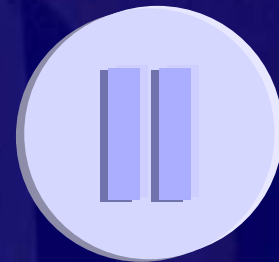


WELCOME TO

*The Art of
Building Science*SM

WORKSHOP

New Homeowner Concerns



Homeowners have come to expect more in their new homes than ever before. An understanding of Building Science can help you create better living environments and more satisfied homeowners.



What is Building Science?

- ❖ Building Science is a *systems approach* to home building that considers the relationships between a home's components and its environment.



What is Building Science?

- ❖ Building Science aims to optimize occupant health, comfort and safety while maximizing energy efficiency and structural durability.



A house is a living, breathing thing

- ❖ The building envelope
- ❖ The mechanical systems
- ❖ The occupants
- ❖ The environment

All components are interrelated through building dynamics



The goals of Building Science

- ❖ Improve occupant comfort
- ❖ Reduce energy costs
- ❖ Control moisture
- ❖ Reduce indoor air pollution
- ❖ Reduce builder/contractor callbacks
- ❖ Create satisfied homeowners



Building Science is and will continue to be an art

- ❖ Building plans are never identical
- ❖ Building materials/components are never identical
- ❖ Sites are never identical
- ❖ Mechanical systems are never identical
- ❖ Occupants living habits are never identical



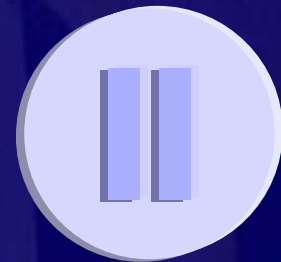
Small changes in one component can have dramatic and unexpected effects on the entire house

- ❖ Changing size of heater and/or air conditioner
- ❖ Increasing size of room from original plan
- ❖ Adding a fireplace
- ❖ Changing exterior siding material
- ❖ Replacing double hung windows with picture windows
- ❖ Site location and/or orientation

Actions of occupants and the environment can also affect the entire house

- ❖ Opening a window
- ❖ Turning heat on and off
- ❖ Doing laundry
- ❖ Cooking
- ❖ Wind

***Introducing Heat Flow,
Air Flow and Moisture Flow***



The marketplace is continuing to change and our industry has to keep pace

- ❖ Educated, more demanding consumers
- ❖ Increased liability litigation
- ❖ Builder and contractor consolidation
- ❖ Changing building codes

Overview of the *Art of Building Science Program*

Heat Flow

Air Flow

Moisture Flow

Indoor Air Quality

Evaluating HVAC & Building Envelope

Sound Control for New Homes

Conclusion

Most modules are structured like this:

- ❖ **Discussion** of topic (Example: Heat Flow)
- ❖ **Problems** caused by Heat Flow
- ❖ **Solutions** to Heat Flow problems

View Heat Flow Next

Every
component
matters.

A home
is a
system.