

Why a Metal Spoon Warms Up in Soup

Name _____

Date _____

Fill in the gaps so that the text makes sense.

When a metal spoon is placed in hot soup, the submerged end warms first. Particles in the soup collide with particles at the spoon's surface and transfer thermal energy to them. The liquid does not travel along the spoon, which remains solid. Instead, thermal energy passes through the solid while the material itself stays in place. This transfer is called _____ .

Inside the spoon, particles near the hotter end have more energy. They pass some of it to neighbouring particles, so warming spreads towards the other end. Metals also contain mobile electrons that help carry energy quickly. Materials that allow thermal energy to move through them easily are known as _____. Metal spoons therefore warm faster than wooden or plastic spoons under the same conditions.

The part held by your hand is the _____. It usually warms later because it is farther from the soup, but it can still become uncomfortably hot if stirring continues. A thicker spoon may take longer to warm throughout because more material must gain energy. Meanwhile, the soup loses the same energy transferred to the spoon, although its large volume may make the temperature change difficult to notice.