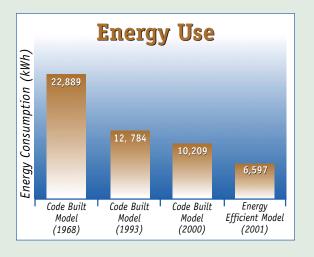
The energy efficient model portable classroom

in use during the 2001-02 school year in the Portland area showed 30 to 50 percent savings in energy use and cost compared to similar size portable classrooms built to code in a neighboring school district.





- ✓ More energy efficient
- ✓ Healthier indoor air quality
- ✓ More comfortable
- ✓ More durable

For more information, call Justin Klure The Oregon Office of Energy

1-800-221-8035 or visit our Web site: www.energy.state.or.us





This case study was published under a grant funded by the U.S. Department of Energy. The funding provided by the U.S. Department of Energy does not constitute an endorsement by US DOE for any of the views or findings expressed in the case study.

Printed on recycled paper

July 2002

\$10 \$12 \$14

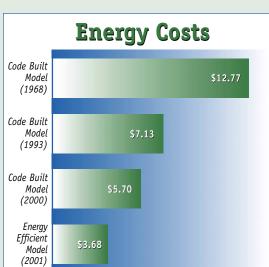
\$8

\$ per sq. ft.

OOE CF-051

Purchasing a *HIGH*-PERFORMANCE Portable Classroom ✓ Lower operating costs 🗸 Healthier 🗸 More comfortable







Getting more for your school district's dollar. . .

As school districts continue to deal with expanding enrollments and shrinking budgets, portable classrooms have become a common and accepted solution. This short-term fix, more often than not, becomes a permanent classroom. It is not uncommon for Oregon schools to have one or more portable classrooms that are 15 and 20 years old. Nearly 30 percent of all portable classrooms in Oregon are more than 20 years old.

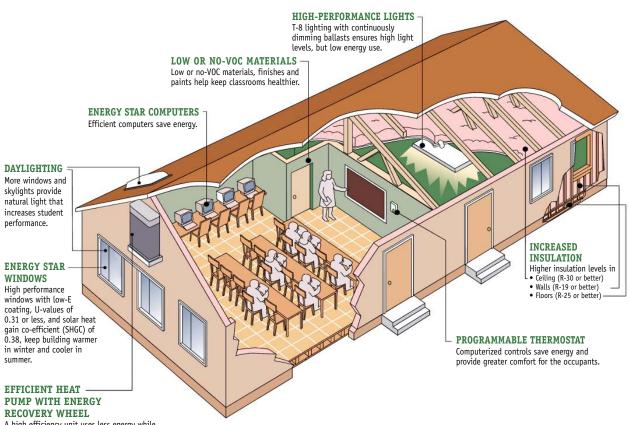
And what was initially the lowest-cost preference, soon becomes a high-operating cost headache. Energy analysts generally assume stand-alone, fully exposed portable classrooms use more energy per square foot than regular classrooms. Insulation is normally minimal and trying to keep the temperature controls set to building standards is difficult. This increased energy usage, along with rising energy costs, result in higher utility bills.

More importantly for student and staff health and comfort are concerns for indoor air quality (IAQ), adequate natural lighting and a stable room temperature. Most portable classrooms are built with materials and finishes that emit high volatile organic compounds (VOCs). These noxious fumes are even more of a concern because of the poor ventilation in most portables. The number and size of windows are often limited making the room dark and closed-in. Add a poorly insulated, drafty structure and it's easy to see why student performance is impacted and staff complaints are high.

What can you do?

When making the purchasing decision, look at an energy efficient, "healthier," more durable portable classroom. The additional up-front costs will vary depending on the options you choose. But, in the long run, you will have a big pay-off — lower monthly utility bills and a healthier and more comfortable classroom for students and staff.

High Performance Portable School Classroom



A high efficiency unit uses less energy while providing greater comfort (EER 12.5 / COP 4.1).

Look for a portable classroom that has these specific features:

- Efficient HVAC system (EER 12.5/COP 4.1)
- Programmable thermostat (7-day programmable)
- T-8 compact fluorescent lighting (0.885 Watts per-square-foot)
- Higher insulation values (roof: R-30 or better; wall: R-19 or better; floor: R-25 or better)
- Daylighting windows (lets in natural light, keeps out heat)
- Efficient windows (low e; U value of .31 or less; solar heat gain co-efficient of 0.38)
- Continuously dimmable ballast
- Low and no-VOC materials/paints/finishes
- 2 x 6 wall construction

Call Justin Klure at the Oregon Office of Energy, 1-800-221-8035, for more information.