

# Agriculture, Food, and Natural Resources: Natural Resource Technology

Utilize data and resources - the student will be able to: CTE.NRT.21.0

**A** Utilize word processing, databases, computer graphics, statistics programs, spreadsheets, Internet, and GIS. CTE.NRT.21.01

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**B** Locate and interpret reference materials. CTE.NRT.21.02

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**C** Maintain necessary/required record keeping practices and procedures. CTE.NRT.21.03

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**D** Discuss Federal and state requirements for (TMDL) Total Maximum daily loads and minimum flows and levels. CTE.NRT.21.04

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**E** Describe the establishment and implementation of TMDL in Florida. CTE.NRT.21.05

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**F** Identify potential sources of point and non-point pollution. CTE.NRT.21.06

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**G** Identify the five water management districts in Florida. CTE.NRT.21.07

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**H** Define minimum flows and levels for a water management district. CTE.NRT.21.08

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Determine the quality and quantity of water resources – the student will be able to CTE.NRT.22.0

**A** Understand pretreatment, primary, secondary, and tertiary treatment processes of wastewater. CTE.NRT.22.01

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**B** Describe wastewater disposal options. CTE.NRT.22.02

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**C** Identify septic tanks types and functions. CTE.NRT.22.03

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**D** Determine water quality of groundwater, rivers, lakes, and spring water. CTE.NRT.22.04

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**E** Determine stream flow. CTE.NRT.22.05

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**F** Collect, store and label water samples from a representative test site. CTE.NRT.22.06

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**G** Determine the quality of water samples by measuring for pH, turbidity, dissolved solids and dissolved oxygen. CTE.NRT.22.07

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**H Investigate water shed boundaries and drainage patterns.** CTE.NRT.22.08

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**I Monitor water levels of rivers, streams, ponds and lakes.** CTE.NRT.22.09

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**Describe stormwater systems – the student will be able to:** CTE.NRT.23.0

**A Demonstrate knowledge of runoff through use of terminology** CTE.NRT.23.01

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**B Recognize soil types and land cover as related to runoff.** CTE.NRT.23.02

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**C Recognize erosion, non-point source pollution and erosion control methods.** CTE.NRT.23.03

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**D Define topography and groundcover and its effects on stormwater.** CTE.NRT.23.04

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**Develop map reading skills – the student will be able to:** CTE.NRT.24.0

**A Review aerial maps.** CTE.NRT.24.01

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**B Interpret topographical and flood plain maps.** CTE.NRT.24.02

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**C Interpret legal land descriptions.** CTE.NRT.24.03

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**D Interpret current and historical aerial photography for land cover and land use applications.** CTE.NRT.24.04

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**F Explain topographic map symbols and legends.** CTE.NRT.24.05

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**G Measure acreage on maps.** CTE.NRT.24.06

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**H Determine location and other information from maps, using technology such as Global Positioning System (GPS) and/or compass.** CTE.NRT.24.07

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**Use Geographic Informational (GIS) and Global Positioning (GPS) Systems – the student will be able to:** CTE.NRT.25.0

**A Define GIS and its function.** CTE.NRT.25.01

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**B Use GIS software.** CTE.NRT.25.02

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**C Learn GIS applications.** CTE.NRT.25.03

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**D Define GPS and its function.** CTE.NRT.25.04

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**E Collect GPS data and load on GIS.** CTE.NRT.25.05

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**F Identify other remote sensing tools.** CTE.NRT.25.06

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**Describe procedures for managing hazardous materials – the student will be able to:** CTE.NRT.26.0

**A Describe flow and life cycles of materials.** CTE.NRT.26.01

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**B Identify proper chemical handling and storage guidelines.** CTE.NRT.26.02

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**C Describe material management procedures.** CTE.NRT.26.03

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**D Identify waste minimization, pollution prevention and alternatives to disposal.** CTE.NRT.26.04

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**E** Describe shipping and transportation procedures for hazardous materials. CTE.NRT.26.05

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**F** Identify principles of toxicology. CTE.NRT.26.06

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**G** Identify routes of exposure. CTE.NRT.26.07

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**H** Discuss common chemical compatibility. CTE.NRT.26.08

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**Prepare a plan for a mock disaster activity – the student will be able to:** CTE.NRT.27.0

**A** Describe the need for and types of pre-planning. CTE.NRT.27.01

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**B** Identify and select necessary agency involvement for the type of disaster. CTE.NRT.27.02

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**C** Identify possible areas and types of impacts CTE.NRT.27.03

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**D** Write and evaluate contingency plans. CTE.NRT.27.04

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**E** Create a plan for a disaster clean up including needed materials and equipment. CTE.NRT.27.05

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**Identify career opportunities and organizational dynamics – the student will be able to:** CTE.NRT.28.0

**A** Identify careers and opportunities in the following fields: agriculture, Surface/stormwater, drinking water, wastewater, groundwater, land resources, air quality, solid waste, and HAZMAT. CTE.NRT.28.01

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**B** Identify the opportunities for leadership development available through an appropriate student and/or professional organization. CTE.NRT.28.02