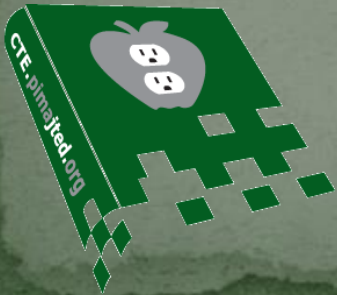


Construction: Plumbing

DRAIN WASTE AND VENT SYSTEM

LESSON 8 OF 12





Bellwork

1. When you use water in a residence where does the waste water go?
2. Where does waste water go after leaving a residence?

PowerPoint Graphic Organizer

1. Write the date
2. Write your first and last name
3. Write the class period

Fill in the above information on the cover sheet of your handout

Preview Objectives

- Student will be able to prepare to assemble a soil, waste and vent system by:

1. Define the terms.

2. Drawing the rough layout with annotations for a Drain, Waste and Vent System (DWV System) on a residential floor plan.

Underline key phrases and terms

Terminology

- **Building Drain:** is the lowest horizontal portion of a drainage system that receives discharge from waste stacks and horizontal branches.
- **Building Sewer:** the main pipe conveying sewage and wastewater from a DWV system to a point of disposal or termination.
- **Cleanout:** a required access at the base of every waste stack and at the transition from a building drain and building sewer.
- **Stack Vent:** the vent for the waste stack.
- **Vent Stack:** the main vent for the DWV system.

Continued on next page 5

Terminology (cont.)

- **Vent Through Roof:** where the Vent Stack goes through the roof of the residence.
- **Waste Stack:** the main vertical pipe which begins with its connection to the building drain and terminates with its connection to the stack vent.
- **Slope:** an upward or downward installation used to install drainage or venting piping.



<http://www.images2000.com/stock-photos/plumbing-system-2000000.jpg>

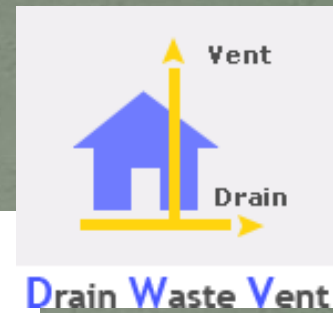
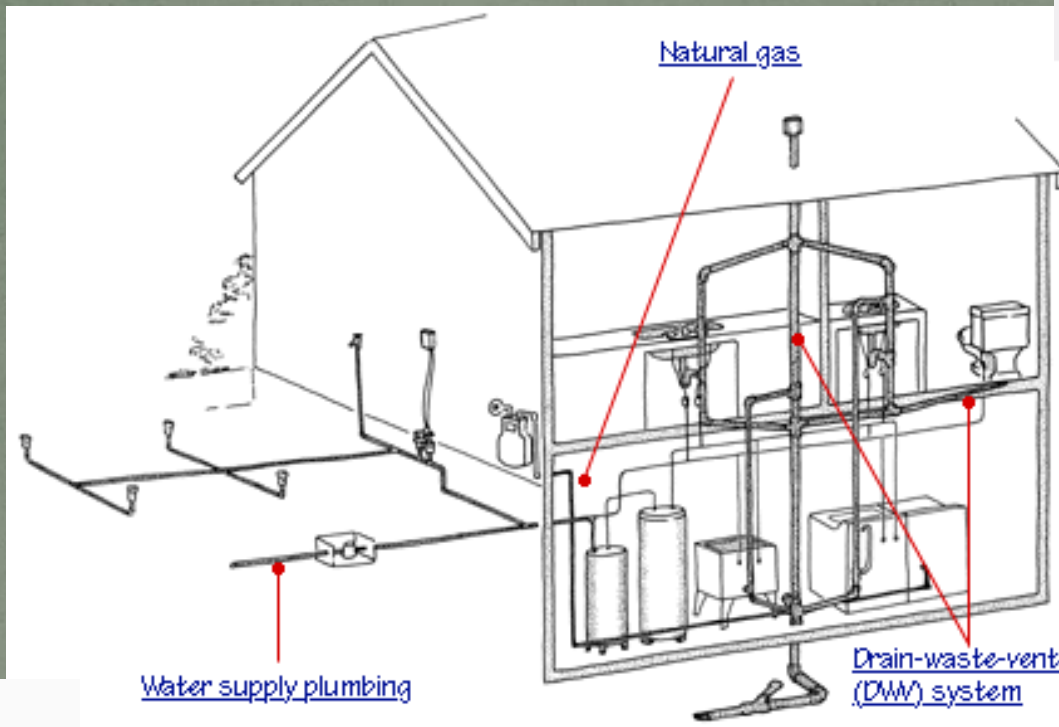


http://www.homeimprovementpages.com.au/media_library/Image/article_images/1866635_drycompostingtoilets.jpg

Part Purpose Function

What is the Part?	What is the Purpose?	What is the Function?
Building Drain:	Lowest horizontal part of a DWV system	Receives discharge from waste stacks and horizontal branches
Building Sewer:	Main pipe in DWV system	Conveys sewage and waste water
Cleanout:		
Vent Stack:		

Plumbing Isometric



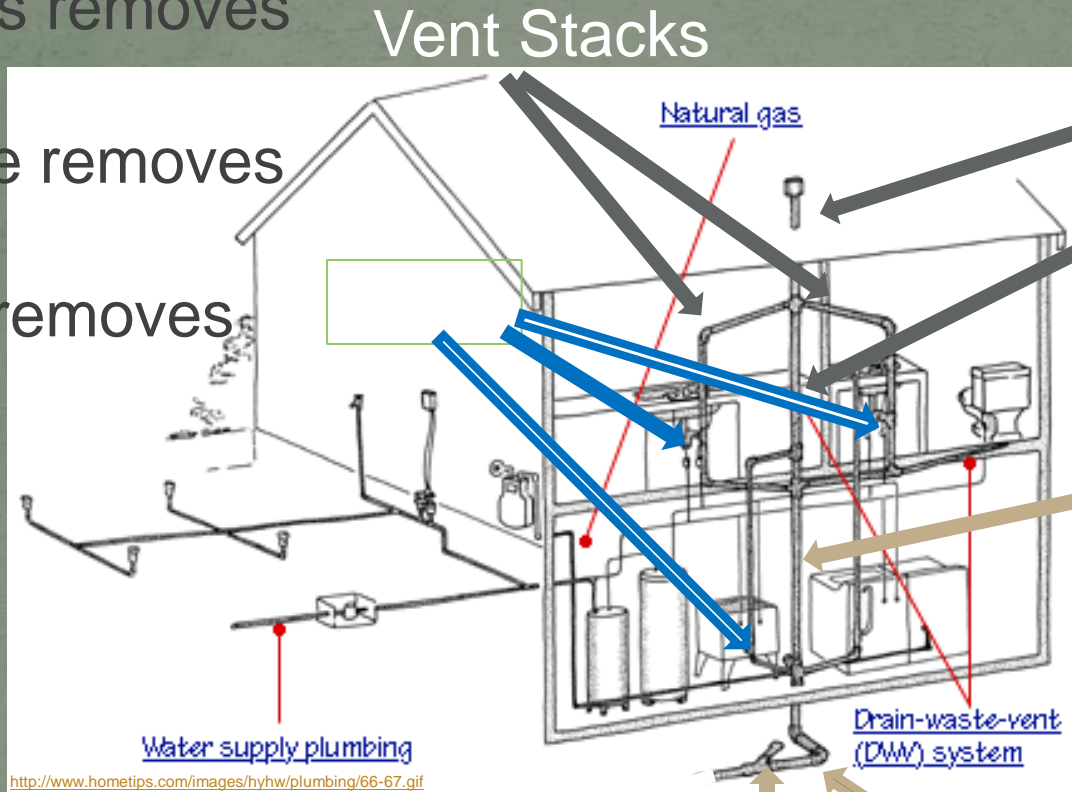
http://www.plumbers-los-angeles.com/imgs/page/residential_3.gif

<http://www.homedps.com/images/tyfw/plumbing/06-07.gif>



Major Components of DWV

- Drains removes liquids
- Waste removes solids
- Vent removes gases



Vent Stacks

Vent through roof

Stack Vent

Waste Stack

Building Sewer

Main Clean Out

Building Drain

Bathroom Water and Waste Perspective

Vent Stack

Branch Vent

Lavatory drain

Cold water supply

Hot water supply

Overflow pipe

Shutoff valve

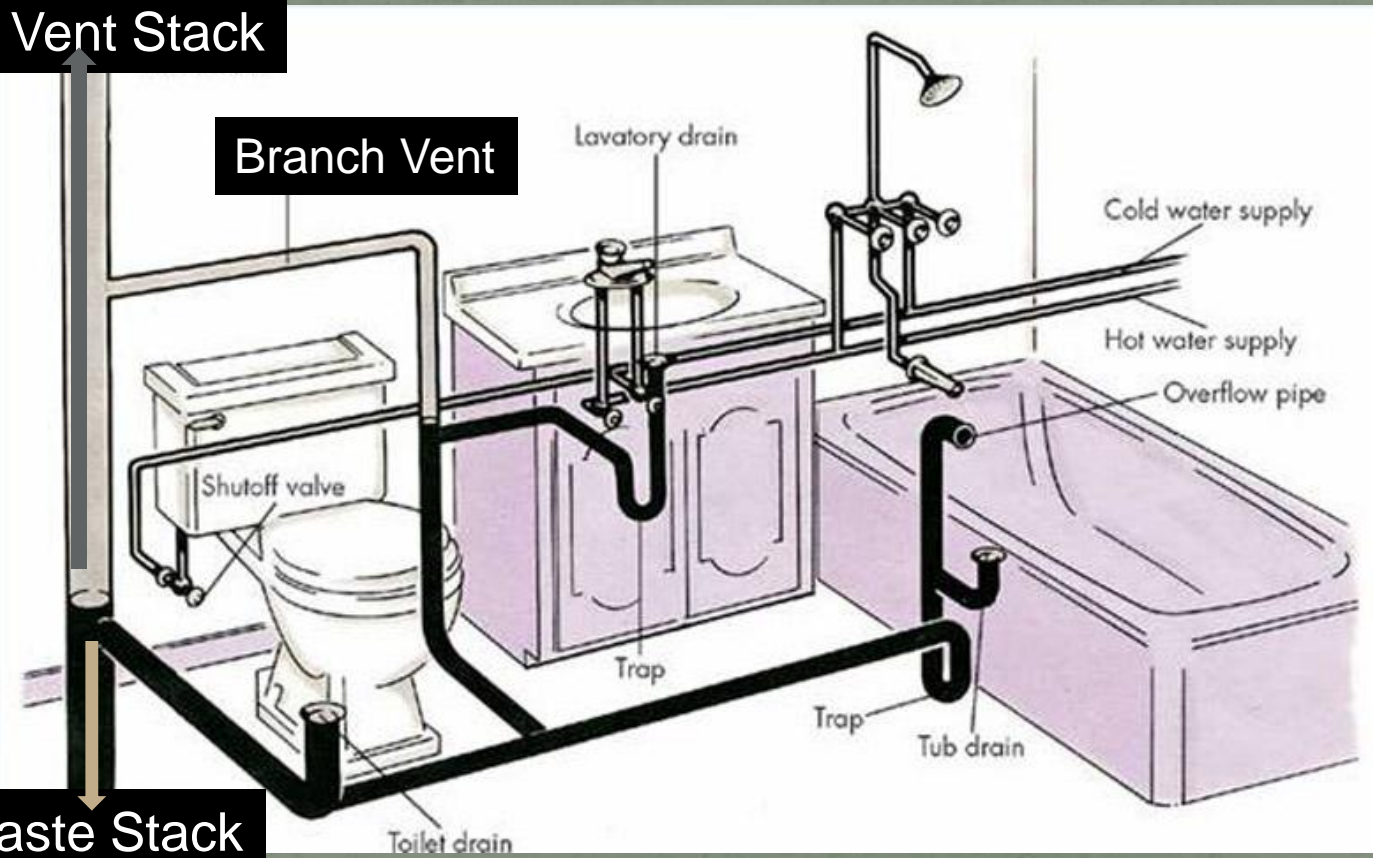
Trap

Trap

Tub drain

Toilet drain

Waste Stack



http://rei-specialist.com/yahoo_site_admin/assets/images/Drain_Plumbing_small_107k.42223527_std.jp

2) The Vents unseal the vacuum

Piece of
paper capturing
water

(upside down glass)

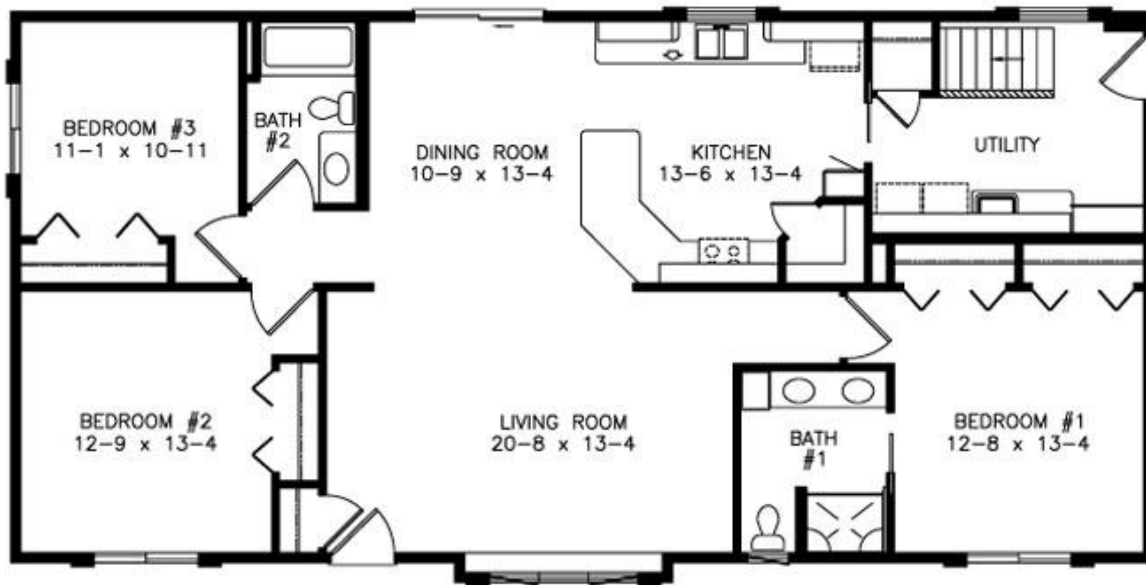


A straw with
a thumb over
the top capturing
water

Glasses of Water



Objective # 2: Design a DWV System



#12752

2858 3BDRM BROOKDALE

1624 sq ft

Look for fixtures and devices that will require some part of a DWV System.

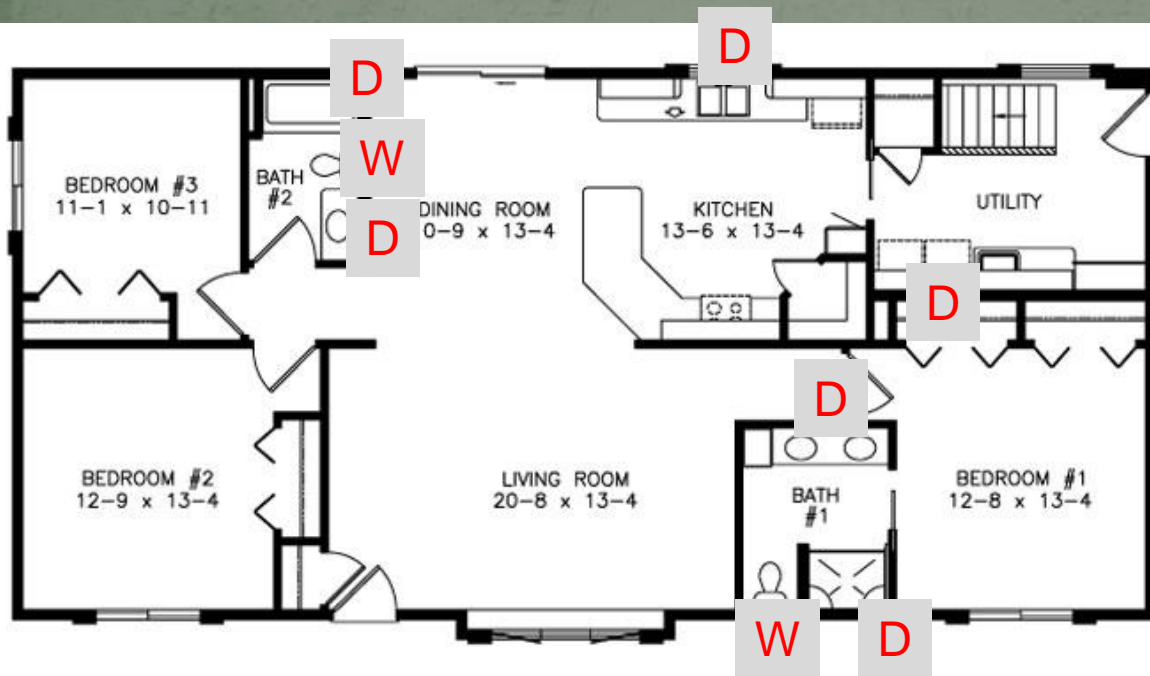
Mark:

D=for drain

W=for waste

For now we will leave out the vent design.

Objective # 2: Design a DWV System



#12752

2858 3BDRM BROOKDALE

1624 sq ft

<http://www.ambienthomes.com/images/plans/BrookdaleFloorPlan.jpg>

Look for fixtures and devices that will require some part of a DWV System.

Mark:

D=for drain

W=for waste

For now we will leave out the vent design.

Next Lesson: Water Distribution System (cont.)

- Student will be able to prepare to assemble a soil, waste and vent system by:
 1. Demonstrating an understanding of the terms.
 2. Explaining the basic layout and functions of the major components of a Drain Waste and Vent System.

Review Objectives

- Student will be able to prepare to assemble a soil, waste and vent system by:
 1. Define the terms.
 2. Drawing the rough layout with annotations for a Drain, Waste and Vent System (DWV System) on a residential floor plan.