

Puzzle #75: Quit w[h]ining!

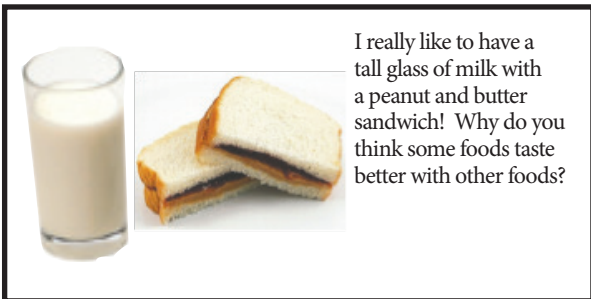
MoeZone

Real challenges for people living in the real world



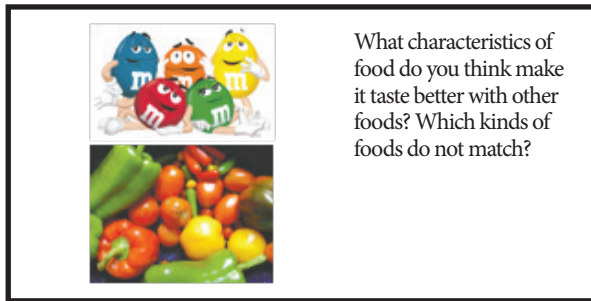
Be safe!

Can you get hurt?
Can someone else get hurt?



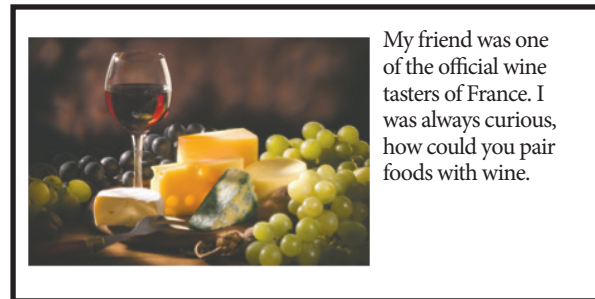
I really like to have a tall glass of milk with a peanut and butter sandwich! Why do you think some foods taste better with other foods?

ELEMENTARY



What characteristics of food do you think make it taste better with other foods? Which kinds of foods do not match?

ADVANCED



My friend was one of the official wine tasters of France. I was always curious, how could you pair foods with wine.

PROFESSIONAL

Send any solutions by Aug. 6 to Moe Benda at mbenda@d.umn.edu.
Best solutions and next puzzle will appear in HTF on Aug. 11.

Keep your eyes clean and bright, they are the window through which you see the world!

Moe's quote:

MoeZone Puzzle #74 solutions: Bit speed!

ELEMENTARY PUZZLE

How long does it take for your friend to get a text or Snapchat from you? Does the time change if you are in another room or in another state? How do you think it gets to them?

Bailee (15 yrs.): Depends on which friends you're asking about. The time is a couple of hours if my German friend is really busy, but she gets it in like two minutes. If my friends are in Biwabik, it takes like 30 seconds. If we are sitting together, it takes like 10 seconds. It goes up to a satellite and then back down.

ADVANCED PUZZLE

When you've connected to the Internet, what is the fastest speed you've ever had? During the uploading or downloading, did the speed change?

Downloading is much faster! Uploading seems to take forever. My Internet says I can get up to 25 Mbps, but I usually get 7 or 8 for downloading and only 2 or 3 for uploading. The speed does change as time goes on; it seems to get faster.

MOE'S NOTE: The speed change comes from the Internet getting smarter during your "handshake" and learning which routers and switches will get you your data the fastest! See the professional puzzle.

PROFESSIONAL PUZZLE

Our Internet traffic here on the Range—what is the fastest it can travel to the Internet? What kind of equipment is needed to do that?

50 Megabits per second is the fastest I have seen in Minnesota. And while 35 Mbps is available in Virginia, MN, I haven't seen that speed. The fastest I've ever seen here is about 18 Mbps. All of the Internet operates on routers and switches; each bit of data that we send or receive have a "going to" and a "coming from" address—our IP address. The routers "look" at each packet of info and route it to its destination. Pretty cool!

MOE'S NOTE: They are talking about speeds of many terabytes per second—oh my! My first computer had an 86 Megabyte hard drive. That's 0.000086 terabytes. Can you figure out how much data that is per second that we can share or have access to?