



Tying it Together -- Education and Maintenance are Key

- Increasing Awareness of Why and How
- Preventative Maintenance Program
- Commissioning and Re-commissioning



Increasing Awareness of Why and How

Maintenance Staff

Instructional Staff

Administrative Staff

Students and Public

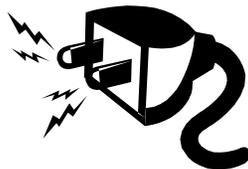
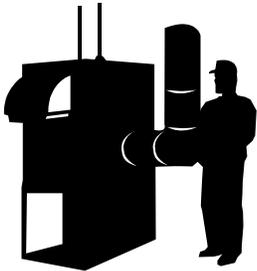
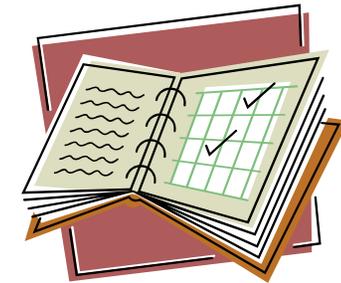


Preventative Maintenance Program

Establish – For All Systems

Keep on Schedule -- Check

Educate! Educate! Educate!



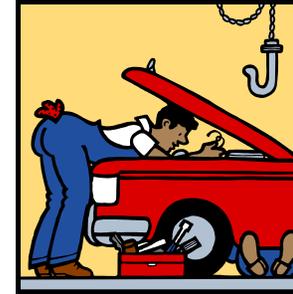


Commissioning and Re-commissioning

Commissioning when it is new or renovated

Re-Commission – Tune up

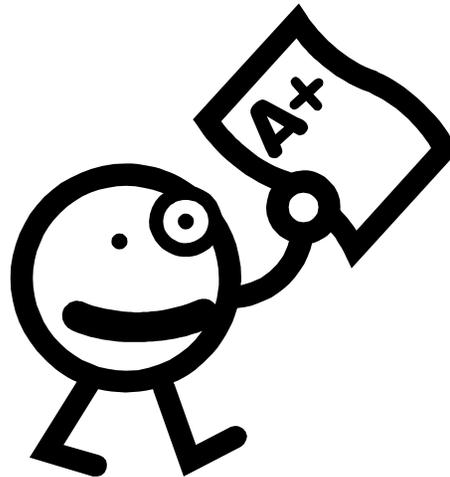
Educate!





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What part does energy awareness play in high performance Schools?





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What role does energy education have in EnergySmart





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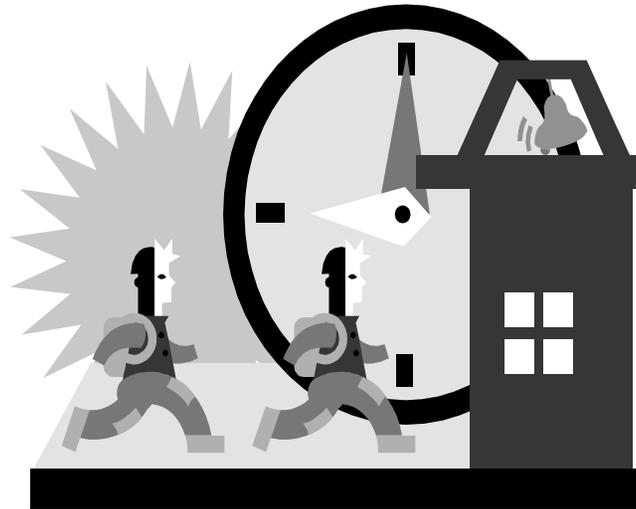
How would you define sustainability?





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How would you define a High Performance School?





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How would you describe day-lighting?





What energy sources would you consider renewable?





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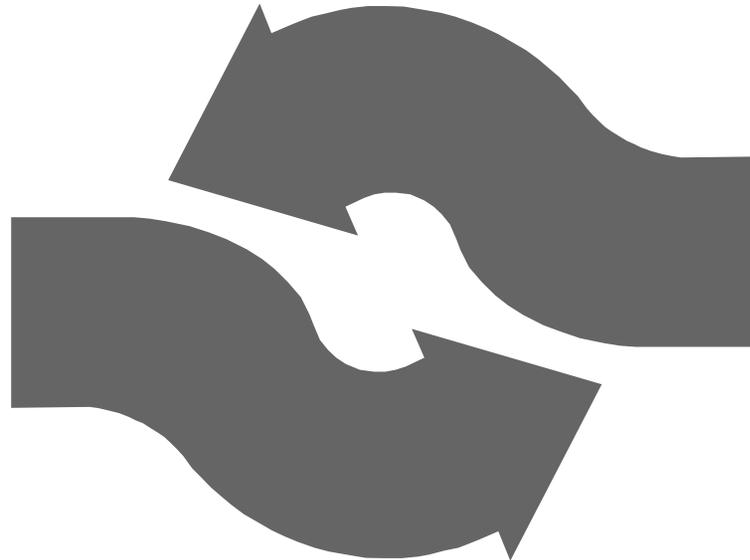
What is Holistic Design?





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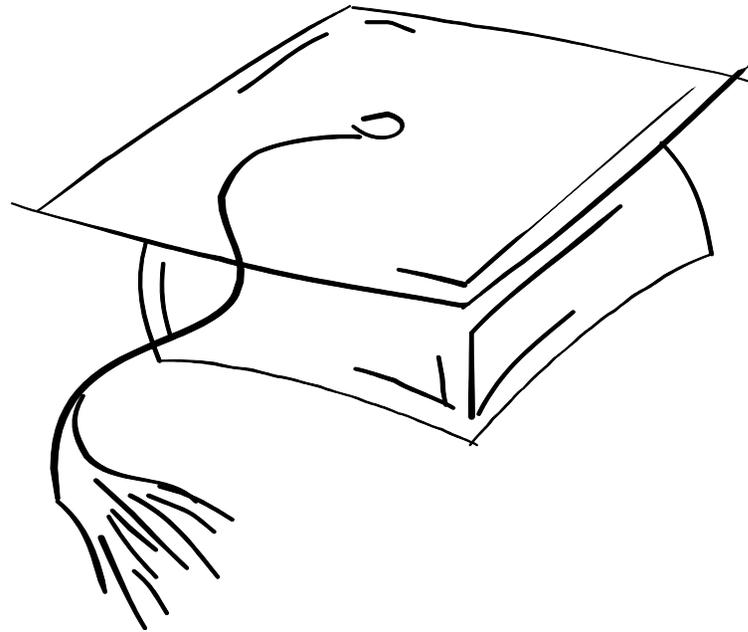
How would you describe geo-exchange?





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What is meant by an EnergySmart School?





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In a school budget, where does energy fall in importance and manageability?





What is the average cost of energy per student in US schools?

- a. \$100
- b. \$ 85
- c. \$ 175
- d. \$ 130
- e. \$ 250



What is the cost range for a school district to operate a soda (pop, soft drink) machine annually?

- a. \$50-125
- b. \$150 - \$300
- c. \$100 – 150
- d. \$300 – 400



What percentage range of a typical school budget is for energy used by the school district?

- a. 4-6%
- b. 1-2%
- c. 3-5%
- d. 5-7%



What is the most efficient lamp available for use in school lighting?

- a. T-5
- b. T-8
- c. T-12
- d. Incandescent
- e. Metal Halide



What percentage of energy used could be saved through changes in behavior or increased energy awareness?

- a. 25-30%
- b. 5-8%
- c. 10-15%
- d. more than 30%



What is the average Cost per square foot for energy used in a school building?

- a. \$1.75
- b. \$.50
- c. \$1.25
- d. \$0.90



What segment of the School community poses the best avenue for sustainability of energy programs in the future?

- a. Teacher
- b. Parents
- c. Custodian
- d. Students
- e. Principal



Does energy efficiency mean you must do without or be uncomfortable?

- a. Yes
- b. No



What is the major advantage of a modular construction in new school facilities?

- a. Lower Costs
- b. Controlled Construction Environment
- c. Time of Design to Occupancy
- d. More efficient use of materials



What is the annual energy used in all schools in the United States including fuel for school vehicle fleets?

- a. \$8.0 Billion
- b. \$7.4 Billion
- c. \$10.0 Billion
- d. \$6.0 Billion



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The New York State Energy Research and Development Authority (NYSERDA) with sponsorship from the U.S. Department of Energy and the National Association of State Energy Officials

High Performance School Design Online Training

www.hpschooldesigntraining.com



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Based on—and enhances—the *National Best Practices Manual for Building High Performance Schools*

Courses features multimedia lecture, web-based resources, required reading from the Manual, interactive test, discussion forum

www.hpschooldesigntraining.com





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What is NYSERDA's online training?

25 courses covering strategies and techniques for designing high-performance school buildings

13 courses available now; 12 more to be completed in January 2004

Based on an integrated, "whole building" design approach for achieving high performance school buildings

www.hpschooldesigntraining.com





What topics are covered in the online training?

High Performance Schools and the Integrated Design Process

Design Criteria

Site Design

Lighting and Electrical Systems

Daylighting and Windows

Energy-Efficient Building Shell

Mechanical and Ventilation Systems

Renewable Energy

Water Conservation



more . . .



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What topics are covered in the online training?

Recycling Systems, Waste Management
and Construction Management
Transportation
Resource-Efficient Building Shell
Health and Productivity
Commissioning

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Architects, engineers, and students may:

Receive continuing education credit (curriculum has been submitted to AIA's Continuing Education System for 1 Learning Unit per course in Health, Safety, Welfare)

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The Project Development Team:

NYSERDA staff

Building Media, Inc.

The Collaborative for High Performance Schools

Eley Associates

The New Jersey Institute of Technology

The Sustainable Buildings Industry Council

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Does HP design = HP school?

NO

Buildings are operated by people
Energy awareness and knowledge are the keys to
success

EDUCATE! EDUCATE! EDUCATE!



Does HP design = HP school?

Education and Maintenance are Key

Increasing Awareness of Why and How

Preventative Maintenance Program

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Building high performance schools today is essential for the future of our nation and its students.

If you do not begin today, you are mortgaging the future of your children and your grandchildren.

If you do not start now, when will you start?

THE FUTURE IS NOW





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