-69  
*Design and Problem Solving Activity: 68-69, 176-178*  
**TAE:** E 48  
AT 47  
CT 46, 55  
R 46, 48  
CA 68, 176 |
| 2.31                   | • demonstrate proficiency in the safe and efficient use and care of equipment, materials, processes, and concepts related to the applications of communications systems technologies. | SE: 11-13, 36-37, 42, 52, 86, 256, 357  
**TAE:** E 36, 86  
AT 36  
EN 42, 256  
R 357  
RS 52 |
| 2.36, 2.38             | • develop personal and professional leadership skills through participation in Kentucky Technology Student Association activities. | SE: 40 (TSA)  
**TAE:** CT 40 |
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| 6.2                    | • develop skills necessary to work effectively with others to solve problems and make decisions involving human and material resources, processes, and communication related technological systems.                                | **SE:** 10, 30, 34-36, 37-39, 60-61, 68-69, 146-147, 173-175  
**TAE:** DT 35  
E 34, 36, 38, 61  
AT 36  
EN 37  
CT 38, 39, 146  
NS 60  
CA 68, 173                                                                                     |
| 2.15, 5.4              | • demonstrate employability and social skills relative to careers.                                                                                                                                                  | **SE:** 10, 30, 34-39, 81-83  
**Directed Activity:** 62-63  
**Career File:** 244  
**TAE:** DT 35  
E 30, 34, 35, 38, 82  
AT 35  
EN 30, 37, 81, 82  
CT 38, 39  
R 63, 83  
NS 62                                                                                         |
| 6.2, 6.3               | • apply concepts from mathematics, science, and communications in the context of technology education.                                                                                                          | **SE:** 28, 58, 59, 303, 404-407, 509  
**Mathematics Connection:** 28, 41, 61, 63, 194, 242, 252, 273, 354, 394, 430, 453, 475  
**Science Connection:** 28, 69  
**TAE:** CA 404  
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E 58                                                                                         |
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| 1.1, 1.11              | **Students will:** | **SE:** 421, 426, 427-429, 431-437  
                          | • engage in meaningful, hands-on, minds-on and conceptual activities to apply transportation-related concepts, processes, and systems. | *Design and Problem Solving Activity:* 510-513, 514-518, 519-524  
                          | | *Tech Report* 418-419  
                          | | *Mathematics Connection:* 430  
                          | | *Career File:* 438 |
| 1.3, 6.2               | • understand the concept of appropriate technologies as it relates to multi-cultural and global perspectives. | **SE:** 18-19, 29, 186-187, 191, 192-193  
                          | | **TAE:** E 19, 186, 187  
                          | | AT 186  
                          | | EN 186, 192, 193  
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| 2.36                   | • identify opportunities, characteristics, and preparation requirements for current and emerging transportation technology-related occupations. | SE: 81-82, 428  
Career File: 438, 462, 478  
508  
Directed Activity: 62-63  
TAE:  
CT 478  
E 81, 82, 438, 462  
EN 82 |
| 6.1                    | • explore and experience the organization and management structure of transportation-related industries. | SE: 79-80, 80-89, 90-91, 91-94, 95  
Career File: 438, 462, 478  
TAE:  
E 82, 84, 244, 438, 462  
EN 81, 82, 84, 85  
CT 91, 478  
R 80, 83, 92  
B 90  
RT 90 |
| 6.3                    | • apply core knowledge and technological concepts. | SE: 33-40  
TAE:  
DT 35 |
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| 5.1, 5.5               | • develop creative problem-solving, critical thinking, teamwork, leadership and personal responsibility skills through collaborative application of transportation technologies and the solution of technical problems. | SE: 34-36, 37-39, 60-61, 68-69, 427  
Mathematic Connection: 430  
Career File: 438  
Design and Problem Solving Activity: 510-513, 514-518, 519-523 |
| 1.16                   | • use computer-based technologies to communicate, process, manipulate, collect, and apply information to solve technical problems in transportation. | SE: 100-108, 109-114, 115-118  
Tech Report: 70-71  
Directed Activity: 170-172, 176-178, 179-181, 510-513, 514-518, 519-523 |
|                        |                | TAE:  
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| 2.3, 5.1               | • apply the systems approach to analyze and solve transportation systems-based technical problems. | **SE:** 46-50, 54-57, 68-69  
*Design and Problem Solving Activity:* 68-69, 176-178, 510-513, 514-518, 519-523  
**TAE:**  
E 48  
AT 47  
CT 46, 55  
R 46, 48  
CA 68, 176  
NS 510, 514  
CA 510, 514, 520  
CL 510 |
| 2.31                   | • demonstrate proficiency in the safe and efficient use and care of equipment, materials, processes, and concepts related to the applications of transportation systems technologies. | **SE:** 11-13, 36-37, 42, 52, 86, 256, 357  
**TAE:**  
E 36, 86  
AT 36  
EN 42, 256  
R 357  
RS 52 |
| 5.1, 6.2               | • develop skills necessary to work effectively with others to solve problems and make decisions involving human and material resources, processes, and transportation related technological systems. | **SE:** 10, 30, 34-36, 37-39, 60-61, 68-69, 146-147, 173-175  
**TAE:**  
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E 34, 36, 38, 61  
AT 36  
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<td>• develop personal and professional leadership skills through participation in Kentucky Technology Student Association activities.</td>
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| 2.17, 5.4              | • demonstrate employability and social skills relative to careers.               | SE: 10, 30, 34-39, 81-83
|                        |                                                                                 | Directed Activity: 62-63
|                        |                                                                                 | Career File: 244 |
|                        |                                                                                 | TAE: DT 35      |
|                        |                                                                                 | E 30, 34, 35, 38, 82
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|                        |                                                                                 | CT 38, 39       |
|                        |                                                                                 | R 63, 83        |
|                        |                                                                                 | NS 62           |
| 6.2, 6.3               | • apply concepts from mathematics, science, and communications in the context of technology education. | SE: 28, 58, 59, 303, 404-407, 509
|                        |                                                                                 | Mathematics Connection: 28, 41, 61, 63, 194, 242, 252, 273, 354, 394, 430, 453, 475
<p>|                        |                                                                                 | Science Connection: 28, 69 |
|                        |                                                                                 | TAE: CA 404     |
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| 2.6, 1.11              | **Students will:** | **SE:** 527, 528, 530-543, 545-557, 559-569  
  *Tech Report:* 524-525  
  *Science Connection:* 529  
  *Career File:* 542, 568  
  *Mathematics Connection:* 558  
  *Directed Activity:* 570-572, 573-574  
|                        | • understand and appreciate both the importance and the dynamic nature of bio-related technologies. | **TAE:** NS 527, 545, 570, 573  
  AT 545  
  DT 549  
  CA 570, 573  
  E 527, 528, 530  
  RT 530, 540, 551  
  EN 533, 537, 538  
  R 533  
  B 535, 548  
  CT 536, 540, 541  
  RS 554, 560, 565 |
| 6.3                    | • engage in meaningful, hands-on, minds-on and conceptual activities to apply bio-related concepts, processes, and systems. | **SE:** 535-536, 536-538  
  *Directed Activity:* 570-572, 573-574  
|                        | | **TAE:** NS 570, 573  
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| **2.36**               | • identify opportunities, characteristics, and preparation requirements for current and emerging bio-related technology occupations. | **SE:** 81-82  
*Career File:* 542, 568  
*Directed Activity:* 62-63  
**TAE:** E 81, 82, 542  
EN 82  
R 428, 62, 63  
NS 62 |
| **1.1**                | • explore and experience the organization and management structure of bio-related technology based industries. | **SE:** 79-80, 80-89, 90-91, 91-94, 95, 536-541  
*Career File:* 542, 568  
**TAE:** E 82, 84, 244, 438, 462  
EN 81, 82, 84, 85  
CT 91, 478  
R 80, 83, 92  
B 90  
RT 90 |
| **6.2, 6.3**           | • integrate and apply core knowledge and technological concepts. | **SE:** 33-40  
**TAE:** DT 35 |
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| 5.1, 5.5               | • integrate and develop creative problem-solving, critical thinking, teamwork, leadership and personal responsibility skills through collaborative application of bio-related technologies and the solution of technical problems. | SE: 34-36, 37-39, 60-61, 68-69, 146-147, 173-175  
Career File: 542, 568  
TAE: DT 35  
E 34, 36, 38, 61  
AT 36  
EN 37  
CT 38, 39, 146  
NS 60  
CA 68, 173 |
| 1.16                   | • use computer-based technologies to communicate, process, manipulate, collect, and apply information to solve technical problems in bio related technologies. | SE: 100-108, 109-114, 115-118, 147, 179-181  
Tech Report: 70-71  
Directed Activity: 170-172, 176-178, 179-181, 570-572, 573-574  
Career File: 542, 568  
TAE: E 100, 102  
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| 2.3, 5.1               | • apply the systems approach to analyze and solve bio-related technology systems-based technical problems. | **SE**: 46-50, 54-57, 68-69, 536-541  
  *Design and Problem Solving Activity*: 68-69, 176-178  
  *Directed Activity*: 570-572, 573-574  
  *Career File*: 542, 568  
  **TAE**: E 48  
  AT 47  
  CT 46, 55  
  R 46, 48  
  CA 68, 176 |
| 1.3, 1.1               | • observe and explore the interrelationships between and among bio-related technology systems and other technological systems. | **SE**: 527, 534-536, 536-538, 540-541, 545, 554-555, 556-557, 560-562, 563-564, 564-566, 566-567  
  *Career File*: 542, 568  
  **TAE**: E 527, 542, 543  
  RS 543  
  NS 527, 545  
  AT 545 |
| 2.31, 2.36             | • demonstrate proficiency in the safe and efficient use and care of equipment, materials, processes, and concepts related to the applications of bio-related technologies. | **SE**: 11-13, 36-37, 42, 52, 86, 256, 357  
  **TAE**: E 36, 86  
  AT 36  
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<td>2.17</td>
<td>• develop skills necessary to work effectively with others to solve problems and make decisions involving human and material resources, processes, and bio-related technological systems.</td>
<td>SE: 10, 30, 34-36, 37-39, 60-61, 68-69, 146-147, 173-175</td>
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<td>SE: 10, 30, 34-39, 81-83</td>
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| 6.2, 6.3               | • apply concepts from mathematics, science, and communications in the context of technology education. | SE: 28, 58, 59, 303, 404-407, 509  
*Mathematics Connection:* 28, 41, 61, 63, 194, 242, 252, 273, 354, 394, 430, 453, 475  
*Science Connection:* 28, 69  
TAE: CA 404  
R 59, 509  
E 58 |

### Construction Technology

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<td>2.20, 1.1</td>
<td>Students will:</td>
<td>SE: 307, 308-312, 314-325, 329, 330-345</td>
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<td></td>
<td>• develop an awareness of the significance of construction technology in the past, present, and future.</td>
<td>Career File: 326, 346, 358, 378, 400</td>
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<td>Tech Report: 304-305</td>
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<td></td>
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<td>Science Connection: 313, 336, 371</td>
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<td></td>
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<td>Mathematics Connection: 354, 394</td>
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<td>TAE: NS 307</td>
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<td>AT 307, 324</td>
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<td>E 308, 315, 316</td>
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<td>CT 310, 317, 319</td>
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<td>R 311, 314, 318</td>
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<td>EN 321</td>
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<td>B 323, 330, 334</td>
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<td>RS 325</td>
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<tr>
<td>5.5, 1.11</td>
<td>• apply individual and group problem-solving skills in construction technology.</td>
<td>SE: 34-36, 37-39, 60-61, 68-69</td>
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<td>E 34, 36, 38, 61</td>
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<td>CT 38, 39</td>
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<td>NS 60, 402</td>
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<td>CA 68, 402</td>
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</table>
| 2.31, 5.1              | • develop responsible and safe work attitudes and the ability to function as a member of a team. | SE: 11-13, 36-37, 42, 52, 86, 256, 357

*Design and Problem Solving Activity: 402-403, 404-409, 410-414, 415-417*

TAE: E 36, 86
AT 36
EN 42, 256
R 357
RS 52 |
| 1.2, 1.3               | • develop an understanding of construction technology and all its sub-systems. | SE: 306-319, 320, 321-326, 337-345, 397-399

*Career File: 326, 346, 358, 378, 400*

Tech Report: 304-305

*Science Connection: 313, 336, 371*

TAE: NS 307
AT 307, 324
E 308, 315, 316
CT 310, 317, 319
R 311, 314, 318
RT 314
EN 321
B 323, 330, 334
RS 325 |
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| 5.2                    | • use and adapt current and emerging construction materials and techniques. | **SE:** 320, 337-345, 397-399  
*Design and Problem Solving Activity:* 402-403, 404-409, 410-414, 415-417  
**TAE:** NS 402, 412  
CA 402, 404, 410, 412  
E 402  
R 403 |
| 1.2, 6.3               | • develop an understanding of structural design and the engineering necessary to construct a safe efficient structure. | **SE:** 337-345, 356-357, 402  
*Career File:* 326, 346, 358, 378, 400  
*Design and Problem Solving Activity:* 402-403, 404-409, 410-414, 415-417  
**TAE:** CT 356, 345, 356  
R 357, 339  
B 337, 339  
E 338, 343  
EN 345  
RS 359 |
| 5.1                    | • use critical thinking skills to design a structure utilizing appropriate applications of technologies. | **SE:** 35  
*Design and Problem Solving Activity:* 402-403, 404-409, 410-414, 415-417  
**TAE:** DT 35  
NS 402, 412  
CA 402, 404, 410, 412  
E 402  
R 403 |
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| 1.2, 1.3               | • appreciate, understand, and perform selected management practices in planning, organizing, and controlling as they relate to the construction enterprise and its related activities. | SE: 328-329, 330-331, 332-346, 350-356, 358  
TAE: NS 329  
E 329, 330, 331  
CT 330, 331, 333  
B 330, 334  
EN 331, 332  
R 333 |
| 1.2, 6.2               | • appreciate and understand the interrelationships within and between management, personnel, and production practices. | SE: 54, 201, 217, 240, 250-251, 253-257, 281, 350-356  
Career File: 358  
Mathematics Connection: 354  
TAE: E 54, 257  
CT 257, 350, 356  
R 217, 250, 251  
RT 201, 240, 255  
EN 54, 240, 256  
B 352  
A 201 |
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| 6.2, 2.17              | • understand the relationship between construction technology, community development and the environment. | **SE:** 308, 310, 319, 323-324, 330-331, 355  
*Tech Report:* 304  
*Design and Problem Solving Activity:* 402-403, 412-413, 510-513  
**TAE:** E 308, 319, 323, 330  
CT 319, 330  
B 323  
AT 324  
R 330  
EN 331 |
| 6.2, 6.3               | • develop a culminating project, drawing upon the student’s knowledge and experiences in construction technology. | **SE:** *Design and Problem Solving Activity:* 402-403, 404-409, 410-414, 415-417  
**TAE:** NA 402, 412  
CA 402, 404, 410, 412, 415  
E 402  
R 403, 417  
EN 415, 416 |
| 2.36, 2.38             | • develop personal and professional leadership skills through participation in Kentucky Technology Student Association activities. | **SE:** 40 (TSA)  
**TAE:** R 40 |
### Construction Technology

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| 2.17, 5.4              | • demonstrate employability and social skills relative to careers. | SE: 10, 30, 34-39, 81-83  
Directed Activity: 62-63  
Career File: 244  
TAE:  DT 35  
E 30, 34, 35, 38, 82  
AT 35  
EN 30, 37, 81, 82  
CT 38, 39  
R 63, 83  
NS 62 |
| 6.2, 6.3               | • apply concepts from mathematics, science, and communications in the context of technology education. | SE: 28, 58, 59, 303, 404-407, 509  
Mathematics Connection: 28, 41, 61, 63, 194, 242, 252, 273, 354, 394, 430, 453, 475  
Science Connection: 28, 69  
TAE:  CA 404  
R 59, 509  
E 58 |

### Graphic Communications Technology

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</table>
| 1.16, 1.11             | Students will: | SE: 100-108, 109-114, 115-118, 147-148, 154-155, 166-167  
Tech Report: 70-71  
Directed Activity: 170-172, 176-178, 179-181  
  
TAE: E 100, 102  
  AT 102, 112, 114, 148  
  EN 104, 146, 147  
  CT 110, 111, 147  
  R 100, 101, 102  
  B 115  
  RT 102, 107, 146 |
|                        | • use computer-based technologies to communicate, process, manipulate, collect, and apply information to solve technical problems in graphic communication. | |
| 6.1                    | • apply concepts from mathematics, science, communication, social studies, and the arts in the context of contemporary graphic communication technology. | SE: 28, 58, 59, 146-147, 158-160, 161-164, 164-166, 303, 404-407, 509  
Mathematics Connection: 150  
  
TAE: R 59, 163  
  E 58, 147, 162  
  RT 146, 158  
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  EN 167 |
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| 2.31                   | • develop competencies in the safe and efficient use of the tools, machines, materials, and processes of graphic communication. | **SE:** 11-13, 36-37, 42, 52, 86, 154-155, 166-167, 256, 357  
  **TAE:**  E 36, 86  
  AT 36  
  EN 42, 256  
  R 357  
  RS 52 |
| 2.36, 6.1              | • identify opportunities, characteristics, and preparation requirements for current and emerging occupations in graphic communications. | **SE:** 81-82  
  **Career File:** 168  
  **Directed Activity:** 62-63  
  **TAE:**  EN 81, 82, 168  
  E 82  
  NS 62  
  R 62, 63 |
| 6.3                    | • engage in meaningful, hands-on, minds-on, and conceptual technology-based activities. | **SE:**  *Directed Activity:* 170-172, 176-178, 179-181  
  *Design and Problem Solving Activity:* 292-294, 295-296, 297-298, 299-300, 301-303  
  **TAE:**  CA 170, 173, 176, 179, 292, 295, 297, 299, 301  
  E 170, 173, 174, 300  
  R 293  
  NS 295, 299  
  RT 298 |
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| 2.30, 1.16             | become discrimination consumers of graphic communications products and services. | SE: 144-148  
TAE: R 144, 145  
E 147 |
| 2.36, 2.38             | develop personal and professional leadership skills through participation in Kentucky Technology Student Association activities. | SE: 40 (TSA)  
TAE: R 40 |
| 1.13, 2.36             | communicate visually using new and traditional graphic communication tools, techniques and materials. | SE: 144-146, 146-148  
TAE: R 144  
E 144, 145, 147  
EN 144  
RT 145  
CT 146, 147  
AT 148 |
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| 1.16, 5.2              | • produce a document using the computer and desktop publishing software as tools. | **SE:** 100-108, 109-114, 115-118, 149, 154, 155  
*Design and Problem Solving Activity:* 299-300  
*Tech Report:* 70-71  
*Directed Activity:* 170-172, 173-175, 176-178, 178-179  
*Math Connection:* 150  
**TAE:** E 100, 102, 155, 300  
AT 102, 112, 114, 154  
EN 104  
T 110, 111  
R 100, 101, 102, 149  
B 115  
RT 102, 107  
CA 299  
NS 299 |
| 5.1, 5.2               | • create and process photographic images using both traditional camera/film technology and computer acquisition/enhancement technology. | **SE:** 155-160  
**TAE:** E 156  
R 156, 157  
RT 157, 158, 159 |
| 5.3                    | • produce a product applying the offset printing process.                      | **SE:** 152  
**TAE:** R 152 |
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| 1.11, 1.13             | • write, develop, edit, and produce an effective video message. | **SE:** *Design and Problem Solving Activity:* 176-178  
**TAE:** CA 176 |
| 1.13, 1.15             | • animate a visual image. | **SE:** 90, 272-273, 274-275  
**TAE:** R 90  
B 90  
E 275 |
| 1.13                   | • convey a message through application of traditional and emerging screen printing processes. | **SE:** 149, 151, 152, 153, 154, 155  
**Math Connection:** 150  
**TAE:** R 149, 151  
RT 152, 153  
AT 154  
E 151, 153 |
| 2.17, 5.4              | • demonstrate employability and social skills relative to careers. | **SE:** 10, 30, 34-39, 81-83  
**Directed Activity:** 62-63  
**Career File:** 244  
**TAE:** DT 35  
E 30, 34, 35, 38, 82  
AT 35  
EN 30, 37, 81, 82  
CT 38, 39  
R 63, 83  
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### Graphic Communications Technology

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</table>
| 6.2, 6.3               | • apply concepts from mathematics, science, and communications in the context of technology education. | SE: 28, 58, 59, 303, 404-407, 509  
|                         |                 | *Mathematics Connection:* 28, 41, 61, 63, 194, 242, 252, 273, 354, 394, 430, 453, 475  
|                         |                 | *Science Connection:* 28, 69  
|                         |                 | **TAE:** CA 404  
|                         |                 | R 59, 509  
|                         |                 | E 58 |

### Special Problems in Technology Education

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</table>
| 1.1, 6.3               | **Students will:**  
|                         | • develop a culminating project, demonstrating the student’s knowledge, and intellectual/technological skills and expertise. | **SE:** *Design and Problem Solving Activity:* 60-61, 68-69, 173-175, 176-178, 292-294, 295-296  
|                         |                 | *Directed Activity:* 62-63, 64-67, 170-172, 179-181  
|                         |                 | **TAE:** NS 60, 62, 64  
|                         |                 | CA 60, 64, 68, 170  
|                         |                 | E 61, 65, 170, 173  
|                         |                 | R 62, 63  
|                         |                 | CT 66  
|                         |                 | RT 66 |
## Special Problems in Technology Education

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</table>
| 1.13, 1.11             | • demonstrate communication skills through presentations, reports, and demonstration. | **SE:** *Design and Problem Solving Activity:* 60-61, 68-69, 173-175, 176-178, 292-294, 295-296  
*Directed Activity:* 62-63, 64-67, 170-172, 179-181  
**TAE:** NS 60, 62, 64  
CA 60, 64, 68, 170  
E 61, 65, 170, 173  
R 62, 63  
CT 66  
RT 66 |
| 2.3, 5.1               | • apply a systems approach, research skills, 21st century skills (e.g., creative problem-solving, critical thinking, teamwork, leadership, acceptance of personal responsibility), and a variety of resources including information, tools and materials to the resolution of a work-based or community based problem. | **SE:** 46-50, 52-55, 56, 80-89, 193, 195-201, 311-323, 427-429, 431-432, 535  
**TAE:** E 48, 54, 81, 82  
AT 47  
EN 54, 82  
CT 46, 53, 195  
R 46, 48, 52, 80, 83  
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B 311, 323, 431  
RT 314, 427  
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**Design and Problem-Solving Activity:** 173-175  
**Science Connection:** 22, 529  
**Tech Report:** 524-525 |
| 1.16, 2.36             | • use computer based technologies to communicate, process, manipulate, collect, and apply information to solve technical problems. | **SE:** 100-108, 109-114, 115-118, 147, 179-181  
**Tech Report:** 70-71  
**Directed Activity:** 170-172, 176-178, 179-181  
**TAE:**  E 100, 102  
AT 102, 112, 114  
EN 104  
CT 110, 111, 147  
R 100, 101, 102  
B 115  
RT 102, 107  
CA 170, 176, 179 |
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</table>
| 2.1                    | • integrate and apply concepts from mathematics, science, communication, social studies, and the arts in the context of contemporary technology. | **SE:** 28, 58, 59, 303, 404-407, 509  
*Mathematics Connection:* 28, 41, 61, 63, 194, 242, 252, 273, 354, 394, 430, 453, 475  
*Science Connection:* 28, 69  
**TAE:**  CA 404  
R 59, 509  
E 58 |
| 2.31                   | • demonstrate competencies in the safe and efficient use of tools, machines, materials, and processes. | **SE:** 11-13, 36-37, 42, 52, 86, 256, 357  
**TAE:**  E 36, 86  
AT 36  
EN 42, 256  
R 357  
RS 52 |
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| 6.3, 5.1               | • engage in meaningful, hands-on, minds-on, and conceptual technology-based activities. | **SE:** 421, 426, 427-429, 431-437  
*Design and Problem Solving Activity:* 510-513, 514-518, 519-524  
*Tech Report:* 418-419  
*Mathematics Connection:* 430  
*Career File:* 438  
**TAE:**  
NS 510, 514  
CA 510, 514, 520  
CL 510  
E 432, 433, 513, 514, 515, 517  
CT 427, 429, 432, 516  
B 426, 431  
R 427, 428  
EN 433  
AS 437 |
| 6.2                    | • demonstrate an understanding of entrepreneurship and its place within the free enterprise system as a means to becoming a self-sufficient individual. | **SE:** 38-39, 180  
*Directed Activity:* 179-181  
**TAE:**  
CT 38, 39  
E 38  
CA 179 |
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| 2.19                   | • demonstrate that they have become participating citizens who can understand, assess, predict, control and adapt to the impacts and consequences of technology on individuals, society and the environment. | **SE:** 18-19, 29, 55, 92-95, 114, 136, 186-187, 204-205, 323-324, 387, 434-346, 534-535, 538, 540  
**TAE:** R 18, 92, 114  
RS 18  
E 19, 55, 92  
CT 55, 114, 136  
RT 186  
AT 186, 204, 324  
B 323 |
| 2.36, 2.38            | • develop personal and professional leadership skills through participation in Kentucky Technology Student Association activities. | **SE:** 40 (TSA)  
**TAE:** R 40 |
| 2.17, 5.4             | • demonstrate employability and social skills relative to careers. | **SE:** 10, 30, 34-39, 81-83  
*Directed Activity:* 62-63  
*Caided File:* 244  
**TAE:** DT 35  
E 30, 34, 35, 38, 82  
AT 35  
EN 30, 37, 81, 82  
CT 38, 39  
R 63, 83  
NS 62 |
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| 6.2, 6.3               | • apply concepts from mathematics, science, and communications in the context of technology education. | SE: 28, 58, 59, 303, 404-407, 509  
*Mathematics Connection:* 28, 41, 61, 63, 194, 242, 252, 273, 354, 394, 430, 453, 475  
*Science Connection:* 28, 69  
TAE: CA 404  
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### SCANS

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<td>Reads, writes, performs arithmetic and mathematical operations, listens and speaks</td>
<td>SE: 170-171, 174-175, 212, 215</td>
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<tr>
<td><strong>A. Reading</strong>—locates, understands, and interprets written information in prose and in documents such as manuals, graphs, and schedules</td>
<td>TAE: E 144</td>
</tr>
<tr>
<td><strong>B. Writing</strong>—communicates thoughts, ideas, information, and messages in writing; and creates documents such as letters, directions, manuals, reports, graphs, and flow charts</td>
<td>SE: 175</td>
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<td>TAE: R 131, 237, E 143</td>
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<tr>
<td><strong>C. Arithmetic/Mathematics</strong>—performs basic computations and approaches practical problems by choosing appropriately from a variety of mathematical techniques</td>
<td>SE: 67, 172, 175, 194, 242</td>
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<td>TAE: M 237</td>
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<td><strong>D. Listening</strong>—receives, attends to, interprets, and responds to verbal messages and other cues</td>
<td>SE: 175</td>
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<td>TAE: E 115, 147</td>
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<td><strong>E. Speaking</strong>—organizes ideas and communicates orally</td>
<td>SE: 175, 215</td>
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<td>TAE: E 212, 215, CT 110, 215</td>
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#### A Three-Part Foundation

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<td>Thinks creatively, makes decisions, solves problems, visualizes, knows how to learn and reasons</td>
<td>SE: 173-175</td>
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<tr>
<td>• A. Creative Thinking—generates new ideas</td>
<td>TAE: E 170</td>
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<tr>
<td>• B. Decision Making—specifies goals and constraints, generates alternatives, considers risks, and evaluates and chooses best alternative</td>
<td>SE: 34-37, 68-69, 174-175, 176-177</td>
</tr>
<tr>
<td>• C. Problem Solving—recognizes problems and devises and implements plan of action</td>
<td>SE: 34-38, 68-69, 174-175, 176-177</td>
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<tr>
<td>• D. Seeing Things in the Mind’s Eye—organizes, and processes symbols, pictures, graphs, objects, and other information</td>
<td>SE: 35, 176-177</td>
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<tr>
<td>• E. Knowing How to Learn—uses efficient learning techniques to acquire and apply new knowledge and skills</td>
<td>SE: 35</td>
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<tr>
<td>• F. Reasoning—discovers a rule or principle underlying the relationship between two or objects and applies it when solving a problem</td>
<td>SE: 191-192</td>
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<td>TAE: AT 148</td>
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**A Three-Part Foundation**

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</table>
| Displays responsibility, self-esteem, sociability, self-management, and integrity and honesty | **SE:** 30, 176-177  
**TAE:** E 30, 168 |
| • A. **Responsibility**—exerts a high level of effort and perseveres towards goal attainment |                 |
| • B. **Self-Esteem**—believes in own self-worth and maintains a positive view of self | **SE:** 30  
**TAE:** E 30, 168 |
| • C. **Sociability**—demonstrates understanding, friendliness, adaptability, empathy, and politeness in new and ongoing group settings | **SE:** 30  
**TAE:** E 30 |
| • D. **Self-Management**—assesses self accurately, sets personal goals, monitors progress, and exhibits self-control | **SE:** 30, 176-177  
**TAE:** E 30 |
| • E. **Integrity/Honesty**—chooses ethical courses of action                          | **SE:** 20, 30  
**TAE:** E 30 |
### SCANS

#### Five Workplace Competencies

<table>
<thead>
<tr>
<th>Resources</th>
<th>PAGE REFERENCES</th>
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</thead>
</table>
| Identifies, organizes, plans, and allocates resources | SE: 54, 201  
TAE: E 54 |
| • A. *Time*—Selects goal-relevant activities, ranks them, allocates time, and prepares and follows schedules | |
| • B. *Money*—Uses or prepares budgets, makes forecasts, keeps records, and makes adjustments to meet objectives | SE: 54, 200  
TAE: E 54 |
| • *C. Material and Facilities*—Acquires, stores, allocates, and uses materials or space efficiently | SE: 201, 235-238  
TAE: R 237  
CT 235  
E 48 |
| • D. *Human Resources*—Assesses skills and distributes work accordingly, evaluates performance and provides feedback | SE: 201, 240  
TAE: R 240 |
### SCANS

#### Five Workplace Competencies

<table>
<thead>
<tr>
<th>Interpersonal</th>
<th>PAGE REFERENCES</th>
</tr>
</thead>
</table>
| **• A. Participates as Member of a Team**—contributes to group effort | SE: 30, 176-177, 195  
TAE: E 30 |
| **• B. Teaches Others New Skills** | SE: 244  
TAE: E 244 |
| **• C. Serves Clients/Customers**—works to satisfy customers’ expectations | SE: 201  
TAE: E 174  
R 253  
D 253 |
| **• D. Exercises Leadership**—communicates ideas to justify position, persuades and convinces others, responsibly challenges existing procedures and policies | SE: 30, 195  
TAE: CT 195  
E 30  
R 217 |
| **• E. Negotiates**—works toward agreements involving exchange of resources, resolves divergent interests | SE: 30, 217  
TAE: E 30  
R 217 |
| **• F. Works with Diversity**—works well with men and women from diverse backgrounds | SE: 30, 195  
TAE: E 30 |
### SCANS

#### Five Workplace Competencies

<table>
<thead>
<tr>
<th>Information</th>
<th>PAGE REFERENCES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acquires and uses information</td>
<td><strong>SE</strong>: 37, 170-171, 200</td>
</tr>
<tr>
<td>• <strong>A. Acquires and Evaluates Information</strong></td>
<td><strong>TAE</strong>: E 36</td>
</tr>
<tr>
<td>• <strong>B. Organizes and Maintains Information</strong></td>
<td><strong>SE</strong>: 170-171</td>
</tr>
<tr>
<td></td>
<td><strong>TAE</strong>: E 34, 111, 170</td>
</tr>
<tr>
<td>• <strong>C. Interprets and Communicates Information</strong></td>
<td><strong>SE</strong>: 34, 55</td>
</tr>
<tr>
<td></td>
<td><strong>TAE</strong>: E 34</td>
</tr>
<tr>
<td></td>
<td>DT 35</td>
</tr>
<tr>
<td></td>
<td>CT 55</td>
</tr>
<tr>
<td>• <strong>D. Uses Computers to Process Information</strong></td>
<td><strong>SE</strong>: 170-171, 176-177</td>
</tr>
<tr>
<td></td>
<td><strong>TAE</strong>: E 170</td>
</tr>
<tr>
<td></td>
<td>CT 55</td>
</tr>
<tr>
<td>Systems</td>
<td>PAGE REFERENCES</td>
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<tr>
<td>-----------------------------------------------------------------------</td>
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</tr>
<tr>
<td>Understands complex inter-relationships</td>
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</tbody>
</table>
| • **A. Understands Systems**—knows how social, organizational, and technological systems work and operates effectively with them | **SE:** 190-193, 195-205  
**TAE:** E 95, 132, 186 |
| • **B. Monitors and Corrects Performance**—distinguishes trends, predicts impacts on systems operations, diagnoses deviations in systems’ performance and corrects malfunctions | **SE:** 57, 136-137  
**TAE:** CT 57, 136  
E 37 |
| • **C. Improves or Designs Systems**—suggests modifications to existing systems and develops new or alternative systems to improve performance | **SE:** 37, 173-175  
**TAE:** E 37, 160  
DT 122  
B 224 |
<table>
<thead>
<tr>
<th>Technology</th>
<th>PAGE REFERENCES</th>
</tr>
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<tbody>
<tr>
<td>Works with a variety of technologies</td>
<td></td>
</tr>
<tr>
<td>• A. Selects Technology—chooses procedures,</td>
<td>SE: 149, 154-158</td>
</tr>
<tr>
<td>tools or equipment including computers and</td>
<td>TAE: E 48, 162</td>
</tr>
<tr>
<td>related technologies</td>
<td>R 149</td>
</tr>
<tr>
<td></td>
<td>AT 126</td>
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<tr>
<td>• B. Applies Technology—Understands overall</td>
<td>SE: 198-199</td>
</tr>
<tr>
<td>intent and proper procedures for setup and</td>
<td>TAE: E 133, 162, 198</td>
</tr>
<tr>
<td>operation of equipment</td>
<td>AT 154</td>
</tr>
<tr>
<td></td>
<td>R 132</td>
</tr>
<tr>
<td>• C. Maintains and Troubleshoots Equipment—</td>
<td>SE: 198</td>
</tr>
<tr>
<td>Prevents, identifies, or solves problems</td>
<td>TAE: E 198</td>
</tr>
<tr>
<td>with equipment, including computers and</td>
<td>AT 154</td>
</tr>
<tr>
<td>other technologies</td>
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</tr>
</tbody>
</table>
### National Standards of Technological Literacy

#### The Nature of Technology

<table>
<thead>
<tr>
<th>STANDARDS</th>
<th>PAGE REFERENCES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard 1: Students will develop an understanding of the characteristics and scope of technology.</td>
<td><strong>SE:</strong> 21, 23-27, 39  &lt;br&gt; <strong>TAE:</strong> CT 57</td>
</tr>
<tr>
<td>Standard 2: Students will develop an understanding of the core concepts of technology.</td>
<td><strong>SE:</strong> 18-20, 45, 46-54  &lt;br&gt; <strong>TAE:</strong> CT 46  R 46</td>
</tr>
<tr>
<td>Standard 3: Students will develop an understanding of the relationships among technologies and the connections between technology and other fields of study.</td>
<td><strong>SE:</strong> 23, 27, 28, 29  &lt;br&gt; <strong>TAE:</strong> R 27</td>
</tr>
<tr>
<td>National Standards of Technological Literacy</td>
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<td>---------------------------------------------</td>
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<tr>
<td><strong>Technology and Society</strong></td>
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<tr>
<td><strong>STANDARDS</strong></td>
<td></td>
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<tr>
<td>Standard 4: Students will develop an understanding of the cultural, social, economic, and political effects of technology.</td>
<td><strong>PAGE REFERENCES</strong></td>
</tr>
<tr>
<td>SE: 19, 29, 70-71, 92-93, 186-187, 190-193, 195-205, 323, 540</td>
<td><strong>TAE:</strong> E 54, 95, 132, 186</td>
</tr>
<tr>
<td>Standard 5: Students will develop an understanding of the role of society in the development and use of technology.</td>
<td>SE: 19, 29, 70-71, 92-93, 186-187, 204, 323, 540</td>
</tr>
<tr>
<td>Standard 6: Students will develop an understanding of the role of society in the development and use of technology.</td>
<td>SE: 19, 29, 70-71, 92-93, 186-187, 204, 323, 540</td>
</tr>
<tr>
<td>Standard 7: Students will develop an understanding of the influence of technology on history.</td>
<td>SE: 18-19</td>
</tr>
<tr>
<td>Design</td>
<td>PAGE REFERENCES</td>
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</tbody>
</table>
| **Standard 8:**  
Students will develop an understanding of the attributes of design. | SE: 145, 146, 159  
TAE: E 147  
CT 147 |
| **Standard 9:**  
Students will develop an understanding of engineering design. | SE: 337-344  
TAE: R 339  
E 338 |
| **Standard 10:**  
Students will develop an understanding of the role of troubleshooting, research and development, invention and innovation, and experimentation in problem solving. | SE: 34-38, 68-69, 174-175, 176-177  
TAE: E 170  
DT 35  
CT 38 |
<table>
<thead>
<tr>
<th>STANDARDS</th>
<th>PAGE REFERENCES</th>
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</table>
| Standard 11: Students will develop abilities to apply the design process. | SE: 60-61, 173-178, 292-300, 402-403, 410-417, 510-513  
TAE: CA 60 |
| Standard 12: Students will develop abilities to use and maintain technological products and systems. | SE: 198  
TAE: E 198, 518  
AT 154 |
| Standard 13: Students will develop abilities to assess the impact of products and systems. | SE: 136-137  
TAE: CT 57, 136  
E 37 |
<table>
<thead>
<tr>
<th>STANDARDS</th>
<th>PAGE REFERENCES</th>
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</thead>
</table>
| **Standard 14:**  
Students will develop an understanding of and be able to select and use medical technologies. | SE: 94-95, 554-555, 556, 557  
TAE: E 553 |
| **Standard 15:**  
Students will develop an understanding of and be able to select and use agricultural and related biotechnologies. | SE: 25, 524-525, 537, 547-552  
TAE: E 527 |
| **Standard 16:**  
Students will develop an understanding of and be able to select and use energy and power technologies. | SE: 26, 431, 499-503  
TAE: E 499 |
| **Standard 17:**  
Students will develop an understanding of and be able to select and use information and communication technologies. | SE: 21-22, 74-95  
TAE: E 22, 95  
R 95 |
| **Standard 18:**  
Students will develop an understanding of and be able to select and use transportation technologies. | SE: 24-25  
TAE: R 25 |
| **Standard 19:**  
Students will develop an understanding of and be able to select and use manufacturing technologies. | SE: 23  
TAE: N/A |
### National Standards of Technological Literacy

#### The Designed World

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<tr>
<th>STANDARDS</th>
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<tbody>
<tr>
<td>Standard 20: Students will develop an understanding of and be able to select and use construction technologies.</td>
<td>SE:23-24</td>
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<td>TAE: CT 23</td>
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TAE Codes

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>AT</td>
<td>Assessing Technology</td>
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<td>CT</td>
<td>Critical Thinking</td>
</tr>
<tr>
<td>DT</td>
<td>Designing Technology</td>
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<tr>
<td>E</td>
<td>Extension</td>
</tr>
<tr>
<td>R</td>
<td>Reinforcement</td>
</tr>
<tr>
<td>EN</td>
<td>Enrichment</td>
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<tr>
<td>LA</td>
<td>Language Arts</td>
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<tr>
<td>B</td>
<td>Brainstorming</td>
</tr>
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<td>RT</td>
<td>Reteaching</td>
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<tr>
<td>BG</td>
<td>Background</td>
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<tr>
<td>RS</td>
<td>Resource</td>
</tr>
<tr>
<td>NS</td>
<td>National Standards</td>
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<tr>
<td>CA</td>
<td>Characterizing the Activity</td>
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</table>
Technology Education
Evaluation Tool
<table>
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<tr>
<th>Instruction and Assessment</th>
<th>Comments</th>
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</thead>
<tbody>
<tr>
<td>Identifies a Sense of Purpose</td>
<td>Each chapter in the Student Edition begins with elements designed to quickly launch a student’s focus and interest on the chapter’s topic. Each <em>Chapter Opener</em> in the Student Edition begins with a <em>Technology Timeline</em> which lists significant developments in the history of technology. Each chapter begins with a list of the skills and knowledge students can expect to have mastered once they have completed the chapter. Photographs expand and reinforce the business and economic concepts presented in each chapter.</td>
</tr>
<tr>
<td>Builds on Student Ideals</td>
<td>Teaching strategies for <em>Technology Today and Tomorrow</em> are presented at the beginning of each chapter in the <em>Lesson Plan</em> section of the Teacher Resource Guide. A section entitled <em>Understanding Concepts</em> is located in the <em>Chapter Review</em> section of each chapter which builds on student’s previous knowledge of technological material.</td>
</tr>
<tr>
<td>Engages Students</td>
<td>Each chapter in the Student Edition begins with elements designed to quickly launch a student’s focus and interest on the chapter’s topic. Each <em>Chapter Opener</em> in the Student Edition provides a brief introduction to the new material that will be covered in the chapter. Each chapter begins with a list of the skills and knowledge students can expect to have mastered once they have completed the chapter. Photographs expand and reinforce the business and economic concepts presented in each chapter.</td>
</tr>
<tr>
<td>Instruction and Assessment (continued)</td>
<td>Comments</td>
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<tr>
<td>----------------------------------------</td>
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</tr>
<tr>
<td>Develops Business Ideas</td>
<td>In <em>Glencoe Technology Today and Tomorrow</em>, new learning is based on previous knowledge, with each new concept building on a prior experience. The instruction in the Student Edition follows an organized flow of concept development</td>
</tr>
<tr>
<td>Promotes Student Thinking</td>
<td>Both the Student Edition and the Instructor Guide provide numerous activities and suggestions to help you incorporate and integrate critical thinking skills you’re teaching in your course. The Understanding Concepts and Thinking Critically feature in the Student Edition contains information and questions that enable students to practice a variety of critical thinking skills such as problem solving, analyzing, evaluating, decision making, and synthesizing information. At the end of each chapter an Applying Concepts and Solving Problems activity is provided which helps develop student’s reasoning skills.</td>
</tr>
<tr>
<td>Instruction and Assessment (continued)</td>
<td>Comments</td>
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<tr>
<td>Assesses Student Progress</td>
<td>A large section of testing and assessment resources is available for <em>Glencoe Technology Today and Tomorrow</em> to help you measure the progress of your students. The <em>Understanding Concepts and Thinking Critically</em> feature in the Student Edition contains information and questions that enable students to practice a variety of critical thinking skills such as problem solving, analyzing, evaluating, decision making, and synthesizing information. At the end of each chapter an <em>Applying Concepts and Solving Problems</em> activity is provided which helps develop student’s reasoning skills. Objective tests are provided for each of the 24 chapters of the student test.</td>
</tr>
<tr>
<td>Instruction and Assessment (continued)</td>
<td>Comments</td>
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<tr>
<td>Enhances The Learning Environment</td>
<td><em>Glencoe Technology Today and Tomorrow</em> offers engaging, relevant, and appropriate content for the widest range of learners – from young scholars and athletes to visual learners and low achievers. The research-based content is presented in a visually dynamic style that will engage and motivate your students. The program has been designed to offer a variety of lesson plan options and embedded assessment that develop the knowledge, business skills, behaviors, and problem-solving skills of all your students – regardless of their learning styles and ability levels.</td>
</tr>
<tr>
<td>Reading level is appropriate for interest and ability level of intended student group: level remains consistent throughout.</td>
<td><em>Glencoe Technology Today and Tomorrow</em> offers engaging, relevant, and appropriate content for the widest range of learners – from young scholars and athletes to visual learners and low achievers. The research-based content is presented in a visually dynamic style that will engage and motivate your students. The program has been designed to offer a variety of lesson plan options and embedded assessment that develop the knowledge, business skills, behaviors, and problem-solving skills of all your students – regardless of their learning styles and ability levels.</td>
</tr>
<tr>
<td><strong>Instruction and Assessment (continued)</strong></td>
<td><strong>Comments</strong></td>
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<tr>
<td>Common wealth Accountability Testing System (CATS) “like” Assessment is provided</td>
<td>Expanded tests which include matching and multiple choice questions are provided on the test generator on the Teacher Productivity CD-ROM. It contains questions which are organized around learning objectives and categorized by chapter and unit.</td>
</tr>
<tr>
<td>Variety of Assessments (diagnostic, formative, summative, open response, multiple choice, individual, small group, oral, demonstrations, presentations, self and peer performance, portfolio prompts) is included.</td>
<td>A large section of testing and assessment resources is available for Glencoe Technology Today and Tomorrow to help you measure the progress of your students. The Understanding Concepts and Thinking Critically feature in the Student Edition contains information and questions that enable students to practice a variety of critical thinking skills such as problem solving, analyzing, evaluating, decision making, and synthesizing information. At the end of each chapter an Applying Concepts and Solving Problems activity is provided which helps develop student’s reasoning skills. Objective tests are provided for each of the 24 chapters of the student test.</td>
</tr>
<tr>
<td>Instruction and Assessment (continued)</td>
<td>Comments</td>
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<tr>
<td>Includes activities and opportunities for integration of technology.</td>
<td>The <em>Technology Today and Tomorrow Teacher Productivity CD-ROM</em> includes Power Point Slides to help students reinforce learning. Teacher and student resources are available at the <em>Glencoe’s Teaching Today Website</em> which features daily teaching tips, free downloadable materials, annotated Web resources, educational news, and more. The site contains a wealth of information on topics from high stakes testing to classroom management.</td>
</tr>
<tr>
<td>Instruction and Assessment</td>
<td>Comments</td>
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<td>---------------------------</td>
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</tr>
<tr>
<td>Reflects researched-based practices (e.g. hands-on activities, technology, problem-solving situations)</td>
<td><em>Glencoe Technology Today and Tomorrow</em> has achieved the highest degree of accuracy through rigorous scientifically-based research. This edition is the product of the most recent research studies, teacher feedback, and detailed editorial development. The result is an up-to-date, solid foundation for an engaging, stimulating, and high-quality technology education course for your students. Hands-on activities, technology, and problem-solving situations are integrated throughout <em>Glencoe Technology Today and Tomorrow</em>.</td>
</tr>
<tr>
<td>Differentiation techniques and activities suggested.</td>
<td><em>Glencoe Technology Today and Tomorrow</em> offers engaging, relevant, and appropriate content for the widest range of learners – from young scholars and athletes to visual learners and low achievers. The research-based content is presented in a visually dynamic style that will engage and motivate your students. The program has been designed to offer a variety of lesson plan options and embedded assessment that develop the knowledge, business skills, behaviors, and problem-solving skills of all your students – regardless of their learning styles and ability levels.</td>
</tr>
<tr>
<td>Content–Technology Education</td>
<td>Comments</td>
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<tr>
<td>------------------------------------------------</td>
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<tr>
<td>Nature of Technology</td>
<td>Each section of the Student Edition begins with a <em>Technology Timeline</em> and <em>Fascinating Facts</em> which outlines the objectives of the chapter and explains the characteristics and scope of technological literacy on history and the relationships between technology and other fields.</td>
</tr>
<tr>
<td>Technology and Society</td>
<td>In <em>Glencoe Technology Today and Tomorrow</em>, students are provided with a detailed explanation of technology’s impact on society and history. A <em>Tech Report</em> section is found at the end of each chapter of each section of the Student Edition. Special <em>Connection</em> sections are found throughout the Student Edition to show students how society impacts their community in different ways.</td>
</tr>
<tr>
<td>Design</td>
<td>The design process is outlined in detail in Chapter 7 of the Student Edition. Students are presented with design concepts and are expected to use the design process to solve real problems and implement solutions in the <em>Applying Concepts and Solving Problems</em> section found in the Student Edition of <em>Glencoe Technology Today and Tomorrow</em>.</td>
</tr>
<tr>
<td>Abilities for a Technological World</td>
<td>In <em>Technology Today and Tomorrow</em>, students explore the future of technology and discuss how new developments in technology will be reflected in new products. Students are challenged to identify a design problem and use computers to communicate.</td>
</tr>
<tr>
<td>Content-Technology Education (continued)</td>
<td>Comments</td>
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<tr>
<td>-----------------------------------------</td>
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</tr>
<tr>
<td>The Design World</td>
<td>In <em>Glencoe Technology Today and Tomorrow</em>, students explore medical technologies, agricultural and related biotechnologies, energy and power technologies, and information and communication technologies.</td>
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<thead>
<tr>
<th>Organization and Structure</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organization is logical and allows for spiraling of content.</td>
<td><em>Glencoe Technology Today and Tomorrow</em> is composed of 24 chapters. Each chapter follows a straightforward format, beginning with <em>Learning Objectives</em>, <em>Careers In</em> and <em>Connection</em> sections help students connect what they learn to the real world of technology. Each chapter closes with a <em>Chapter Review</em> which provides a review of important terms and technological concepts, as well as a variety of activities.</td>
</tr>
<tr>
<td>Vocabulary and key terms are clearly defined and easily accessible within each lesson.</td>
<td>Each chapter begins with a list of the <em>Terms</em> presented in the chapter. These key terms are printed in bold-face type the first time they are introduced and defined within the text.</td>
</tr>
<tr>
<td>Visual illustrations (e.g. graphs, charts, models) and examples are clearly presented and content-related</td>
<td>Graphs, charts, and models are used throughout the book to illustrate concepts. Examples are related to the content of the chapter.</td>
</tr>
<tr>
<td>Organization and Structure (continued)</td>
<td>Comments</td>
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<td>----------------------------------------</td>
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<tr>
<td>Illustrations and language reflect diversity (e.g. racial, ethnic, cultural, age, gender, disabilities).</td>
<td>A variety of situations that reflect diversity are presented throughout the text.</td>
</tr>
<tr>
<td>Legible type, length of lines, spacing, and page layout and widths of margins contribute to overall appearance and use.</td>
<td><em>Glencoe Technology Today and Tomorrow</em> has achieved the highest degree of accuracy through rigorous scientifically-based research. This edition is the product of the most recent research studies, teacher feedback, and detailed editorial development. The result is an up-to-date, solid foundation for an engaging, stimulating, and high-quality technology education course for your students. Hands-on activities, technology, and problem-solving situations are integrated throughout <em>Glencoe Technology Today and Tomorrow</em>.</td>
</tr>
<tr>
<td>Student materials seem durable and conducive to daily use.</td>
<td>The very best materials are used in all Glencoe products. The materials are easy for students to use, both in school and at home.</td>
</tr>
<tr>
<td>Includes sufficient glossary, index and appendices.</td>
<td>The <em>Index</em> can be found on pages 593-624. The <em>Glossary</em> can be found on pages 575-588.</td>
</tr>
<tr>
<td>Employs accurate grammar and spelling.</td>
<td><em>Glencoe Technology Today and Tomorrow</em> has achieved the highest degree of accuracy through rigorous scientifically-based research. This edition is the product of the most recent research studies, teacher feedback, and detailed editorial development.</td>
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<tr>
<td><strong>Organization and Structure (continued)</strong></td>
<td><strong>Comments</strong></td>
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</tr>
<tr>
<td>Organization of material can be effectively used with Standards Based Units, Core Content and Program of Studies.</td>
<td>The correlation between <em>Glencoe Technology Today and Tomorrow</em> and the International Technology Education Association is strong.</td>
</tr>
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<thead>
<tr>
<th><strong>Resource Materials</strong></th>
<th><strong>Comments</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Teacher materials coordinate easily with student materials (e.g. additional resources included at point of need, student pages shown, integration of technology indicated).</td>
<td>Each chapter in the Instructor Resource Guide begins with a detailed lesson plan which includes a focus for the lesson and teaching suggestions for the chapter content. <em>Lesson Plan Organizers</em> are provided to assist the teacher in designing lesson plans in the Teacher’s Annotated Edition on pages TM-25 through TM-48.</td>
</tr>
<tr>
<td>Resource Materials (continued)</td>
<td>Comments</td>
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<td>Activities are included that adapt to the various learning styles, intelligences, and interest / ability levels.</td>
<td><em>Glencoe Technology Today and Tomorrow</em> offers engaging, relevant, and appropriate content for the widest range of learners – from young scholars and athletes to visual learners and low achievers. The research-based content is presented in a visually dynamic style that will engage and motivate your students. The program has been designed to offer a variety of lesson plan options and embedded assessment that develop the knowledge, business and economic skills, behaviors, and problem-solving skills of all your students – regardless of their learning styles and ability levels.</td>
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<tr>
<td>Extension activities including adaptations and accommodations for students with special needs.</td>
<td>In order to help you provide all your students with a positive learning experience, <em>Glencoe Technology Today and Tomorrow</em> provides a variety of activities. This diversity will stimulate student interest, motivate learning, and facilitate understanding. <em>Meeting Special Needs</em> is included in the Instructor Resource Guide on pages 39-40 to help teachers meet all needs of the students in their classrooms. <em>Tips for Instruction</em> are included in this section.</td>
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<tr>
<td>Resource Materials (continued)</td>
<td>Comments</td>
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<tr>
<td>Resources provide objectives, background information, common student errors, hints, advice for lesson implementation and real-world connections, connections with career and / technology and references (e.g. solution manuals, study guides).</td>
<td>Each chapter follows a straightforward format, beginning with a list of objectives and background information in <em>Fascinating Facts</em> to help students connect what they learn to the real world of technology. Real-world connections and connections with careers can be found throughout the Student Edition and Instructor Resource Guide. A multitude of references are available.</td>
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<td>Suggestions are made for integration of themes and / or interdisciplinary instruction.</td>
<td>The <em>Science and Math Connections</em> sections found throughout the Student Edition help students apply their technological concepts to different academic areas such as mathematics, communication and science.</td>
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<tr>
<td>Integration opportunities suggested and examples given.</td>
<td>The <em>Science and Math Connections</em> sections found throughout the Student Edition help students apply their technological concepts to different academic areas such as mathematics, communication and science.</td>
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<tr>
<td>Teacher resources are available online.</td>
<td>Teacher resources are available in the Instructor Resource Guide located on pages TM-23 through TM-24.</td>
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