

e2020 Curriculum Briefing Green Design and Technology (EL5730)

Course Description

This course will examine the impact of human activities on sustainability while exploring the basic principles and technologies that support sustainable design. Students will learn about the potential for emerging energy technologies, such as water, wind, and solar power. Students will find out how today's businesses are adapting to the increased demand for sustainable products and services. By the end of this course, students will have a comprehensive understanding of this fast-growing field. This course includes lessons on green design and sustainability; systems thinking; how to calculate carbon, water, and ecological footprints; life-cycle analysis and cradle-to-cradle design; deforestation, habitat loss, and species extinction; landfills and waste management; sustainable and unsustainable agriculture practices; and economics and the environment.

This course is aligned with the Washington State CTE Green Sustainable Design and Technology framework.

Topics of Study

- Systems thinking
- Waste management
- Green energy
- Green transportation
- Green agriculture
- Green manufacturing & construction

e2020 Curriculum Briefing (continued)

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Course Features

- Interviews with professionals in the field provide a career-related context for students' knowledge.
- This course includes many course graphics, animated images, and interactive exercises that enhance students' understanding.
- Practice pages throughout the course help to reinforce conceptual content as students progress through the course. Feedback ensures that students know if they've answered the questions correctly.
- Research-and-reflect assignments ask students to use the Internet to research questions and reflect on the concepts they've learned throughout the course.
- In an ecological footprint assignment, students calculate their ecological footprint, and then analyzes possible ways in which they can reduce their footprint.

Grading

Just as with our other e2020 courses, you always have the flexibility to tailor the grade weights for the course according to your own district, school, and student needs.

The default grades for this course are as follows:

- Assignments 20%
- Essays 0%
- Quizzes 20%
- Tests 10%
- Exams 0%
- Projects 50%
- Additional 0%