

Six Degrees Movie – Class Note

Climate scientists have observed changes that are occurring and used computer models to predict what would happen if the earth heated up. This is an American movie so the degrees are in Fahrenheit.

Note $6^{\circ}\text{F} = 11^{\circ}\text{C}$.

If 1° warmer

- Arctic would be ice free for half of the year.
- American Southwest (and likely western provinces of Alberta and Saskatchewan) would dry up. A lack of water would mean cattle farming would be very difficult or impossible. Grain crops would not grow.
- Warmer in Europe. This means that grapes, olives and other Mediterranean crops would grow in England! This is already starting to happen.

If 2° warmer

- 90% of the world's energy starts as fossil fuels. We must reduce this!
- If 2° warmer, Greenland's ice will disappear. This dramatically changes their lifestyle and raises ocean levels. Cities like London England, New York and Bangkok, India may start to flood significantly.
- Insects will migrate from equator towards poles, possible bringing disease and disruption to ecosystems.
- Our Canada forests might grow further north (NOT a bad thing)
- Lose our coral reefs. This is REALLY BAD. Will disrupt ocean ecosystems. Oceans and the life living in them are a great CARBON SINK (sinks remove carbon dioxide from the atmosphere which is a good thing)

If 3° warmer

- Arctic will be ice free (sea levels rise)
- Mediterranean will experience withering heat – crops won't grow. Difficult for people.
- More severe weather.

If 4° warmer

- Himalayan glacier will be gone. The meltwater from this glacier feeds the Ganges River. This river is the water supply for billions of people in Nepal, China and India. This would be disastrous!
- New York city and other cities near sea will be flooded.

If 5 or 6° warmer

- Experts cannot predict so precisely what will happen but it will be extreme.
- Mass migrations of people will disrupt our social networks. Billions will need to move from flooded areas, areas too hot and drought areas where nothing can grow.