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| **Ionic** |
| Electrons are transferred |
| Forms a crystal lattice |
| Smallest part is called a formula unit |
| Metal + nonmetal |
| Metal + polyatomic ion |
| Polyatomic ion + nonmetal |
| Polyatomic ion + polyatomic ion |
| Brittle |
| Electrolyte when in aqueous or liquid phases |
| Lewis structure is depicted like so:  **A B** |
| Strength of bonds is measured by lattice energy |
| High electronegativity difference between bonding elements |
| When dissolved: |
| Formed from the electrostatic attraction of oppositely charged ions |
| High ionic character |

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| **Covalent** |
| Electrons are shared |
| Smallest part is called a molecule |
| May be polar or nonpolar |
| Formed from all nonmetals |
| Nonelectrolytic when dissolved |
| Lewis structure is depicted like so:  **A B** |
| May have single, double, or triple bonds |
| Strength of bonds is measured by bond energy |
| Low electronegativity difference between bonding partners |
| Bonding within polyatomic ions |
| When dissolved: |
| Nonelectrolyte in all phases of matter |
| Formed from the electrostatic attraction of 2 nuclei for shared electrons |
| Low ionic character |