

Climate Background Design Information for China

Tropical Climate → City name: *Guangzhou*

Number of rainy days each year: 112

Latitude: 23° North

Altitude: 26 feet above sea level

Summer average temperature: 72 °F

Winter average temperature: 72 °F

Engineering Challenge: You want to engineer your house to keep the people inside dry during a very big rainstorm.

Cold Climate → City name: *Harbin*

Number of snowy days each year: 47

Latitude: 45° North

Altitude: 469 feet above sea level

Summer average temperature: 69.4 °F

Winter average temperature: 6.4 °F

Engineering Challenge: You want to engineer your house to keep the people inside warm during a very cold winter, and the roof must be very strong to support (and/or shed) the weight of a lot of snow.

Desert Climate → City name: *Urumqi*

Number of rainy days each year: 36

Latitude: 47° North

Altitude: 2844 feet

Summer average temperature: 73 °F

Winter average temperature: 5 °F

Engineering Challenge: You want to engineer your house to keep the people inside cool during a very hot summer.

Your house should have:

- 1 or 2 bedrooms
- 1 bathroom (which can be outside)
- 1 kitchen
- 1 living room