

1.6 HOW IT'S BUILT

Components of a house with analogy to human body

My adult son still remembers my little lecture I gave to his class when he was in 2nd grade. I said our bodies are a lot like our houses. We should all have a rudimentary understanding of each.

I know a house builder who thinks that all the parts of a house are a lot like the pieces of our bodies. People used to live in caves or huts but now our houses can do so much more. Here are some of the similarities:

YOUR BODY

Feet

Ever notice that your feet are wider than you legs? What if you didn't have feet? - you would probably sink into the dirt or fall over a lot more if your body didn't have a wide base to support it.

A HOUSE

Footings

If you took a shovel and dug to the bottom of an outside wall you'd see that it sits on a wide piece of concrete called a footing. Without a footing the heavy walls would sink into the dirt. A footing spreads out the weight so the soil can support it more easily.

Bones

Bones are the main structure of the body. They provide the support for the body and determine the shape of it. When scientists find bones of dinosaurs, they can pretty much figure out what the entire dinosaur looked like.

Framing

Ever see a house under construction? At first it looks like a lot of sticks. Those are pieces of wood called studs that are two-by-fours or two-by-sixes. There are also a lot of wider and thicker pieces of wood called posts and beams. These wood pieces make up the walls, floors and roof of the house and are its bones. Just like a body's bones, they will get covered up with other materials.

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| <p>Skin</p> <p>Our outer layer is the largest organ in our body. It helps protect everything that's on the inside. Skin needs to breathe - air can get in and out. Our skin also keeps the water from coming inside.</p> | <p>Sheathing</p> <p>The outside skin of the house is the siding and roofing. They protect the outside elements like wind and rain from getting inside. The skin on the inside of the house is the drywall (or sheetrock) which make the walls that separate the rooms from each other.</p> |
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(So far, the house is not much different that a tent or a simple hut – vinyl skin over poles)

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| <p>Nerves</p> <p>Our bodies have nerves that connect all you body parts to the central panel which is our brain. One set of nerves goes to the muscles to tell them to move and another set of nerves tells the brain what you're feeling - heat, cold, wet or pressure. The way nerves do this is a lot like electrical wiring in a house.</p> | <p>Electrical</p> <p>Inside the walls, before you put on the sheathing (or skin), you add lots of wires for plugs, lights and switches. All of this wiring goes to a central electrical panel.</p> |
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| <p>Digestion</p> <p>Our digestive system includes our mouth, throat (esophagus), stomach, and intestines. This system takes in water and food and then gets rid of the waste.</p> | <p>Plumbing</p> <p>There are also water pipes in the walls. The smaller ones are for hot and cold water and the bigger pipes carry waste water (also known as "sewage")</p> |
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| <p>Respiration</p> <p>Our lungs move air in and out and our brain has a thermostat to make our body colder or warmer. We shiver to stay warmer and we sweat to cool off.</p> | <p>HVAC</p> <p>(an abbreviation for Heating, Ventilation and Air Condition). Houses have furnaces that make heat and square metal pipes (called ducts) in the walls and ceilings that convey the warm or cool air. A thermostat tells the system to either stop heating or moving the air or to put out more of the conditioned air.</p> |
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| <p>Fat</p> <p>We have several uses for fat. Our body can use it to burn energy if food isn't available, it protects our bones and muscles, and it can insulate us to keep us warm. Hair on our bodies also helps with insulation.</p> | <p>Insulation</p> <p>The last thing that goes in the walls before the sheathing is the insulation. It goes in the floor, the ceiling and the walls. The better the insulation, the less energy is needed to cool or heat the house.</p> |
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What fun would it be if people were naked or if houses are empty?

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| <p>Clothing and jewelry</p> | <p>Rugs and furniture</p> |
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It's interesting how some of these descriptive terms have adopted other meanings:

The term "foundation" is used much in our lexicon. Without a good foundation, a house will flounder. No matter how big or how expensive the other components of the house are, it's all for naught without a good foundation. The same can be said for human development: Without a core foundation of character, compassion and joy, a person could live a sorry life.

"You've got a lot of nerve" or "nerves of steel" can mean a person is brave, courageous, steadfast, determined, confident.

“We need to cut out some of the fat”. Here used, “fat” can describe anything that is unwanted, overdone, and wasteful.

When you “digest” something, you could also be trying to have your brain absorb new information.