GRADES 9-12 (Technology Education)  (Note:  High school courses are elective and most can be taken at any point during the high school cycle.)

Career and Technical Education Standard 9.1 – Career Awareness/Employability Skills

All students will develop career awareness and planning, employability skills and functional knowledge necessary for success in the workplace.

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Grades 9-12 will infuse NJCCCS 9.1 in each of the Technology/Technical courses with specific activities which vary by discipline content.

Course:  Construction Technology II  
Prerequisite:  Construction Technology I

All students electing further study in career and technical education will also:

1. Participate in a structured learning experience that demonstrates interpersonal communication, teamwork and leadership skills.

Students will:

- Investigate current issues in the construction field.
- Participate in projects supporting interpersonal communication, teamwork and leadership skills.
- Demonstrate interpersonal communication, teamwork and leadership skills in class presentations.

The Construction Technology II course is designed for students who wish to pursue a career in the construction field and have demonstrated an aptitude for this area.

Students will:

Receive their team assignments and guidelines for current issues in the construction field:

**Team I: Create a floating student desk and wall shelf.**  
Housing costs are high and many people have to make do with less space than they like. A floating student desk and shelf is, therefore, an excellent opportunity to create a separate work space without taking away from another need. The following activity steps are recommended:

- review the general style of the room the floating work space will be placed in
- design a floating shelf space unit that reflects this style
- create a design template using existing measurements (Wood: Technology and Processes, p.543) making sure that templates are created in the elected style
- select wood, paint or stains reflective of the chosen period, transfer pattern to wood and cut
- finish the wood, paint or stain and apply a protective finish if indicated
- hang the floating work station in the home using
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- prescribed hardware
- estimate material cost of project.
- **Extension Activity**: The team should relate these tasks to specific job titles from the career clusters and career ladder diagrams.

**Team II: Design and Create a Wall Clock Reflective of a Specific Furniture Period.**

Many students know what they like, but may have limited understanding of furniture trends and fashion. It is, therefore, vital that students understand these styles, appreciate that new items generally should blend with existing room styles, and create such a project. The following activity steps are recommended:

- research furniture styles to identify characteristic lines of specific furniture periods
- identify one furniture style and design a clock house reflective of this design (thumbnail sketches)
- enlarge design to preferred size to create a pattern (See p. 548 in *Wood: Technology and Processes* highlighting a project that can be adapted reflective of the Federal style.)
- obtain clock face housing insert measurements and draw them on to the pattern
- select wood and stains reflective of the chosen period, transfer pattern to wood and cut
- finish the wood, stain and apply a protective finish
- insert clock face, add hanging hardware
- estimate project cost.
- **Extension Activity**: The team relates these tasks to specific job titles from the career clusters and course diagrams.
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**Team III: Create a Shadow Box Table.**

Many people have collections or other items dear to them, but are afraid to display them for fear of damage. The shadow box table is ideal for such a purpose since it provides a glass/plastic covered display area that is multi-functional and can double as a small table. The following activity steps are, therefore, recommended:

- create a design template using existing measurements (*Wood: Technology and Processes*, p.543) making sure that templates are also created in the elected style
- select wood, paint or stains reflective of the chosen period, transfer pattern to wood and cut
- finish the wood, paint or stain and apply a protective finish if necessary
- estimate material cost of the project.

**Extension Activity:** The team relates these tasks to specific job titles from the career clusters and course diagrams.

**Team IV: Create a Stackable CD Shelf**

Housing costs are high and many people have to make do with less space than they like. A floating CD shelf that can be added to will permit a nice functional addition to the room without the reduction of available floor space. The following activity steps are recommended:

- review the general style of the room the shelf will be placed in
- design a multi-tiered CD shelving unit that reflects this style (For reference/adaptation consult p.528 in *Wood: Technology and Processes*)
- create a pattern reflective of the room style select wood and stains/paints reflective of the...
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2. Participate in simulated industry assessments, when and where appropriate.

3. Demonstrate occupational health and safety skills related to industry-specific activities. (Benchmark #4)

- Assess a woodworking facility using industry established health and safety guidelines.

- Participate in a laboratory health and safety assessment including a Material Safety Data Sheet (MSDS) review.

- chosen period, transfer pattern to wood and cut

- finish the wood (stain/paint) and apply a protective finish

- hang the shelf using correct hardware

- estimate project cost

- **Extension Activity**: The team relates these tasks to specific job titles from the career clusters and course diagrams.

**Note**: All students should create their own project within their teams.

Present their team projects to the class assuring:

- organize material for clarity and effective delivery

- observation of teacher-designated time

- speak clearly and loud enough to be heard

- integrate ‘communication hooks’ to reach and captivate the audience.

**Note**: This activity grade should be a combination of peer/self and teacher evaluation.

Listen to a teacher lecture demonstrating that the concept of safety is everyone’s business to limit injuries, disability and increased insurance costs and recognize that businesses must follow health and safety guidelines by law to:

- observe health and safety practices for their workers

- identify and prioritize potential hazards in the common service of cars to limit injury

- eliminate hazards wherever possible

- train employees in healthy and safe behavior reduce insurance costs for owner (business...
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4. Prepare industry-specific technical reports/projects

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<th>• Demonstrate correct health and safety procedures.</th>
<th>• insurance), employees (health insurance) and consumers (repair bills).</th>
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<td>• Create a technical report inclusive of a graphic aid.</td>
<td>Participate in a teacher demonstration on how to locate and use checklists pertaining to a construction site in the Safe Schools: a Health and Safety Check manual, and conducts a walk-through safety assessments with students using one of the checklists.</td>
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<tr>
<td></td>
<td></td>
<td>Receive a copy of the “Construction Technology Health and Safety Guidelines” for the purpose of:</td>
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<td></td>
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<td>• review and demonstration of guidelines</td>
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<td></td>
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<td>• special emphasis on illness spread by focusing on the hand washing procedures and blood borne pathogens guidelines</td>
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<td></td>
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<td>• addressing Right-To-Know guidelines and the reading and proper use of the MSDS</td>
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<td></td>
<td></td>
<td>• assess health and safety knowledge through the health and safety test.*</td>
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<td></td>
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<td>*Additional tests are given for use of specific equipment.</td>
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Receive several examples of creative and technical writing....

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<th></th>
<th>essay</th>
<th>creative story</th>
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that incorporate graphic aids, when and where appropriate. (Benchmark #3)

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- newsletter
- memorandum

......and explain how technical writing is different from that learned in English classes.

Listen to a teacher lecture identifying the major goals of technical writing:

- communicate to support a position
- choose words carefully to support acceptance/or enable precise communication by the audience
- present information in formats such as symbols, pictures, schematics, charts and graphs as part of the written communication
- present this information in industry accepted formats
- be efficient about length
- employ correct spelling and grammar of common and technical words.

Receive specific technical writing instructions outlining the parameters within their previous team work project consisting of cover letter and summative report of the projects they created earlier in the course.

Present their team technical writing projects to the class using the standard guidelines:

- speak from a position in the room in full view of the audience
- speak clearly and loud enough to be heard
- maintain some eye contact with audience during presentation
- display and integrate project into the activity.
- employ technology in the delivery (overhead
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Note: Construction Technology II is offered as an elective and meets for 80 minutes each day for the full year, or its equivalent time in a half-year block schedule.

projector, computer, etc.). (Extra credit)