

Name _____

Unraveling the Mystery of Chemical Potential Energy

Short Answer Key

1. Chemical potential energy is energy stored in the bonds between atoms and molecules. An example is the energy stored in gasoline, which is released during combustion to power vehicles.
2. Chemical bonds contribute to the storage of chemical potential energy by holding atoms together within molecules. Breaking these bonds during chemical reactions can release stored energy.
3. The process of releasing chemical potential energy during chemical reactions involves breaking bonds between atoms in reactants and forming new bonds in products. The difference in energy levels between reactants and products determines whether energy is released or absorbed.
4. Two examples of chemical potential energy in daily life are the energy stored in batteries, which powers electronic devices, and the energy stored in food, which fuels our bodies.
5. Covalent bonds involve atoms sharing electrons and typically store chemical potential energy. Ionic bonds, on the other hand, involve the transfer of electrons between atoms, and the energy storage depends on the nature of the ions involved.

