

**Glencoe/McGraw-Hill**

**Technology in Action ©2002**  
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**1. Exploring Technology Systems**  
**ISBN# 0–07–822489–6**

**correlated to**

**North Carolina**  
**Technology Education**  
**Course Blueprint for 8108 –**  
**Exploring Technology Systems**

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**CORRELATED TO**

**NORTH CAROLINA  
COURSE BLUEPRINT FOR 8108 – EXPLORING TECHNOLOGY SYSTEMS**

<b>OBJECTIVES</b>		<b>PAGE REFERENCES</b>
<b>A INTRODUCTION</b>		
<b>001.00 Apply communication, leadership, and lab safety and management skills.</b>		
001.01	Explain appropriate lab, classroom, and teaming skills.	<p>The objective is addressed throughout. See for example:</p> <p>SE: 38–39, 42–43, 137–138, 210–211, 293–294, 305–306, 368–367, 419–420, 459–460</p> <p>TRG: 62, 88, 111, 138, 140, 156, 169, 180</p>
001.02	Apply management, leadership, and communication skills through classroom experiences and student activities. (TSA)	<p>The objective is addressed throughout. See for example:</p> <p>SE: 33, 56–57, 93–95, 153–154, 200–201, 272–273, 349–350, 368–369, 377–379, 425–427</p> <p>TRG: 61, 65, 76, 94, 109, 132, 151, 156, 158, 170</p>
01.03	Create a Career Development Plan.	<p>The opportunity to address this objective is available. See the following:</p> <p>SE: 45, 65, 83, 105, 125, 145, 161, 189, 213, 237, 263, 285, 309, 335, 359, 381, 403, 429, 451, 473</p> <p>TRG: 62, 63, 67, 78, 84, 113, 121, 147, 153, 171</p>

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<b>OBJECTIVES</b>		<b>PAGE REFERENCES</b>
<b>B NATURE OF TECHNOLOGY</b>		
<b>002.00 Analyze the relationship between technology and society.</b>		
002.01	Explain the characteristics and scope of technology.	The objective is addressed throughout. See for example:  SE: 23, 147, 191–192, 246–247, 268–271, 314–317, 351–355, 405–406  TRG: 57, 93, 107, 132, 144, 152, 167
002.02	Explain the 7 major areas of Technology and distinguish between the natural world and the technological world.	SE: 147–150  TRG: 83, 94
002.03	Explain the relationships among the core concepts of technology	The opportunity to address this objective is available:  SE: 147–150, 151–154, 155–159, 160–161  TRG: 93, 94, 95
002.04	Analyze the relationships of the different technologies and their connection with other fields of study.	The objective is addressed throughout. See for example:  SE: 26, 48, 120, 194, 222, 288, 328, 362, 410, 444  TRG: 60, 65, 84, 108, 117, 137, 146, 168, 176
002.05	Create a product that shows the different areas of technology and its relationship with society.	SE: 158–159, 318–320  TRG: 95, 144

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<b>C TECHNOLOGY AND SOCIETY</b>			
<b>003.00 Analyze the relationships between technology and society.</b>			
003.01	Explain the tools and processes used to assess technologies	SE:	69–71, 433, 454–455
		TRG:	70, 174, 179
003.02	Assess how cultural, social, economic, political, historical and environmental factors affect technology and are affected by technology. (Technology Assessment)	SE:	69, 71, 433, 453–455, 445
		TRG:	70, 1173, 176, 178
<b>D DESIGN AND PROBLEM SOLVING</b>			
<b>004.00 Apply Problem solving and design methods</b>			
004.01	Explain the nature of design and the design/problem solving model	SE:	32–35, 199, 202–204, 208–209, 274–277, 280–281
		TRG:	61, 109, 110, 111, 133, 134
004.02	Apply design and problem solving concepts and principles	SE:	40–41, 62–63, 282–283, 459–460
		TRG:	62, 66, 188–189, 190–191, 192_193, 196–199, 200–201, 202–203, 204, 205, 206–208
<b>E ABILITIES FOR A TECHNOLOGICAL WORLD</b>			
<b>005.00 Apply technological tools and systems to real world experiences.</b>			
005.01	Explain the concepts used to develop and maintain technological products and systems.	SE:	34–35, 127–129,
		TRG:	61, 87
005.02	Use computers and other tools of technology in various applications	SE:	113–114, 117–118, 122–123
		TRG:	82, 83, 84, 188–189, 190–191

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<b>OBJECTIVES</b>		<b>PAGE REFERENCES</b>	
<b>F THE DESIGNED WORLD: MEDICAL AND AGRICULTURAL TECHNOLOGY</b>			
<b>006.00 Assess how medical and agricultural technology affects society.</b>			
006.01	Explain how medicine, healthcare, and agriculture have been improved by inventions and innovations.	SE:	52, 199, 431–433, 443–444
		TRG:	65, 109, 173, 176
006.02	Describe genetic engineering, including its role in modifying the structure of DNA to produce new biotechnology products.	SE:	443–444
		TRG:	176
006.03	Evaluate how healthcare, medicine, agriculture, and biotechnology influence and is influenced by economics, politics, and the environment. (Report – Research)	SE:	69–71
		TRG:	70
006.04	Apply the principles of medical, biotechnological, and agricultural technology in an activity.	SE:	59, 436–437, 448
		TRG:	65, 174, 176
<b>G THE DESIGNED WORLD: ENERGY, POWER, AND TRANSPORTATION</b>			
<b>007.00 Apply principles of energy, power, and transportation.</b>			
007.01	Describe the types and forms of energy, and scientific principles of energy, power, and transportation.	SE:	148, 287, 289, 291–292, 301–304, 311–317, 321–323, 327–330, 386–387, 461
		TRG:	93, 135, 137, 138, 140, 143, 145, 146, 161, 181
007.02	Describe systems, sub-systems, and modes of transportation systems.	SE:	163–165, 167–168, 173–176, 179–180, 183–185, 313, 315–317, 321–323, 327–330, 386–387
		TRG:	99, 100, 101, 102, 103, 143, 144, 145, 146, 161

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<b>OBJECTIVES</b>		<b>PAGE REFERENCES</b>	
007.03	Design and fabricate a transportation vehicle.	SE:	318–320, 324–326, 390–393, 400–401
		TRG:	144, 145, 162, 163

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<b>OBJECTIVES</b>	<b>PAGE REFERENCES</b>
<b>H THE DESIGNED WORLD: COMMUNICATION SYSTEMS</b>	
<b>008.00 Analyze and produce communication products.</b>	
008.01 Explain the components and types of communication systems.	SE: 338, 351–355, 361–364 TRG: 147, 149, 152, 153
008.02 Produce a communications product using one of the following: technical drawings, graphic communication, electronic communication.	SE: 356–357, 368–369, 373–374, 377–378, 347–350 TRG: 151, 152, 156, 157, 158
<b>I THE DESIGNED WORLD: PRODUCTION SYSTEMS</b>	
<b>009.00 Explain and apply principles of manufacturing and construction.</b>	
009.01 Explain the concepts and principles of manufacturing systems.	SE: 155–157, 217–218, 221–223, 246–247, 474 TRG: 95, 6, 117, 125
009.02 Explain the concepts of separating, forming, combining, and conditioning.	SE: 155 TRG: 95
009.03 Create a manufactured product.	SE: 137–138, 158–159, 181–182, 254–255, 377–379, 394–395, 400–401 TRG: 88, 95, 102, 126, 158, 162, 163
009.04 Explain the concepts and principles of structural systems.	SE: 265–267, 268–271, 274–277, 280–281 TRG: 131, 132, 133, 134
009.05 Create a structure.	SE: 278–279, 282–283 TRG: 133, 134

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