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1. Fundamentals of Technology

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correlated to

North Carolina

Technology Education

Course Blueprint for 8110 –

Fundamentals of Technology

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CORRELATED TO

**NORTH CAROLINA
TECHNOLOGY EDUCATION
COURSE BLUEPRINT FOR 8110 – FUNDAMENTALS OF TECHNOLOGY**

OBJECTIVES	PAGE REFERENCES
A Nature of Technology	
001.00 Analyze technology and its relationship to the designed world.	
001.01 Define and characterize technology.	This objective is addressed throughout. See, for example: SE: 18, 77, 52, 100, 186, 218, 308, 422, 466, 499 TAE: 18, 77, 52, 100, 186, 218, 218, 308, 422, 466, 499
001.02 Recognize and describe the interaction of technology and society.	This objective is addressed throughout. See for example: SE: 28, 29, 38, 39, 138, 191–193, 435, 470–471, 534–535, 540–541 TAE: 28, 29, 38, 39, 138, 191–193, 435, 470–471, 534–535, 540–541
001.03 Analyze and assess the evolution and influence of technology.	SE: 19–20, 132, 186–188 TAE: 19–20, 132, 186–188
001.04 Analyze how technology relates to other disciplines.	This objective is addressed throughout. See for example: SE: 22, 78, 123, 150, 252, 267, 336, 394, 490, 529 TAE: 22, 78, 123, 150, 252, 267, 336, 394, 490, 529

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OBJECTIVES	PAGE REFERENCES
001.05 Investigate trends in technology (tie careers into this objective).	This objective is addressed throughout. See for example: SE: 30, 96, 140, 228, 258, 326, 378, 438, 478, 508 TAE: 30, 96, 140, 228, 258, 326, 378, 438, 478, 508
001.06 Produce a career development plan.	The opportunity to address this objective is available. See the following: SE: 30, 62–63 TAE: 30, 62–63
002.00 Develop a safe and an effective workplace.	
002.01 Recognize safety procedures and practices in a technological world.	SE: 11–13, 356–357 TAE: 11–13, 356–357
002.02 Apply safety procedures and practices in a technological world.	SE: 11–13 TAE: 11–13
002.03 Outline leadership skills and team building.	SE: 62–63 TAE: 62–63
002.04 Demonstrate leadership skills and team building.	SE: 62, 64, 402–403, 410–411, 510–511 TAE: 62, 64, 402–403, 410–411, 510–511

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OBJECTIVES		PAGE REFERENCES
002.05	Outline how a computer is used as an information management tool.	The opportunity to address this objective is available. See the following: SE: 282, 251, 297–298, 354 TAE: 282, 251, 297–298, 354
002.06	Utilize a computer as an information management tool.	SE: 297–298, 354 TAE: 297–298, 354
B DESIGN		
003.00 Apply a formal problem-solving method.		
003.01	Explain the concepts of DEAL problem solving method.	The opportunity to address this objective is available. See the following: SE: 34–37 TAE: 34–37
003.02	Apply the DEAL problem solving method.	The opportunity to address this objective is available. See the following: SE: 60–61, 68–69, 173–175 TAE: 60–61, 68–69, 173–175
003.03	Explain the Universal Systems Mode.	SE: 46–56 TAE: 46–56
003.04	Describe research and development strategies.	SE: 212–215, 263, 264 TAE: 212–215, 263, 264

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OBJECTIVES	PAGE REFERENCES
003.05 Apply research and development strategies.	SE: 68–69, 173–175, 415–417 TAE: 68–69, 173–175, 415–417
004.00 Communicate the design process.	
004.01 Explain terms and procedures involving measurement tools.	SE: 150, 256 TAE: 150, 256
004.02 Apply measuring techniques.	SE: 150 TAE: 150
004.03 Explain terms and procedures utilized in technical sketching.	SE: 339–341 TAE: 339–341
004.04 Apply technical sketching utilizing orthographic and pictorial layout.	The opportunity to address this objective is available. See the following: SE: 162–165 TAE: 162–165
004.05 Explain computer processes used in computerized 2D/3D modeling.	SE: 166 TAE: 166
004.06 Utilize the computer as a design tool including 2D/3D modeling.	SE: 415–417 TAE: 415–417
005.00 Apply the principles and elements of design.	
005.01 Identify the principles and elements of design.	SE: 145–146, 215–217 TAE: 145–146, 215–217

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OBJECTIVES		PAGE REFERENCES	
005.02	Describe how the design process relates to technology and other disciplines.	SE:	218, 224–227, 274–275
		TAE:	218, 224–227, 274–275
005.03	Create a product based on the principles and elements of design.	SE:	173–175, 292–294, 295–269, 297–298, 410–411, 510–513
		TAE:	173–175, 292–294, 295–269, 297–298, 410–411, 510–513
005.04	Explain computer processes used as a graphic design.	SE:	147–148, 153–155, 272, 274
		TAE:	147–148, 153–155, 272, 274
005.05	Utilize the computer as a graphic design tool.	SE:	179–181, 299–300
		TAE:	179–181, 299–300
006.00 Develop abilities to communicate effectively in a technological world.			
006.01	Explain the abilities to communicate effectively in a technological world.	SE:	21, 23
		TAE:	21, 23
006.02	Produce a technical report.	The opportunity to address this objective is available. See the following:	
		SE:	168
		TAE:	168
006.03	Deliver an oral presentation.	SE:	299–300
		TAE:	299–300
006.04	Produce a technology related portfolio.	SE:	62–63
		TAE:	62–63

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OBJECTIVES	PAGE REFERENCES
C THE DESIGNED WORLD	
007.00 Develop an awareness of the designed world.	
007.01 Explain the concepts and principles of communications systems.	SE: 79–95, 100–117, 122–139, 144–166 TAE: 79–95, 100–117, 122–139, 144–166
007.02 Apply the concepts and principles of communication systems.	SE: 170–171, 173–175, 176–178, 179–181 TAE: 170–171, 173–175, 176–178, 179–181
007.03 Explain the concepts and principles of transportation systems.	SE: 422–429, 431–437 TAE: 422–429, 431–437
007.04 Apply the concepts and principles of transportation systems.	SE: 510–513, 514–518 TAE: 510–513, 514–518
007.05 Explain the concepts and principles of manufacturing systems.	SE: 186–193, 195–205 TAE: 186–193, 195–205
007.06 Apply the concepts and principles of manufacturing systems.	SE: 68–69, 514–518 TAE: 68–69, 514–518
007.07 Explain the concepts and principles of structural systems.	SE: 308–311, 313–325, 330–335, 337–339, 341–345, 382–392, 395–399 TAE: 308–311, 313–325, 330–335, 337–339, 341–345, 382–392, 395–399

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OBJECTIVES		PAGE REFERENCES	
007.08	Apply the concepts and principles of structural systems.	SE: 402–403, 404–409	TAE: 402–403, 404–409
007.09	Explain the concepts and principles of energy and power.	SE: 52–53, 482–507	TAE: 52–53, 482–507
007.10	Apply the concepts and principles of energy and power.	SE: 60–61, 514–518	TAE: 60–61, 514–518
007.11	Explain the concepts and principles of biotechnology.	SE: 570–572, 573–574	TAE: 570–572, 573–574
007.12	Apply the concepts and principles of biotechnology.	SE: 573–574	TAE: 573–574

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Atlantic Southeast Region
6510 Jimmy Carter Boulevard
Norcross, GA 30071
770/613-0281
800/731-2365