



Principles of Home Inspection: Systems and Standards, Second Edition

©Carson Dunlop & Associates

Timed Outline: 50 Hours

For

Casey, O'Malley Associate's 6-Day Comprehensive Live Class Module

Total class time **online module and live** is 90 hours (approx)

Notes:

The PowerPoint lectures for this course contain numerous photographs of systems and components in the field. All times are approximate.

Topics	PowerPoint/ Slides	Hours
Standards and Reports • Standards of practice • Code of ethics • Reports	Class Overview and Chapter 1, slides 1-104	1.5
Exterior Cladding • Overview of components and materials • General inspection strategy • Brick, stone, and concrete • Conventional stucco • Synthetic stucco	Chapter 2, slides 1-89	1.0
Exterior Cladding • Wood siding • Plywood, hardboard, and OSB • Metal and vinyl siding • Cement-based siding • Clay and slate shingles • Asphalt shingles	Chapter 2, slides 90-188	1.5
Wood/Soil Contact and Exposed Foundations Soffits and Fascia Windows and Doors Trim, Flashing, and Caulking	90-188	Incl above
Exterior Structures • Porches, decks, and balconies • Railings • Columns • Beams • Joists • Porch and deck floors • Garages and carports	Chapter 2, slides 189-213	1.0
Surface Water Control and Landscaping • Flat roof drainage • Window wells • Walks, driveways, and grounds Exterior Inspection Procedures	Chapter 2, slides 214-254	1.0



Steep Roofing • Asphalt shingles • Ice dams • Wood roofing • Slate roofing • Clay tile • Concrete tile • Fiber cement roofing • Metal tile	Chapter 3, slides 1-101	1.5
Steep Roof Flashing • Valley flashing • Chimney flashing • Hip and ridge flashing • Stack and vent flashing • Roof/wall flashing • Skylight flashing Low slope roofing, BUR, Mod Bit, EPDM	Chapter 3, slides 102-207	2.0
Structure: Footings & Foundations • Functions • Configurations	Chapter 4, slides 1-72	1.5
<ul style="list-style-type: none"> • Types • The macro approach • Settling • Crack analysis • Settlement corrective actions • Shrinkage cracks • Horizontal forces • Backfill height • Foundation surface damage 	Incl. above.	Incl above
Structure: Floors • Sills • Columns • Beams • Joists • Engineered wood • Subfloors and floor slabs	Chapter 4, slides 73-130	1.0
Structure: Walls • Solid masonry walls • Wood frame walls • Brick veneer walls • Arches and lintels	Chapter 4, slides 131-166	1.0
Structure: Roof Framing • Roof rafters, roof joists, and ceiling joists • Trusses • Roof sheathing • Roof framing Structure Inspection Strategy	Chapter 4, slides 167-206	1.5
Insulation • Introduction • R-Value • Moisture • Building envelope • Materials • Radiant barriers • Vapor barriers • Roof ventilation • Living space ventilation	Chapter 5, slides 1-148	2.0



<ul style="list-style-type: none"> • Attic insulation inspection • Flat roof and cathedral ceiling inspection • Above-grade wall insulation • Basement and crawlspace inspection • Exhaust fan inspection • Insulation and ventilation inspection procedure 	Incl. above	Incl above
Interiors • Floors • Walls • Party walls • Ceilings • Trim and cabinets • Stairs	Chapter 6, slides 1-75	1.0
Interiors • Windows • Doors • Foundation flaws • Concrete block foundations • Wet basement clues, Built-in Appliances	Chapter 6, slides 76-186	1.0
Electrical Systems • Electrical basics • Service drop and laterals • Service entrance • Service size • Service box • Grounding and bonding	Chapter 7, slides 1- 83	2.0
Electrical Systems • Introduction to distribution panels • 240-volt and multi-wire circuits • Distribution panel conditions	Incl. above time, slides 84-117	Incl above
Electrical Systems • Distribution wiring • Branch circuit wiring conditions • Knob and tube wiring • Aluminum wiring • Lights • Receptacles	Chapter 7, slides 118-213	2.0
• GFIs • Switches • Junction boxes	Incl. above	
Heating: Gas Furnaces • Introduction • Gas piping • Combustion air • Burners • Heat shields • Heat exchangers • Air filters	Chapter 8, slides 1-122	1.0
Heating: Gas Furnaces • Ducts and registers • Testing procedure • Mid-efficiency furnaces • High-efficiency furnaces • Testing procedure for high-efficiency furnaces	Chapter 8, slides 123- 231	1.0
Heating: Oil tanks & appliances	Chapter 9, slides 1-37	.5 hr



<p>Heating: Hot Water Boilers • Introduction • Boiler controls • Distribution piping • Radiators • Boiler inspection procedures , intro to Steam boilers</p>	Chapter 10, slides 1-70	1.0
<p>Heating: Chimneys • Chimney inspection • Flue liners • Chimney caps • Chimney height • Fire safety • Draft • Chimney damage • Intro to vents</p>	Chapter 11, slides 1-50	1.0
<p>Heating: Metal Chimneys/Vents • Metal chimneys/vents Heating: Fireplaces • Fireplaces • Fireplace hearths • Fireboxes</p>	Chapter 11, slides 50-100	1.5
<p>• Dampers and draft • Smoke chamber • Fireplace face/breast • Ashpit</p>	Incl. above	Incl above
<p>Heating: Fireplaces • Combustion air • Glass doors • Heat circulators Electric Systems • Baseboard heaters • Electric furnaces • Plenum heaters • Radiant heat</p>	Chapter 11, slides 100- 159	1.0
<p>Air Conditioning • Types • Components and their functions • The air conditioning cycle • Capacity • Compressor • Life expectancy • Condenser coils • Evaporator coils</p>	Chapter 12, slides 1-100	1.5
<p>Air Conditioning • Condensate system • Case studies • Refrigerant lines • Condenser fan • Evaporator fan Heat Pumps • Introduction • Heat pumps in practice • Heat pump conditions</p>	Chapter 12, slides 101-178	1.5
<p>Plumbing: Supply System • Supply plumbing system goals and performance • Water entry piping • Supply piping distributions Plumbing: Water Heaters</p>	Chapter 13, slides 1-62	1.0



• Introduction • Gas-fired, oil-fired, and electric water heaters,	Incl. above	Incl above
Plumbing: Water Heaters • Common problems of conventional water heaters • Fan-assisted water heaters tankless heaters Plumbing: DWV • Introduction • DWV materials • DWV conditions	Chapter 13, slides 63-172	2.0
Plumbing: DWV • Traps • Floor drains • Venting system • Sewage ejector pumps	Chapter 13, slides 173-208	1.0
Plumbing: Fixtures and Faucets • Introduction • Basins, sinks, and laundry tubs • Faucets • Toilets • Bathtubs • Tub and shower stall enclosures • Shower stalls	Chapter 13, slides 209-297	1.5
Field Exercises – Home Inspections and Review of findings	Field at houses	12.0
Total Classroom Interaction Technical/Business	Classroom	38.0
TOTAL		50.0

Students receive these class books:

Students receive the Systems & Standards, 2nd edition (836 pgs)
And Code Check California, 2008 edition



Principles of Home Inspection Class Highlights and Learning Objectives

This comprehensive course reviews all major home systems and provides time efficient coverage of system and component problems, their practical implications, and inspection strategies for finding them.

This class provides comprehensive, in-depth training for students wishing to enter the profession or enhance their existing knowledge. With clear descriptions, detailed technical illustrations, and useful summaries of products, this course is the most exhaustive distance training available. Created by Carson Dunlop & Associates and **modified for the West by COA**, one of the most successful home inspection companies in North America, Principles of Home Inspection is based on years of practical experience in both inspecting homes and training inspectors.

Highlights

- Over 400 detailed technical illustrations reinforce key concepts
- Interactive exercises keep students focused and increase material retention
- Thematic graphics keep the material fresh and compelling
- Unit exams test subject mastery and identify topics requiring additional review
- Detailed Contents
- Communication and Professional Practice
- Learning Objectives
- By the end of this unit you should be able to:
 - describe the difference between a home inspection and an appraisal
 - indicate the average time required to complete a home inspection
 - list four advantages of having clients attend the inspection
 - describe what a home inspector's clothing and vehicle should reflect
 - list ten basic tools that home inspectors typically use
 - list the four parts of a home inspection and the amount of time typically spent on each
 - list a typical routine or flow of an inspection
 - describe the macro/micro approach to home inspection
 - list ten things inspectors commonly fail to put back the way they found
 - describe the purpose of the closing discussion
 - list four reasons reports are needed
 - list ten common components of the body of the report, and give an example of each

The course includes:

- Descriptions of every major house system and component
- An introduction to communication and professional practice issues
- Consideration of standards of practice and ethical issues
- Coverage of appliances
- Over 400 detailed technical illustrations
- Inspection checklists to help students review key points and begin organizing their approach to actual inspections
- Summaries of inspection procedures for each major system
- Lists of recommended and optional inspection tools for each major system



For each house system covered, the course takes a step-by-step approach to the inspection process, including:

- 1) Surveying the problems that can occur with each system and component;
- 2) Explaining the practical implications of problem conditions, and
- 3) Providing inspection strategies for each problem discussed.

Course Objectives

Upon successful completion of the Principles of Home Inspection Course, students will be able to:

- Attain the necessary knowledge indicative of the home inspection industry standards
- Recognize residential construction materials and techniques of construction
- Recommend the remedial action required to rectify identified problems
- Have a working knowledge of inspection equipment and use and application
- Identify personal protective clothing used in home inspection
- Identify and prioritize the most common defects found in residential construction
- Inspect a residence pursuant to general industry standards.
- Report inspection findings consistent with recognized methods.
- Identify and locate resources and technical reference materials.
- Apply attained knowledge in practical settings with a high degree of confidence.
- Sit for state inspection exams
- Expect to pass exams based on the course of home inspection.
- Earn a valid Continuing Education Completion Certificate where and when applicable
- Enjoy a successful career track

Assessment

Each study session includes learning objectives, reading assignment, a comprehension quiz, and interactive exercises that reinforce visual as well as conceptual insight. A comprehensive final exam is also provided for students to take online, to help students prepare for actual licensing exams that may be required by their state or professional organization.

Learning Objectives for Each Unit

Exteriors

Learning Objectives

By the end of this unit you should be able to:

- identify ten types of exterior siding material
- recognize soffits and fascia
- describe how windows and doors are made weather-tight
- describe the function of trim, flashings, and caulking
- list the common problems with each of the types of siding, soffits, fascia, windows, doors, trim, flashing, and caulking
- recognize structural and safety components, including steps, railings, columns, beams, joists, floors, roofs, skirting, doors, drains, and walls
- assess the grading of the land around a house and recognize the effects of poor grading
- identify what gutters and downspouts are made of and assess their condition
- understand how window wells are built, what common problems can be found with them, and the implications of the problems
- inspect walks, driveways, and grounds for their condition and usability to the occupant



- understand how retaining walls are built and how they fail
- list the common implications of failure or non-performance for each component
- describe the inspection strategy and tools necessary to identify common problems with each component

Roofing

Learning Objectives

By the end of this unit you should be able to:

- list three roof functions
- define roof pitch and square
- describe four components of the goal of the roof inspection
- be familiar with the installation details associated with different kinds of roofing materials.
- recognize and distinguish the different types of roofing materials
- understand the typical conditions for various roofing materials and how to inspect for them
- know the inspection strategies used to identify roof problems
- identify the various types of steep roof and low-slope roof flashings
- know the materials and locations where flashings are used
- know the common problems associated with flashings
- describe the problems specific to low-slope roofs

Structure

Learning Objectives

By the end of this unit you should be able to:

- list nine steps in crack analysis
- define dead loads and live loads
- list twelve common foundation problems
- list four types of cracks, their characteristics and implications
- describe how crack size can be misleading
- list four things you may recommend to clients with respect to cracks
- know the implications of pier movement and how to identify it
- understand the function of sills and common sill problems.
- list common problems with columns and their implications.
- describe the function of beams and common problems associated with them.
- list twelve common joist problems
- list nine subflooring problems
- list seven concrete floor problems
- list six common problems with masonry walls in addition to cracks.
- list seven common wood frame wall problems
- list nine common lintel problems
- define rafters, roof joists and ceiling joists and identify the common problems associated with each
- identify different types of trusses, including functions and typical conditions associated with them.
- know the function of sheathing, the types available and common conditions associated with it



Insulation

Learning objectives

By the end of this unit you should be able to:

- define the terms insulation, vapor retarder, and air barrier, including their purposes
- describe the implications of inadequate insulation and air/vapor barrier
- name two kinds of house ventilation
- define thermal bridges and perm
- list eight common insulation materials and their forms
- describe the issues surrounding urea formaldehyde foam insulation
- give two reasons it is important to control air movement through building walls and roofs
- list six qualities of a good air barrier and five qualities of a good vapor barrier
- indicate whether vapor barriers should be on the warm or cold side of walls
- explain why a vapor barrier should be laid on an earth floor in a crawlspace
- list the functions and types of roof vents
- give two reasons for venting house air
- list three general approaches to ventilation
- state at least three precautions you should take when inspecting attics
- list the ventilation-related problems (and their implications) you may find in attics
- list three common problems with wall insulation
- list nine common problems with basement and crawlspace insulation and ventilation
- list seven common areas where insulation may be provided over unheated spaces
- list ten problems with exhaust fans, and their implications

Interiors

Learning Objectives

By the end of this unit you should be able to:

- list the problems and implications related to concrete, wood, carpet, resilient, and ceramic flooring
- list the problems and implications related to plaster, drywall, and wood walls
- list two party wall problems and their implications
- describe two inspection strategies that help with ceiling inspections
- list the problems and implications related to plaster, drywall, metal, and wood ceilings
- list five trim problems and their implications
- list nine countertop problems and their implications
- list twelve cabinet problems and their implications
- define tread width, rise, run, stringer, winder, guardrail, handrail, and baluster as they apply to interior stairs
- list 35 common problems with stairs and their implications
- list four window functions and eight common window types
- list six frame problems and their implications
- list eight sash problems and their implications
- list six interior trim problems and their implications
- list six glass problems and their implications
- list five hardware problems and their implications
- explain how window size or location can be a problem
- list thirteen door and frame problems and their implications



- list six implications of basement and crawlspace problems
- list twenty signs of moisture in basements and crawlspaces

Electrical Systems

Learning Objectives

By the end of this unit you should be able to:

- recognize the electrical service drop and service entrance and how they should be arranged
- determine the size of the service and how to advise your client about it
- recognize the problems commonly found on the service drop and their implications
- identify common problems found on service entrance conductors and their implications
- understand the function of the service box or service panel
- be familiar with the arrangement and location of the service box
- recognize the common conditions found in service boxes and their implications
- know the functions of grounding and bonding
- understand the common problems found in system grounds and their implications
- identify 17 common problems with branch circuit wiring, and their implications
- recognize conditions found in all panels, as well as those unique to subpanels, fuses, breakers and panel wires
- explain the relative advantages of fuses and breakers
- understand how wires should be connected and supported
- understand how to identify knob-and-tube wire and the issues associated with it
- know how to identify aluminum wiring and the issues associated with it
- be familiar with common problems at lights and receptacles and their implications
- be familiar with the strategies for inspecting the various components of household electrical systems

Gas Furnaces

Learning Objectives

By the end of this unit you should be able to:

- list and describe the two most common types of gas burners
- describe the function of the gas valve, pilot light and thermocouple, on a residential furnace
- list nine conditions that may be found with gas combustion equipment
- list two problems commonly found with gas furnace heat exchangers
- list six problems found with furnace cabinetry
- describe the setting and function of the three fan/limit controls
- list six problems found with fan controls
- list seven conditions found with thermostats
- list eleven conditions that are found with vent connectors
- list eight components of the duct system in a forced air system
- list twelve problems with duct systems
- list twelve components of a conventional gas-fired furnace
- outline the four basic components of the inspection and testing procedure for a conventional gas furnace
- list the components of an induced-draft condensing furnace
- list and describe the eight common problems found with high-efficiency furnaces



- outline the basic testing procedure for a high-efficiency furnace
- describe the life expectancies of different efficiency gas furnaces

Oil Furnaces

Learning Objectives

By the end of this unit you should be able to:

- list five problems found with oil storage tanks
- list four problems found with oil, fill and vent pipes
- list four problems found with oil supply lines
- list two problems found with the oil filter
- describe in five sentences the basic workings of an oil burner
- list six problems found with oil burners
- describe three different materials commonly used for refractories
- list two problems found with refractories
- describe the function of and problems associated with the primary controller
- describe the operation of a barometric damper
- list six problems commonly associated with the barometric damper
- list twelve problems associated with the vent connector
- describe the basic difference between a mid-efficiency and a conventional oil furnace, and list two of the concerns

Hot Water Boilers

Learning Objectives

By the end of this unit you should be able to:

- list four materials used in boiler construction
- list ten differences between boilers and furnaces
- list the advantages and disadvantages of hot water heat
- list three problems found with boiler heat exchangers
- list and describe in one sentence the function of the four types of automatic safety controls
- list fifteen problems found with automatic safety controls
- describe eight normal operating controls
- list the common problems found with these operating controls
- List four problems found with expansion tanks
- list three problems found with pumps
- list four problems found with pipes
- list the eight problems found with radiators, convectors and baseboards
- list the four problems found with radiant heating
- list the four problems found with tankless coils
- list the problems found with high-efficiency boilers
- understand how long different boilers last
- understand how to use a general rule to determine the adequacy of the boiler capacity

Other Aspects of Heating

Learning Objectives

By the end of this unit you should be able to:

- list five components of masonry chimneys
- list 25 common masonry chimney problems and their implications



- list 13 common metal chimney or vent problems and their implications
- define in one sentence each creosote, ash and soot
- list four main components of a wood stove
- describe the difference between radiant and convective stoves
- describe in one sentence three types of wood-burning fireplaces
- list seven components of masonry fireplaces and their common problems
- describe the implication of each problem
- identify electric heating systems
- recognize all of the components and describe each of their functions
- list the common problems encountered with electric heating systems
- describe the implications of each of these problems

Air conditioning and Heat Pumps

Learning Objectives

By the end of this unit you should be able to:

- define in one sentence each the function of the compressor, condenser, evaporator and expansion device
- describe in two sentences how air conditioners dehumidify
- list ten factors that affect how much air conditioning is needed
- explain the implications of an undersized air conditioning system
- explain the implications of an oversized air conditioning system
- describe the location of the air conditioning compressor
- describe in one sentence the function of a crankcase heater
- list nine common compressor problems
- describe the location and function of the condenser fan and the evaporator fan
- list four common condenser fan problems
- list seven common evaporator fan problems
- list eight common duct problems
- describe the function and appropriate locations for thermostats
- list seven thermostat problems
- give the normal life expectancy for conventional air conditioner compressors
- list nine tricks for identifying heat pumps
- list seven common heat pump problems

Plumbing

Learning Objectives

By the end of this unit you should be able to:

- describe functional flow
- list three things that can go wrong with supply piping
- list four factors which affect the pressure or flow at a fixture
- describe the location and function of a water pressure regulator
- list six problems commonly found with pressure regulators
- list seven different materials used for supply piping
- describe the weaknesses and strengths of each type of pipe
- list four common problems with service piping
- describe seven problems found with supply piping
- identify common water heaters and recognize all of their components
- list the common problems found with various types of water heaters



- identify common drain, waste and vent materials and distinguish their function
- list the common problems found with each DWV component
- describe the implication of nonperformance of these components
- describe the inspection strategy for identifying problems
- identify each of the major plumbing fixtures, their function, and how they should be connected to the plumbing system
- list the common problems found with each fixture, their implications, and the inspection strategy used to identify them

Appliances

Learning Objectives

Most major household appliances have life spans of 10 to 20 years. They can cost several hundred dollars to replace, but do not generally play a major part in the decision to buy a house. Appliances can be changed much more easily than the structure, roof, plumbing, heating or electrical systems.

The appendix provides an overview of some common household appliances. A tremendous variety of appliances are available, and not all are considered in these pages. We recommend that owner's manuals be consulted for regular maintenance on all household appliances. If the manuals are not on hand, they are usually available from the manufacturer.

Household appliances may be built in, or portable (often referred to as freestanding). Generally speaking, installed appliances will remain with the house when it is sold, but freestanding appliances are often removed. The purchase agreement normally stipulates which appliances stay with the house.



Fundamentals Online Program

This module is designed to prepare the student for the COA 6-Day comprehensive live class

FUNDAMENTALS OF HOME INSPECTION	Time (hours)
Roofing/Flashing/Chimneys	2.5
Reading Assignment	
ROOFING	
FLASHINGS	
CHIMNEYS	
PROBABILITY OF LEAKAGE	
Reading Comprehension Quiz 1	
Interactive Exercises	
Unit Exam 1	
Exterior	2.5
Reading Assignment	
GUTTERS AND DOWNSPOUTS	
LOT GRADING	
DOORS, WINDOWS AND TRIM	
WALL SURFACES	
PORCHES, DECKS, BALCONIES,	
ENTRANCES AND CARPORTS	
WALKS, DRIVEWAYS, AND LANDSCAPING	
BASEMENT WALK-OUT	
GARAGES	
RETAINING WALLS	
Reading Comprehension Quiz 2	
Interactive Exercises	
Unit Exam 2	
Structure	7.5
Reading Assignment	
THE BASICS OF STRUCTURES	
FOOTINGS	
FOUNDATIONS	
CONFIGURATION	
FLOORS	
WALLS	
ROOFS	
MASONRY CHIMNEYS	
TERMITES	
OTHER WOOD BORING INSECTS	
MECHANICAL DAMAGE AND FIRE DAMAGE	
Reading Comprehension Quiz 3	



Interactive Exercises
Unit Exam 3

Electrical 4

Reading Assignment
THE BASICS
SERVICE ENTRANCE
SERVICE PANEL
BRANCH CIRCUIT WIRING
LIGHTS, OUTLETS, SWITCHES
& JUNCTION BOXES
Reading Comprehension Quiz 4
Interactive Exercises
Unit Exam 4

Heating 5

Reading Assignment
HEATING OBJECTIVES
UNITARY ELECTRIC HEATERS
FURNACES (FORCED AIR SYSTEMS)
BOILERS (HOT WATER SYSTEMS)
CONVERSION FROM HOT WATER TO FORCED-AIR
CONVERSION FROM OIL TO GAS
CHIMNEY LINERS
EFFICIENCIES
CAPACITY
FAILURE PROBABILITY
GAS PIPING
WARM AIR HEATING SYSTEMS
HOT WATER HEATING SYSTEMS
GENERAL
DISTRIBUTION
LIMITATIONS
STEAM BOILERS
COMBINATION HEATING SYSTEMS
Reading Comprehension Quiz 5
Interactive Exercises
Unit Exam 5

Cooling/Heat Pumps 2

Reading Assignment
AIR CONDITIONING
HEAT PUMPS
COOLING CAPACITY
FAILURE PROBABILITY
COMPRESSOR
PLENUM COIL
OUTDOOR COIL
WATER COOLED COIL
OUTDOOR FAN



CONDENSATE TRAY/LINE/PUMP
REFRIGERANT LINES
INDOOR FAN
DUCTWORK
ATTIC DUCTWORK INSULATION
SUPPLEMENTAL COOLING
ATTIC DRIP PAN
WATER LINES
THERMOSTAT
HOUSE FAN
EVAPORATIVE COOLER

Reading Comprehension Quiz 6
Interactive Exercises
Unit Exam 6

Insulation

2.5

Reading Assignment

ATTICS
FLAT ROOFS
CATHEDRAL ROOFS / SLOPED CEILINGS
SKYLIGHT WELLS
KNEE WALLS
WOOD FRAME EXTERIOR WALLS
MASONRY WALLS
LOG WALLS
BASEMENT WALLS - INTERIOR
BASEMENT WALLS - EXTERIOR
CRAWL SPACES
FLOORS ABOVE UNHEATED AREAS
PIPES IN UNHEATED AREAS
DUCTWORK IN UNHEATED AREAS
EXHAUST DUCTS IN UNHEATED AREAS
CURRENT STANDARDS
EXISTING AMOUNT
TYPES OF INSULATION
INSPECTING AND MAINTAINING INSULATION
AND VENTILATION

Reading Comprehension Quiz 7
Interactive Exercises
Unit Exam 7

Plumbing

5

Reading Assignment

SUPPLY
WASTE
FIXTURES
GAS PIPING



Reading Comprehension Quiz 8
 Interactive Exercises
 Unit Exam 8

Interior **6**

Reading Assignment
 MAJOR FLOOR FINISHES
 MAJOR WALL FINISHES
 MAJOR CEILING FINISHES
 TRIM
 STAIRS
 WINDOWS
 DOORS
 FIREPLACES
 PARTY WALLS
 BASEMENT LEAKAGE

Reading Comprehension Quiz 9
 Interactive Exercises
 Unit Exam 9

Appliances **2**

Reading Assignment
 RANGES
 OVENS
 EXHAUST VENTS
 DISHWASHERS
 WASTE DISPOSERS
 TRASH COMPACTORS
 CENTRAL VACUUMS
 DOOR BELLS
 LAUNDRY FACILITIES
 EXHAUST VENTS
 MONTHLY ENERGY CONSUMPTION
 OF HOUSEHOLD APPLIANCES

Reading Comprehension Quiz 10
 Interactive Exercises
 Unit Exam 10

Final Exam **1**

Total **40**