### 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 above sea level
- **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