

## Everyday Science Questions Answers - Part 3 of 4

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51. **Question:** Why is it less difficult to cook rice or potatoes at higher altitudes?

**Answer:** Atmospheric pressure at higher altitudes is low and boils water below 100C. The boiling point of water is directly proportional to the pressure on its surface.

52. **Question:** Why is it difficult to breathe at higher altitudes?

**Answer:** Because of low air pressure at higher altitudes the quantity of air is less, and so that of oxygen.

53. **Question:** Why are winter nights and summer nights warmer during cloudy weather than when the sky is clear?

**Answer:** Clouds being bad conductors of heat do not permit radiation of heat from land to escape into the sky. As this heat remains in the atmosphere, the cloudy nights are warmer.

54. **Question:** Why is a metal tyre heated before it is fixed on wooden wheels?

**Answer:** On heating, the metal tyre expands by which its circumference also increases. This makes fixing the wheel easier and therefore cooling down shrinks it; thus fixing the tyre tightly.

55. **Question:** Why is it easier to swim in the sea than in a river?

**Answer:** The density of sea water is higher; hence the up thrust is more than that of river water.

56. **Question:** Who will possibly learn swimming faster-a fat person or a thin person?

**Answer:** The fat person displaces more water which will help him float much more freely compared to a thin person.

57. **Question:** Why is a flash of lightening seen before thunder?

**Answer:** Because light travels faster than sound, it reaches the earth before the sound of thunder.

58. **Question:** Why cannot a petrol fire be extinguished by water?

**Answer:** Water, which is heavier than petrol, slips down permitting the petrol to rise to the surface and continue to burn. Besides, the existing temperature is so high that the water poured on the fire evaporates even before it can extinguish the fire. The latter is true if a small quantity of water is poured.

59. **Question:** Why does water remain cold in an earthen pot?

**Answer:** There are pores in an earthen pot which allow water to percolate to the outer surface. Here evaporation of water takes place thereby producing a cooling effect.

60. **Question:** Why do we place a wet cloth on the forehead of a patient suffering from high temperature?

**Answer:** Because of body's temperature, water evaporating from the wet cloth produces a cooling effect and brings the temperature down.

61. **Question:** When a needle is placed on a small piece of blotting paper which is placed on the surface of clean water, the blotting paper sinks after a few minutes but the needle floats. However, in a soap solution the needle sinks. Why?

**Answer:** The surface tension of clean water being higher than that of a soap solution, it can support the weight of a needle due to its surface tension. By addition of soap, the surface tension of water reduces, thereby resulting in the sinking of the needle.

62. **Question:** To prevent multiplication of mosquitoes, it is recommended to sprinkle oil in the ponds with stagnant water. Why?  
**Answer:** Mosquitoes breed in stagnant water. The larvae of mosquitoes keep floating on the surface of water due to surface tension. However, when oil is sprinkled, the surface tension is lowered resulting in drowning and death of the larvae.
63. **Question:** Why does oil rise on a cloth tape of an oil lamp?  
**Answer:** The pores in the cloth tape suck oil due to the capillary action of oil.
64. **Question:** Why are ventilators in a room always made near the roof?  
**Answer:** The hot air being lighter in weight tends to rise above and escape from the ventilators at the top. This allows the cool air to come in the room to take its place.
65. **Question:** How does ink get filled in a fountain pen?  
**Answer:** When the rubber tube of a fountain pen immersed in ink is pressed, the air inside the tube comes out and when the pressure is released the ink rushes in to fill the air space in the tube.
66. **Question:** Why are air coolers less effective during the rainy season?  
**Answer:** During the rainy season, the atmosphere air is saturated with moisture. Therefore, the process of evaporation of water from the moist pads of the cooler slows down thereby not cooling the air blown out from the cooler.
67. **Question:** Why does grass gather more dew in nights than metallic objects such as stones?  
**Answer:** Grass being a good radiator enables water vapour in the air to condense on it. Moreover, grass gives out water constantly (transpiration) which appears in the form of dew because the air near grass is saturated with water vapour and slows evaporation. Dew is formed on objects which are good radiations and bad conductors.
68. **Question:** If a lighted paper is introduced in a jar of carbon dioxide, its flame extinguishes. Why?  
**Answer:** Because carbon dioxide does not help in burning. For burning, oxygen is required.
69. **Question:** Why does the mass of an iron increase on rusting?  
**Answer:** Because rust is hydrated ferric oxide which adds to the mass of the iron rod. The process of rusting involves addition of hydrogen and oxygen elements to iron.
70. **Question:** Why does milk curdle?  
**Answer:** Lactose (milk sugar) content of milk undergoes fermentation and changes into lactic acid which on reacting with milk protein (casein) form curd.
71. **Question:** Why does hard water not lather soap profusely?  
**Answer:** Hard water contains sulphates and chlorides of magnesium and calcium which forms an insoluble compound with soap. Therefore, soap does not lather with hard water.
72. **Question:** Why is it dangerous to have charcoal fire burning in a closed room?  
**Answer:** When charcoal burns it produces carbon monoxide which is suffocating and can cause death.
73. **Question:** Why is it dangerous to sleep under trees at night?  
**Answer:** Plants respire at night and give out carbon dioxide which reduces the oxygen content of air required for breathing.
74. **Question:** Why does ENO's salt effervesce on addition of water?

**Answer:** It contains tartaric acid and sodium bicarbonate. On adding water, carbon dioxide is produced which when released into water causes effervescence.

75. **Question:** Why does milk turn sour?

**Answer:** The microbes react with milk and grow. They turn lactose into lactic acid which is sour in taste.