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Day 1 Exercises

Section 1 – Introduction to Installations Basic Building Science – “The Rules of the Game”

- 1) List 4 common goals for doing energy retrofits.

- 2) Define the term RETROFIT.

- 3) List 4 common energy retrofits.

Section 2: Basic Building Science – “The Rules of the Game”

- 1) Heat moves from _____ to _____.
- 2) Air moves from _____ to _____.
- 3) Moisture moves from _____ to _____.
- 4) Heat, Air, and Moisture will continue to move until everything is _____.
- 5) Heat can move in three ways. List them below:
_____ (when objects are touching)
_____ (thru air movement)
_____ (thru space)
- 6) A hot air balloon rises because _____ rises.
- 7) Name the 2 requirements for air to move.

Sections 3: Basic Building Science Lab

Station #1

- 1) What was the moisture source that caused the “roof leak” in Grandma’s House?

- 2) Name the ways that heat moves from the woodstove in Grandma’s House.

Station #2

- 3) Describe what you did to the stackolator to make air move out the very top.

- 4) Describe what you did to the stackolator to make air move out oward the top, in at the bottom, and neither in/out in the middle.

Station #3

- 5) Describe what sealing you did to make the dryer backdraft the water-heater.

- 6) Describe what sealing you did to make the fireplace backdraft.

Section 4: Introduction to Blower Door

- 1) What is a CFM? _____
- 2) How many CFM leak through the home for every 1 CFM that goes through a blower door fan?
_____ CFM
- 3) List 2 things that a blower door helps you do at a home.

NOTES for Blower Door Setup:

Section 5: Blower Door Lab

Stage 1 _____
Stage 2 _____

Stage 3 results _____ @ 35pa
_____ @ 50pa
_____ @ 65pa

Section 6: Blower Door Lab Wrap-up

- 1) Why were some of the readings the same at different pressures?

- 2) Why were some of the readings different?

- 3) What could you do if you can't reach the desired pressure with the fan at full-speed?

- 4) What must you do if the gauge flashes "LO"?

Section 7: Insulation 101

- 1) Describe how insulation slows the flow of heat.

- 2) List 4 common insulation problems.

Day 2 Exercises

Section 8: Beyond Blower Door

1) What can a Pressure Pan help find?

2) What can Chemical Smoke help find/confirm?

Section 9: Air-sealing Materials

1) Which Caulk is never acceptable?

2) Caulk can seal gaps up to _____”.

3) Sprayfoam can seal gaps up to _____”.

4) Name 3 common air-sealing mistakes.

Name: _____

Date: _____

Class Checklist Beginning Installer

Directions: Each student must demonstrate each of the following items and have it confirmed by the instructor before the end of class on Day 2. Failure to complete this checklist will result in a “non-pass” for the course.

Remove your checklist and turn it in to the instructor before leaving on Day 2.

<u>TASK</u>	<u>Instructor Sign-off</u>
1. <u>Complete all Handbook Exercises</u>	_____
2. <u>Complete Skills Demonstration (3 props)</u>	_____

	Name:	Agency:	Date:	Pressure Test
1	Non-IC Can Light Prop 	The <u>Non-IC Can Light Prop</u> is designed to simulate a recessed light. Construct an air sealed box over can lights. MATERIALS _____ _____ _____ _____	QUANTITY _____ _____ _____ _____	0 Leaks 1 Leak 2+ Leaks
2	Large Hole with Flue Pipe Prop 	The <u>Large Hole with Flue Pipe Prop</u> is designed to simulate a flue penetrating an attic through a mechanical chase. Students will learn how to select appropriate fire-rated materials to effectively air-seal an opening with a heat source. MATERIALS _____ _____ _____ _____	QUANTITY _____ _____ _____ _____	0 Leaks 1 Leak 2+ Leaks
3		<u>PVC Vent Stack Prop</u> with large and small bypasses. MATERIALS _____ _____ _____ _____	QUANTITY _____ _____ _____ _____	0 Leaks 1 Leak 2+ Leaks