Name _____

## Matter Conservation: Campfires, Baking Cookies, and Fireworks

Have you ever roasted marshmallows over a campfire, smelled cookies baking in the oven, or watched fireworks light up the sky? All of these fun events involve chemical reactions, and they all follow one important rule of science: matter cannot be created or destroyed. This rule is called the law of conservation of matter.

Let's start with a campfire. When you burn wood, it seems like the wood just disappears. But it doesn't. The wood turns into ashes, smoke, and gases like carbon dioxide. These tiny bits of matter go into the air or stay behind in the fire pit. Even though the wood changes form, the matter is still there—just in a different way.

What about baking cookies? When cookie dough goes into the oven, it changes. It puffs up, turns brown, and smells amazing. That's because heat causes the ingredients to react. The dough turns into a cookie, but no matter is lost. The matter in the flour, sugar, and butter becomes part of the final cookie and the smells that fill the kitchen.

Now think about fireworks. They explode with color, sound, and light. Inside each firework are chemicals that react when they get hot. These reactions create gases and colorful sparks. Even though the firework disappears, its matter becomes part of the smoke and light we see.

In every case—campfires, cookies, and fireworks—the matter doesn't vanish. It changes form, but the total amount of matter stays the same. Scientists can measure all the parts before and after the reaction and find that nothing is lost.

Understanding how matter works helps us be better scientists and even better cooks! So the next time you watch something burn or bake, remember: the matter didn't disappear. It just changed its form.