

# PLUMBING AND PIPING BASICS



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**Domestic water into a building.**

**Sanitary waste out of a building.**

**How important are these functions?**

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## Clean drinking water in short supply in Haiti

2010-01-28 14:22 BJT

Special Report: [Strong Quake Hits Haiti](#) |

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As they attempt to take care of life's ordinary tasks -- cooking, bathing and washing clothes-- water has become a valuable commodity.

As they queued up on Wednesday, residents said water trucks roll in fairly regularly.

Tent City Resident, said, "There is always water. They don't give us food, but water comes constantly."

Still, others say there can never be enough.

Tent City Resident, said, "Many thanks for the water because we need it. The people need it very badly."

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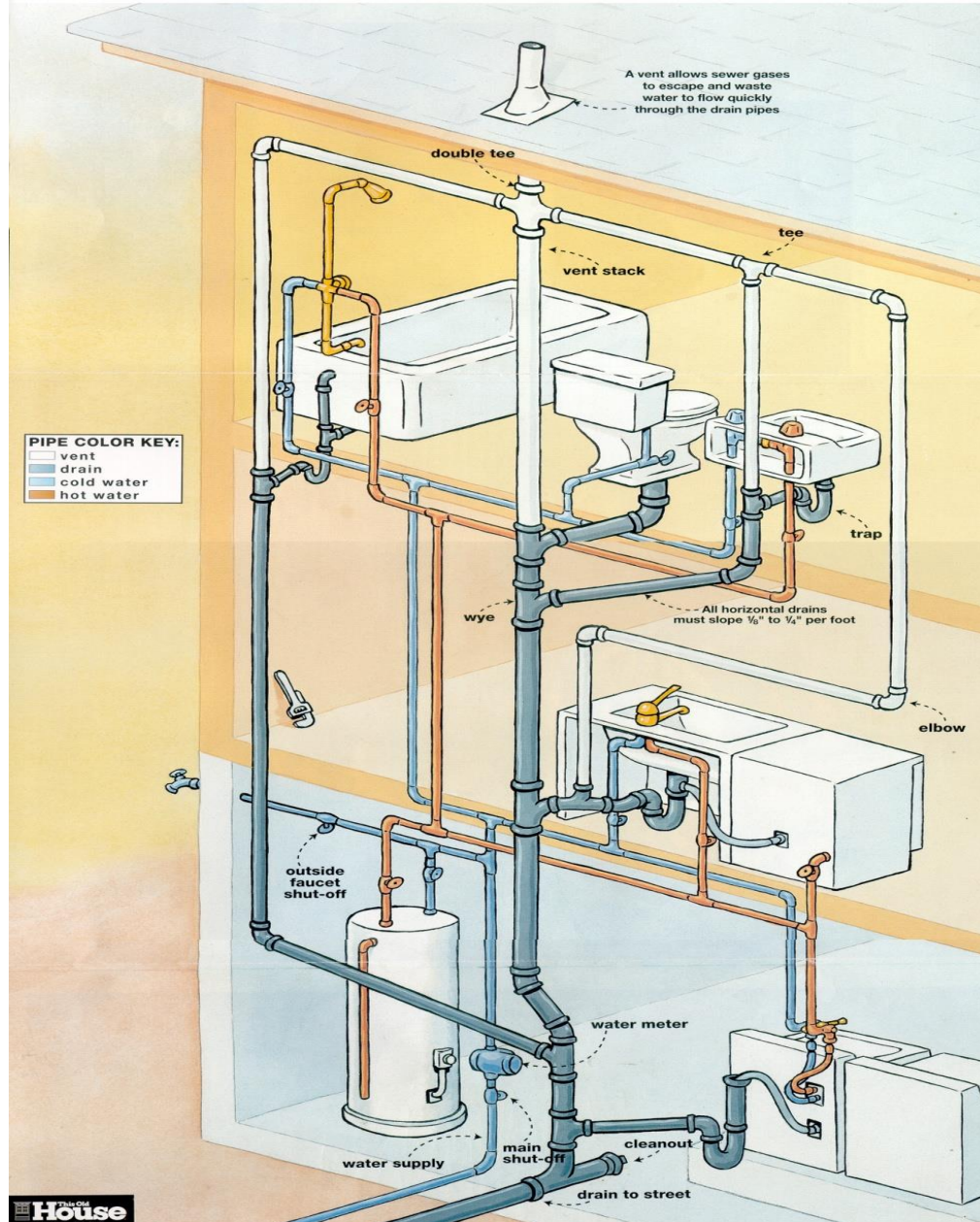


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# RESIDENTIAL PLUMBING SYSTEM



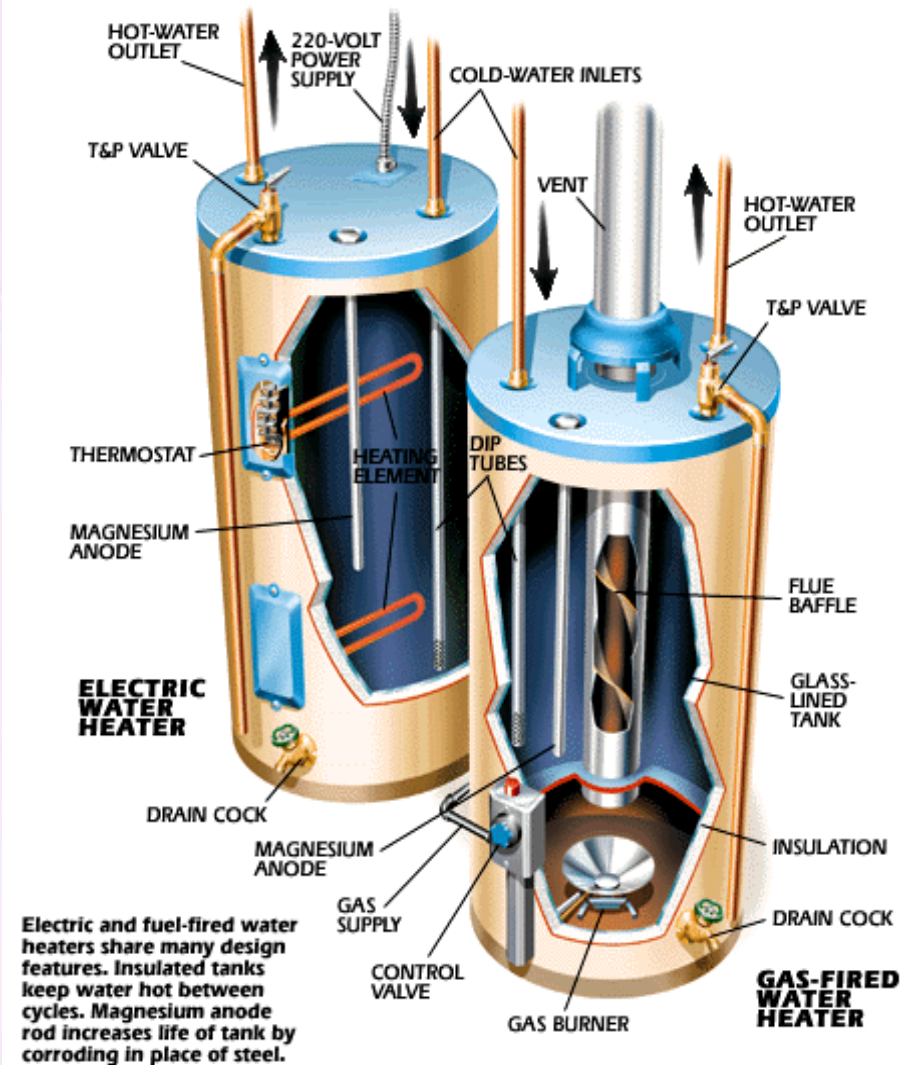
## Domestic Water System

- Pressurized potable water delivery system.
  - FlowGuard Gold CPVC
  - Copper / PEX

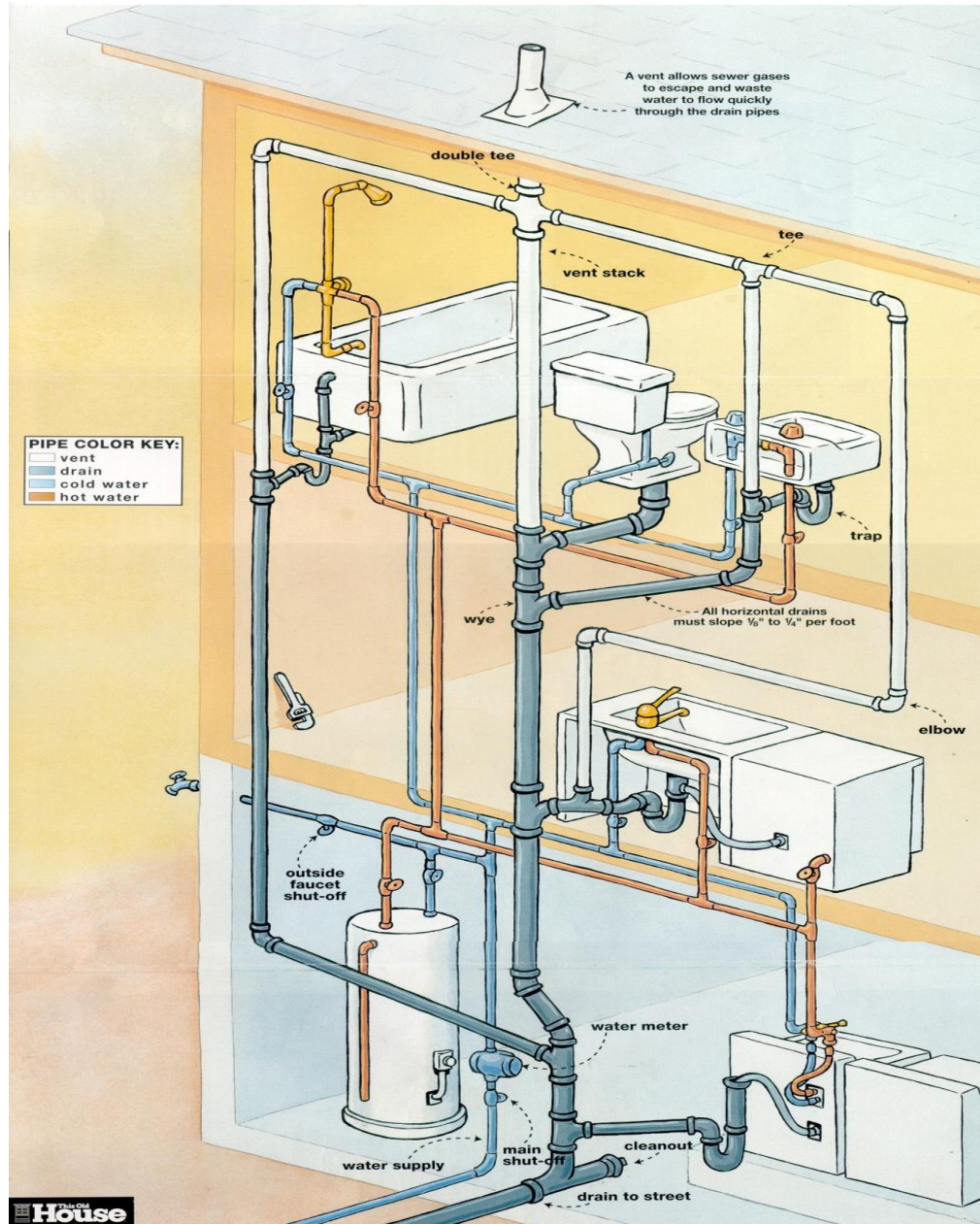
## Sanitary Waste (DWV) System

- Gravity waste elimination system.
- Which System is more complex?

# HOT/COLD DOMESTIC WATER SYSTEM



# RESIDENTIAL PLUMBING SYSTEM



## Domestic Water System

- Pressurized potable water delivery system.
  - FlowGuard Gold CPVC
  - Copper

## Sanitary Waste (DWV) System

**Gravity waste elimination system**

**D = drain tubs & sinks**

**W = waste from water closets**

**V = vent air into/out of the system.**

- **Cast Iron (No-Hub, Service, XH)**

- **PVC DWV & ABS DWV**

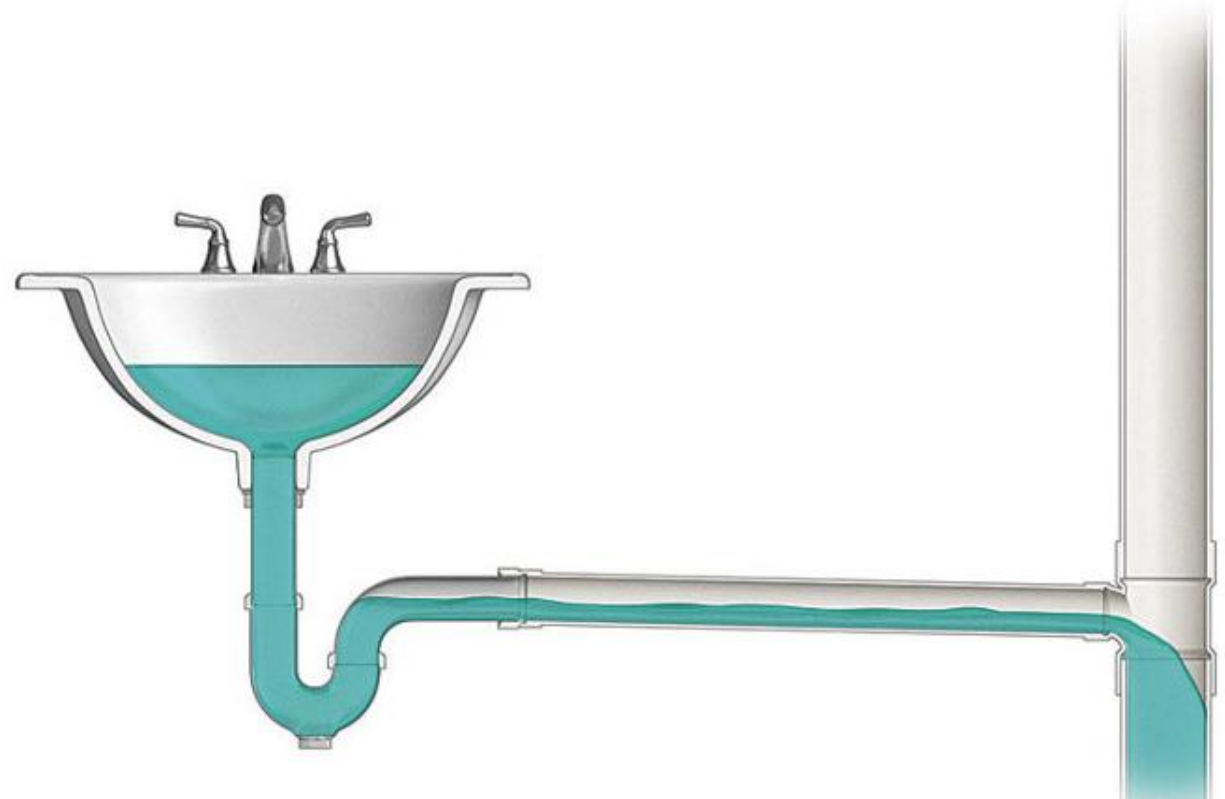
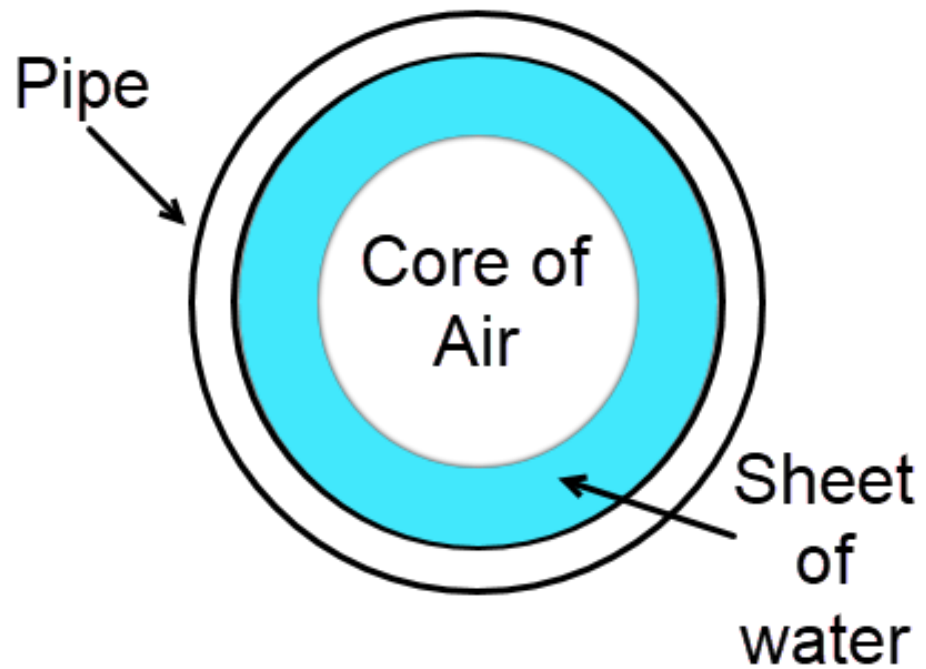
**What's a vent do?**

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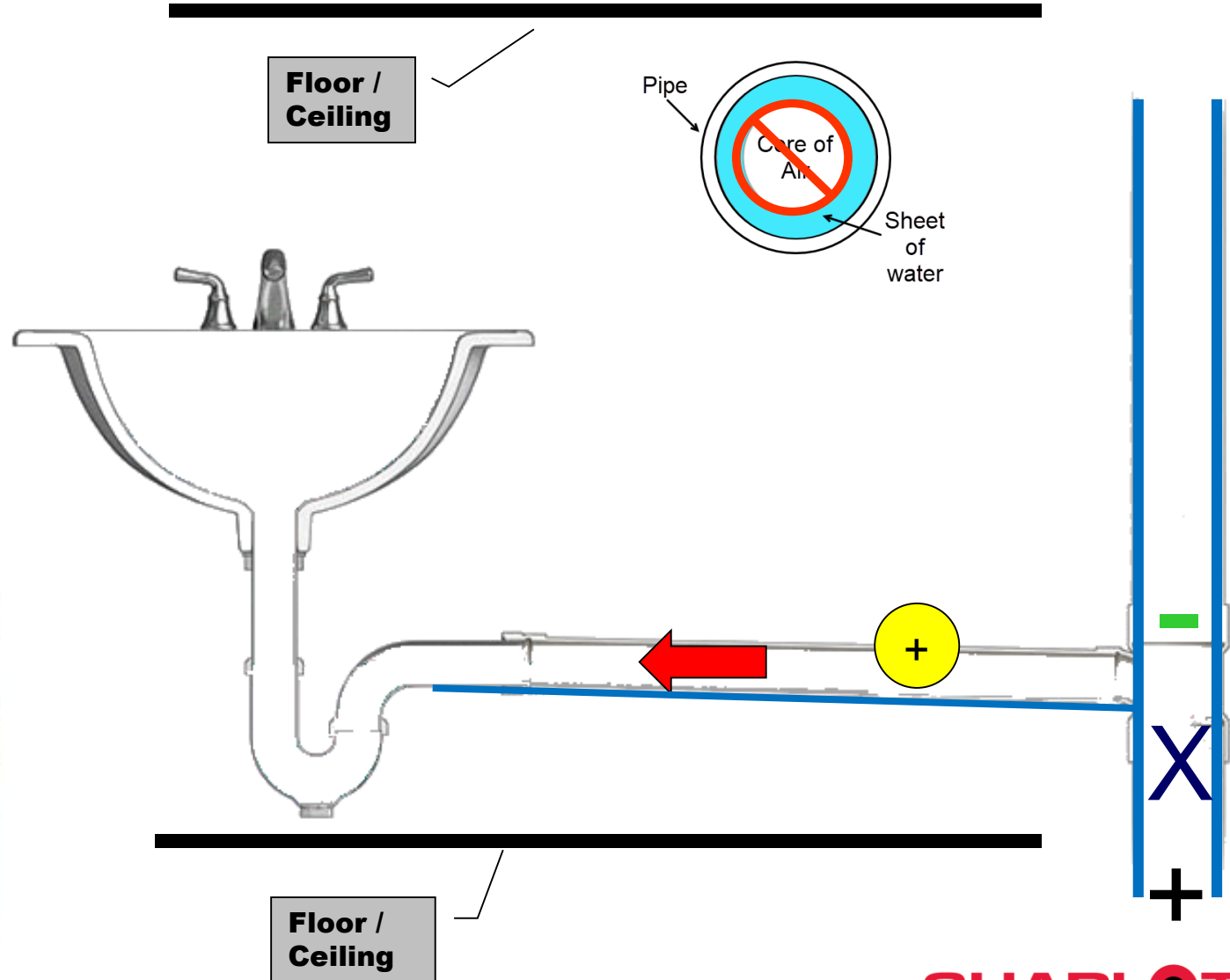
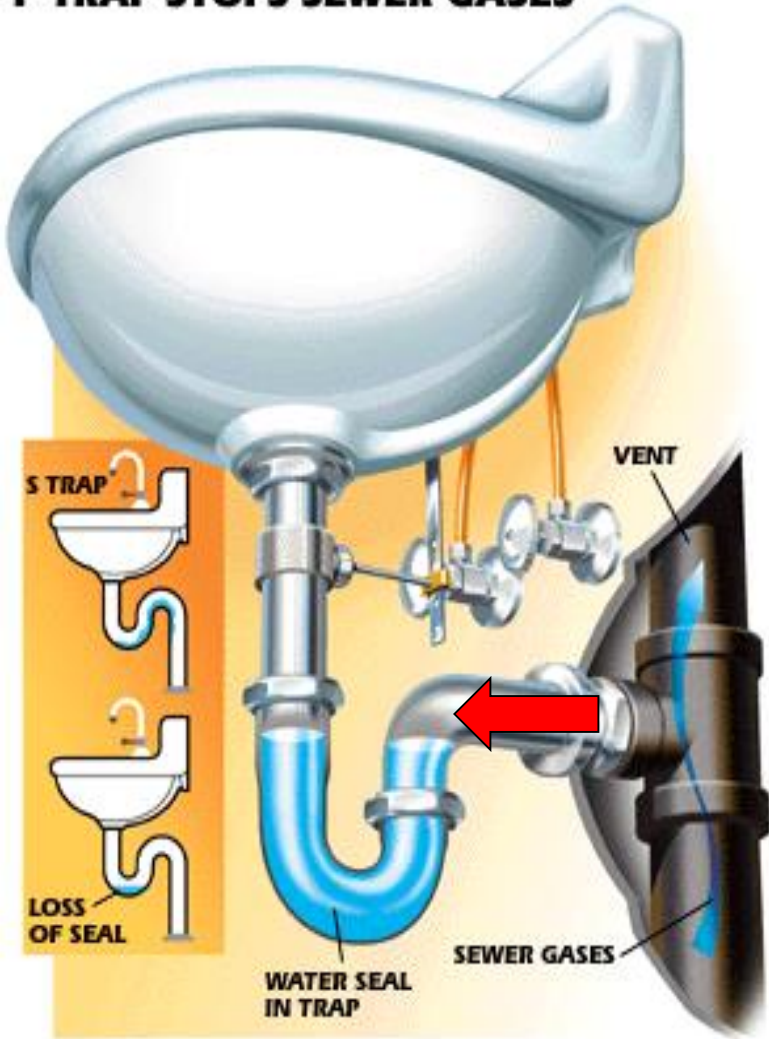
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**Flow 1/4 to 1/2 Full**

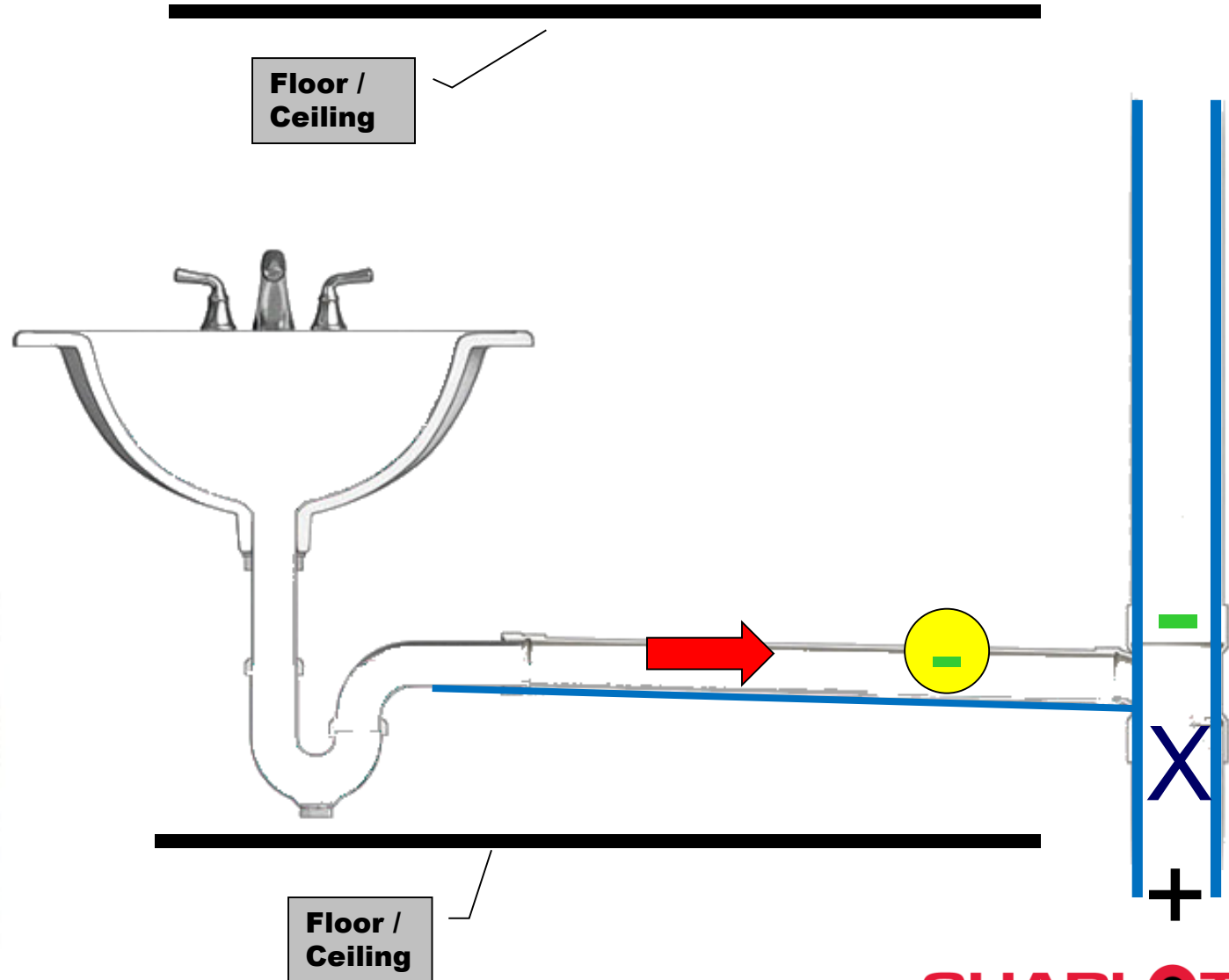
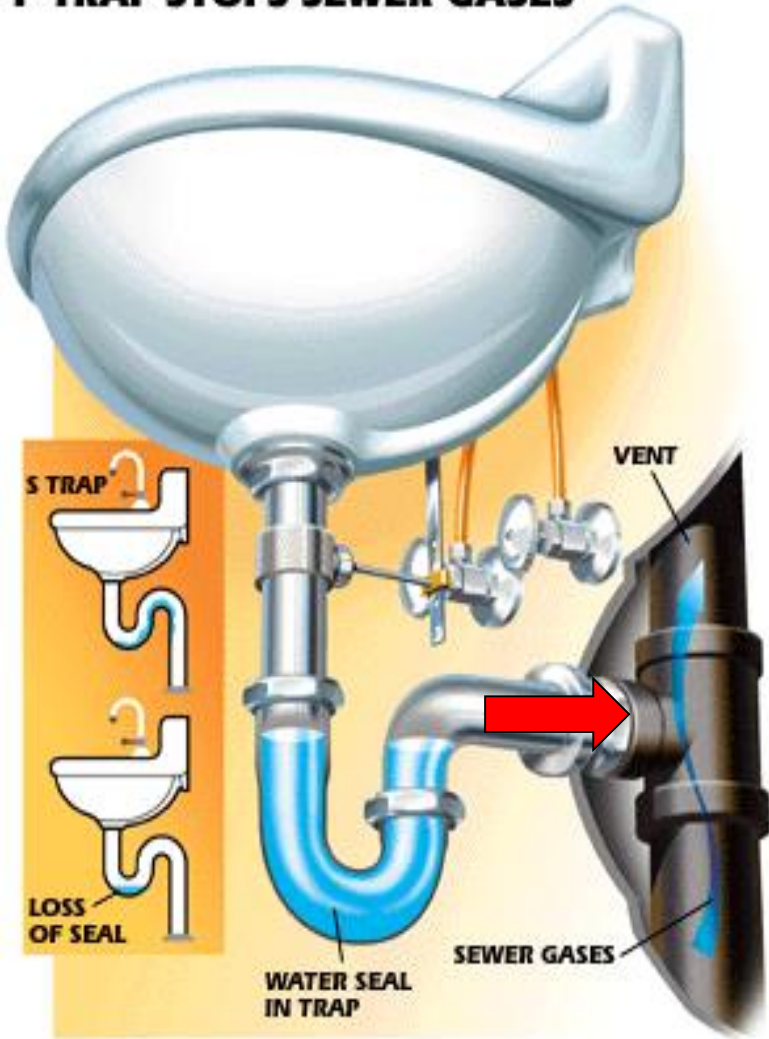
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## P TRAP STOPS SEWER GASES



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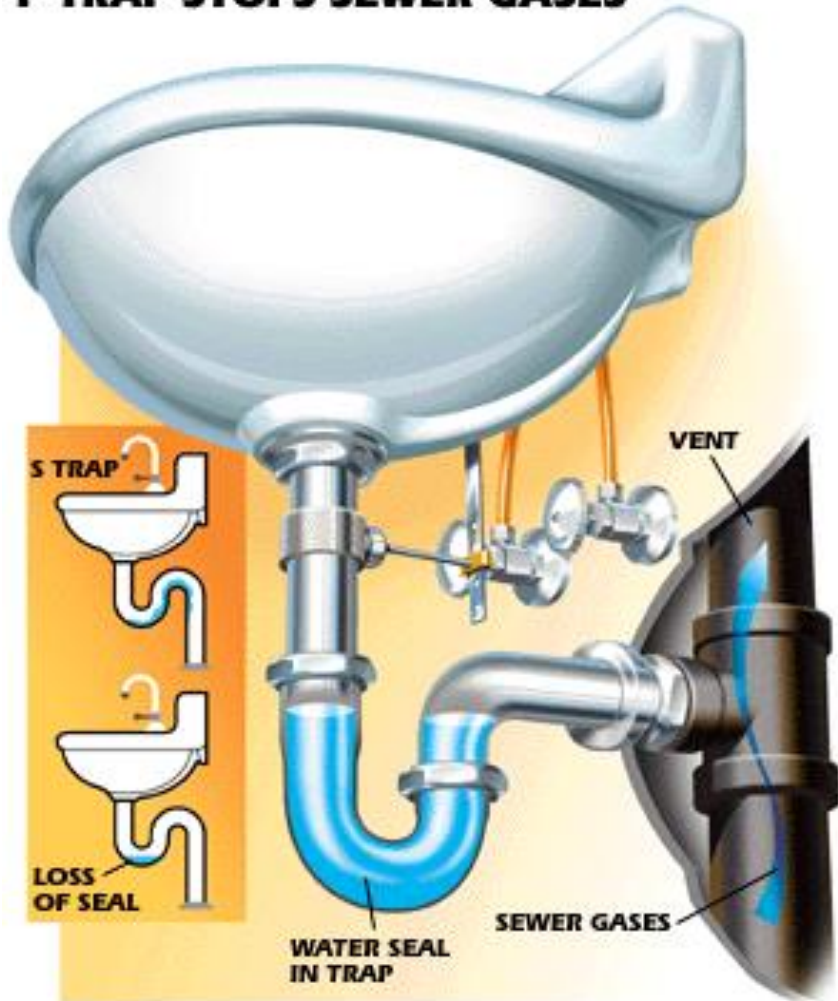
## P TRAP STOPS SEWER GASES



# WHO NEEDS A TRAP SEAL ANYWAY?

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## P TRAP STOPS SEWER GASES



## Intrusion of sewer gases

- **Unpleasant**
- **Toxic**
- **Explosive**

# WHO NEEDS A TRAP SEAL ANYWAY?

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## Uninvited house guests

- **Vermin**
- **Flying / Crawling Insects**
- **Disease (SARS)**

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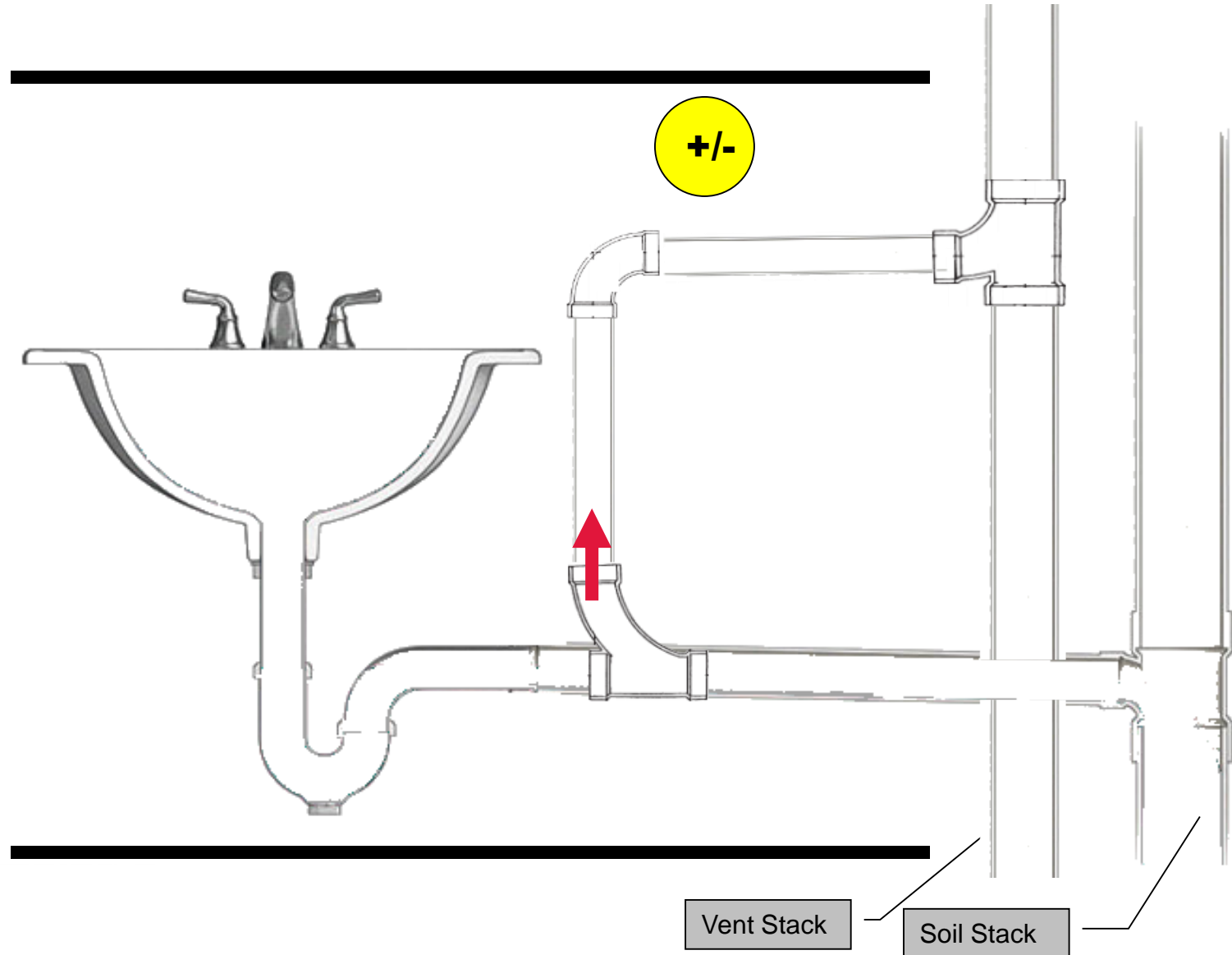
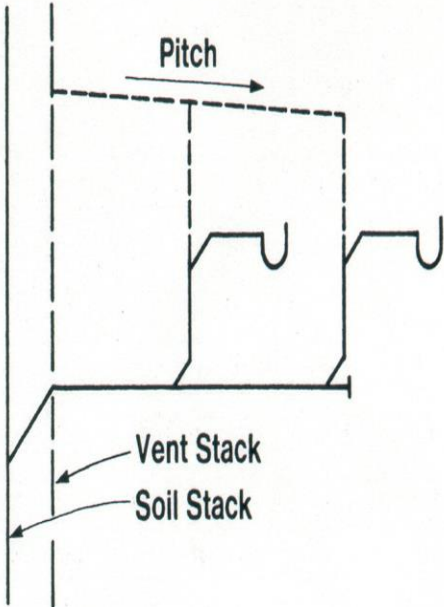
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**If you reduce venting back to the basics, it is easier to understand the design of venting systems. The original and sole purpose of venting is to protect the trap seal. If a trap did not exist in a drainage system, a vent would not be required.**

**Source: ASPE**

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## Vent System Protects the Trap Seal



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You can't beat the system.®