

A *conjecture* is something that we think is probably true based on experience or examples, but haven't yet proved.

A famous example is the Goldbach conjecture (which says that every even number greater than 2 can be written as the sum of two prime numbers): it works for every even number that has been checked, but it hasn't yet been proved that it is true in general. It might turn out that there is some very large even number which cannot be written as the sum of two prime numbers; we just don't know.