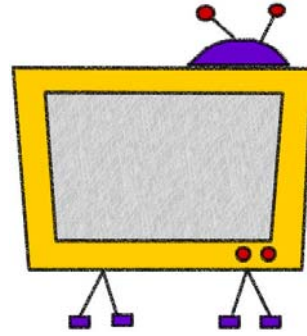


Some House Secrets FAQs

How does the television work?

Inside the conventional television is an 'electron gun', that is, a cathode ray tube. The 'cathode' is like a light globe with a heated filament in a vacuum tube. The 'ray' is the stream of electrons that come from the cathode into the vacuum 'tube' and hit the screen.

Electromagnets create a magnetic field that steer the three beams across to the screen. One set of electromagnetic coils move the beams vertically and the other moves them horizontally. Your screen is made up of red, blue and green phosphor dots or pixels (get a magnifying glass and have a look). When the three electron beams hit the three phosphors they light up and glow, creating a coloured picture. The moving image on the TV is made up of stills – a new picture is created on the screen 25 times a second. The TV 'draws' each new picture in horizontal lines from the top of the screen to the bottom – the 'electron guns' are fast on the 'draw'!



Why does your TV still glow after you turn it off?

The inside of your television screen is coated with phosphors. When they are hit by a stream of electrons they get 'energised' and glow, which means they emit visible light. When you turn your television off, even though the electron guns have stopped firing at the screen, there is still some residual energy in the phosphors and they emit a small amount of light for a short time.

Why is there always dust on my TV?

Find a small sheet of newspaper and hold it against the TV screen. Turn off the TV and the newspaper will seem to stick to the screen for a while because the television screen is statically charged. When the TV is on, electrons are being fired at the screen and the screen becomes charged. The newspaper is neutral (neither positively or negatively charged). The electrons from the screen are attracted to the positives in the neutral newspaper. The charged screen attracts the dust in the same way as the newspaper. The charge eventually dissipates.

What was the first video game ever invented?

The first home video game, Pong, was a simple electronic tennis game. It arrived in the late 1970's. Donkey Kong, in 1981, introduced the theme of the heroic quest to video gaming.



Who invented the Beanbag?

The beanbag was invented by Italian designers Piero Gatto, Cesare Paolini and Franco Teodoro in 1968. They believed their 'stylish' chair would be the furniture of the future. 'Il sacco' was the original Italian name for the beanbag. If the bean bag was filled with real beans instead of polystyrene beads you would not be able to lift it.

Why does a CD reflect rainbow colours?

The colours you see reflecting off a CD is white light separated into the colours of the rainbow. The CD breaks up the white light because it has really fine ridges which are coated with a thin film of an aluminum alloy and a thin film of polycarbonate plastic. Light rays reflected from the different thin films interfere with each other. This interference causes the light waves to add together and make certain colours brighter, or cancel each other out, removing certain colours.

Who invented the light globe?

Thomas Alva Edison in the United States and Sir Joseph Wilson Swan in England invented the first workable incandescent light globes in 1879. In the mid 1900s, Edmund Germer invented the fluorescent lamp which had lower energy consumption, and produced less heat.

Electric lighting started when Sir Humphrey Davy noticed that an 'electrical arc' between two poles produced light. In 1841, he set up 'electric arc' public lighting in the Place de la Concorde in Paris, but it burned out too quickly. James Prescott Joule theorised that a metal filament would glow if electricity passed through it, but it had to be put in a container without oxygen. This would prevent the filament burning out. Joseph Swan made the first light globe, but had trouble maintaining the vacuum. Edison solved the problem and his first light globe glowed for 40 hours. Edison's company tested thousands of prototypes before finally achieving a practical light globe



Does water go down the plug hole in different directions in the Northern and Southern Hemispheres?

The Coriolis Effect (fluids spinning in a clockwise or anticlockwise direction according to the hemispheric location) is caused by the Earth's rotation. It affects the spin of hurricanes and large storms, but is too weak to affect your average household sink or toilet. When you unplug your bathroom sink, the direction of flow is determined by the shape of your sink, how level the bottom is, and the turbulence you created when you filled it or unplugged it. The Coriolis Effect can work under laboratory conditions in a huge, circular, level tank with absolutely still water and a smooth unplugging mechanism.

Does anything live down the plug hole?

Slimy bacteria and fungi grow in your drain. It is called 'bioslime' and it grows well in the dark. If you have ever pulled a hair from the plughole and dragged up some gunk with it, you may have noticed it can be white, grey, pink or clear, but not green. Unlike green pond slimes, bioslime can't photosynthesise because there is no sunshine down the plug hole. Some insects consider it a good source of food and regularly feed off it.

Why is there always water in the toilet?

There is always some water at the bottom of the toilet. It is deliberately designed to stop bad smells coming up from the sewer. If you can see under your bathroom sink you'll notice it has a bend in the plumbing for the same reason. It traps water there to plug the smells. It is called an S bend or P bend, named after the letter it looks like.

What did people use before they had rolls of toilet paper?

Most people made do with newspapers, mail order catalogues and even corn cobs. Before the wide-spread distribution of paper products, people also used grass, straw or left-over wool. The first person to sell toilet paper commercially was an American, Joseph Gayetty, in 1857. Every sheet had his name on it. There are reports that Chinese emperors had toilet paper made for them to use in the 14th century.

What is in toothpaste and how does it work?

Toothpaste is essentially a bone cleaning detergent, with flavour and a mild abrasive. The micro-organisms in your mouth eat up food scraps and sugar between your teeth. They create an organic concrete called plaque, smelly gases and acid that eats into your teeth causing decay. So what you want in a toothpaste is an abrasive that sandpapers away the 'plaque' without harming your teeth, prevents decay and tastes okay when you use it. In times past they used charcoal ashes or ground up burnt bones of animals with sharp teeth – they must have thought there was a connection. Some ancient toothpaste formulas even included urine and honey!



Today's manufactured toothpastes contain mild abrasives and fluoride that help maintain strong enamel (outer layer of the tooth). This makes teeth more resistant to acid attack. Detergents create a foaming action preventing the toothpaste from dripping out of your mouth when you brush. There are other ingredients too, like preservatives, flavouring, and even a chemical that stops the toothpaste from drying out.

What did people use as toothbrushes before the invention of plastic?

Long ago and still in some remote areas, people used 'chew sticks'. These were soft wooden sticks with frayed ends that would be chewed. William Addis developed the first mass produced toothbrush in 1780. It had a cow bone handle and cow tail-hair bristles. Hog hair was the deluxe choice until nylon took over in 1938.

Why do bathroom tiles feel really cold compared to wooden floors?

If you could measure the temperature of all the different surfaces in your home like wood, tile, metal and plastic you would find that they all have the same temperature. The reason bathroom tiles feel cold is that they are better at carrying heat away from your skin than wood or plastic. Never make a toilet seat out of silver; it would be really unpleasant on a cold winter's night.

Whose idea was the roll-on deodorant?

What happens when you cross a ballpoint pen with an antiperspirant cream? You get roll-on deodorant. Helen Barnett Diserens and the Mum production team did just that in the 1950s. Prior to that, deodorant cream was applied from the jar with finger tips. The first antiperspirant aerosol deodorant was launched in 1965.

Who was the first Avon lady?

The first Avon lady was a man called David McConnell, who, in 1886, was a door-to-door book salesman. In order to get an opportunity to do his sales pitch, he introduced a gimmick of free samples of rose perfume which he blended himself with the help of a local pharmacist. Clients loved his perfume but not his books, so he developed a door-to-door cosmetics industry. He called it Avon because his favourite playwright, William Shakespeare, lived in Stratford-upon-Avon.

