# Temperature and Its Effect on the Elasticity of Rubber Bands

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Polymers, once mysterious chemical compounds, have now become among the most widely used products in the world. Whether in industrial equipment or office supplies, these substances play an integral role in day-to-day lives. For this experiment, the elasticity of rubber bands was tested in varying temperatures to determine their optimal working conditions. Rubber bands of small, medium, and large sizes were stretched across a constant length in temperatures ranging from cold to hot. I hypothesized that the relationship between the elasticity of a rubber band and the temperature to which it was subjected is directly proportional. The experiment supported my hypothesis by showing that rubber bands exposed to warm temperatures required less force to stretch over a given distance when compared with rubber bands subjected to cold temperatures. Therefore, I was able to conclude that higher temperatures did in fact lead to a higher degree of elasticity in rubber bands. In order to facilitate trials in the future, I recommend subjecting the rubber bands to even harsher variations in temperature in order to more accurately confirm the relationship which exists between elasticity and temperature.

**Awards Won:**