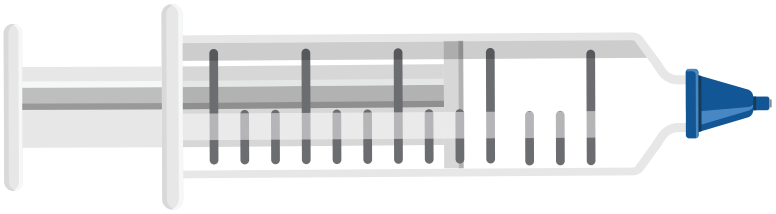
FLINN SCIENTIFIC

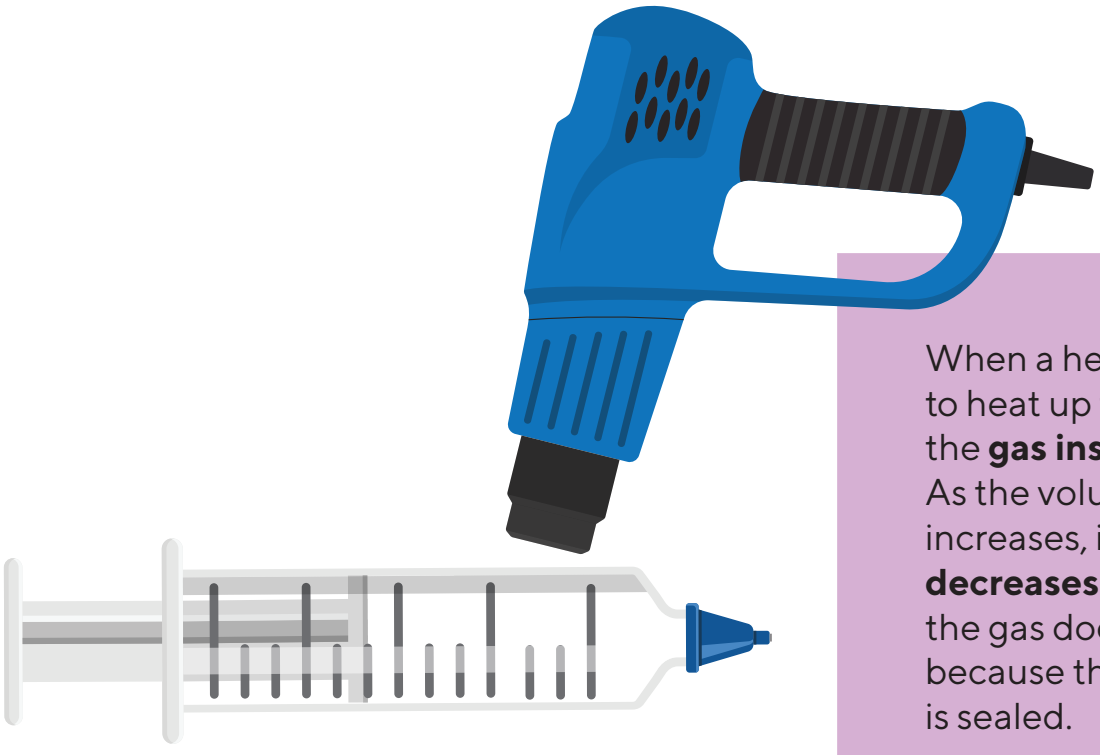
Gases

Just like the air inside the sealed glass syringe expands when the syringe is heated up, the air inside a hot air balloon expands when heated.

Hot air is less dense than cooler air. Hotter air tends to rise while cooler air remains at a lower altitude. This is how hot air balloons are kept aloft!



A tightly sealed glass syringe contains a certain volume of air.



When a heat gun is used to heat up the syringe, the **gas inside expands**. As the volume of the gas increases, its **density decreases**. The mass of the gas does not change because the syringe is sealed.