

# GREEN CONSTRUCTION Skills

Green Construction is the newest Construction Trade Area (CTA) in the BuildingSkills program. This exciting exploration into the process of environmentally responsible and sustainable construction techniques will attract a lot of student interest.



## Student Objectives

1. Gain an understanding of how photo-voltaic panels are installed and tested.
2. Determine through experimentation how window construction and insulation types can conserve energy.
3. Assemble and test a solar water heater to determine heat transfer between materials.
4. Use mathematics to compare and contrast the efficiencies of various lighting types.
5. Compare and contrast the cost of Green building materials with traditional construction.
6. Gain an understanding of Green building standards for environmentally sustainable construction.

## Activities Include:

1. Installation and testing of a solar panel array.
2. Installation of energy saving plumbing components.
3. Lighting and efficiency investigations.
4. Energy conservation properties of window types.
5. Thermal insulation efficiency.
6. Solar water heater construction.
7. Alternative construction materials.
8. Green construction cost comparisons.
9. LEED Green Building Rating System (Leadership in Energy and Environmental Design)

## Complete 10 Day Green Construction Unit Includes:

- Solar panel trainer
- Thermal efficiency trainer
- Electrical energy efficiency trainer
- Solar water heating trainer
- Plumbing trainer - PEX tubing
- Sustainable building materials display
- Testing equipment
- Tools
- Supplies
- DVD video instruction and Student Guidebooks

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