

Climate Change

The background features a dark blue gradient with faint, light-colored graphics. On the left side, there is a compass rose with the letters 'N', 'E', 'S', and 'W' visible. On the right side, there is a faint line graph with multiple data series, suggesting a scientific or data-driven context.

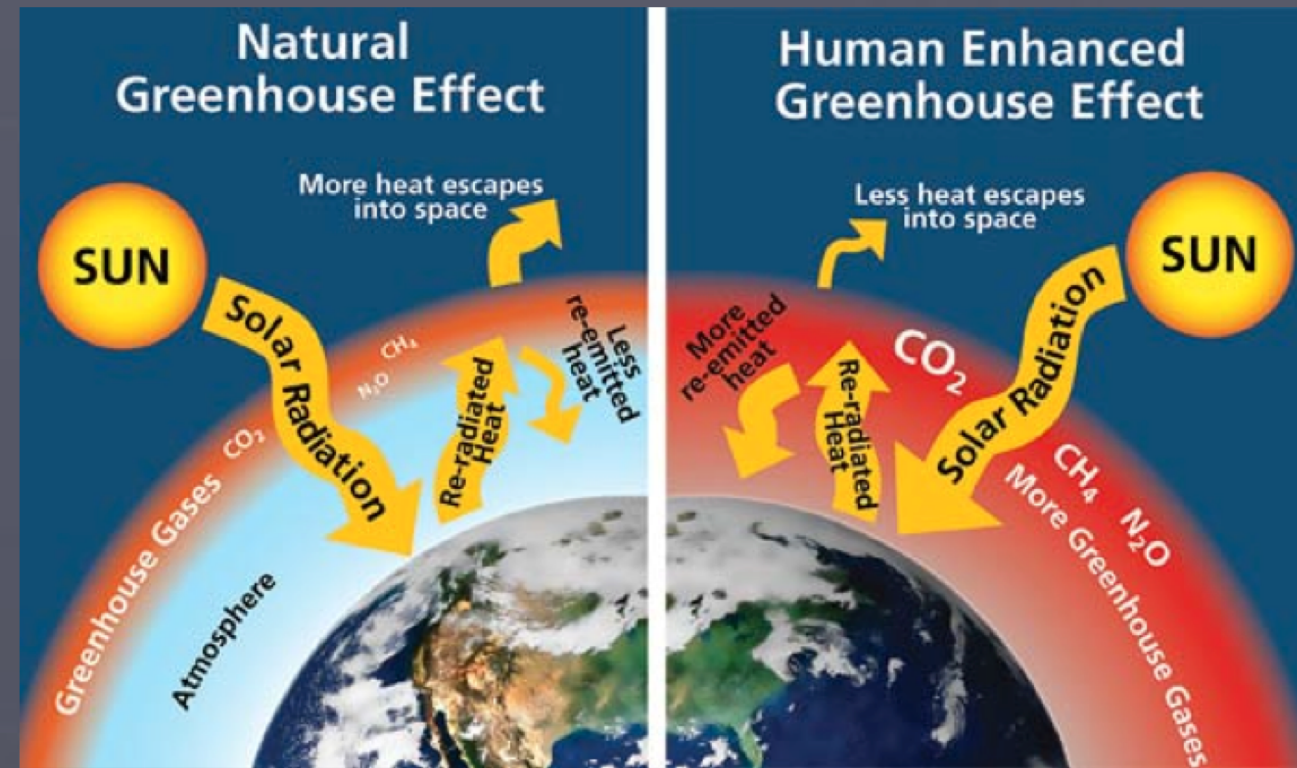
Defining Climate Change

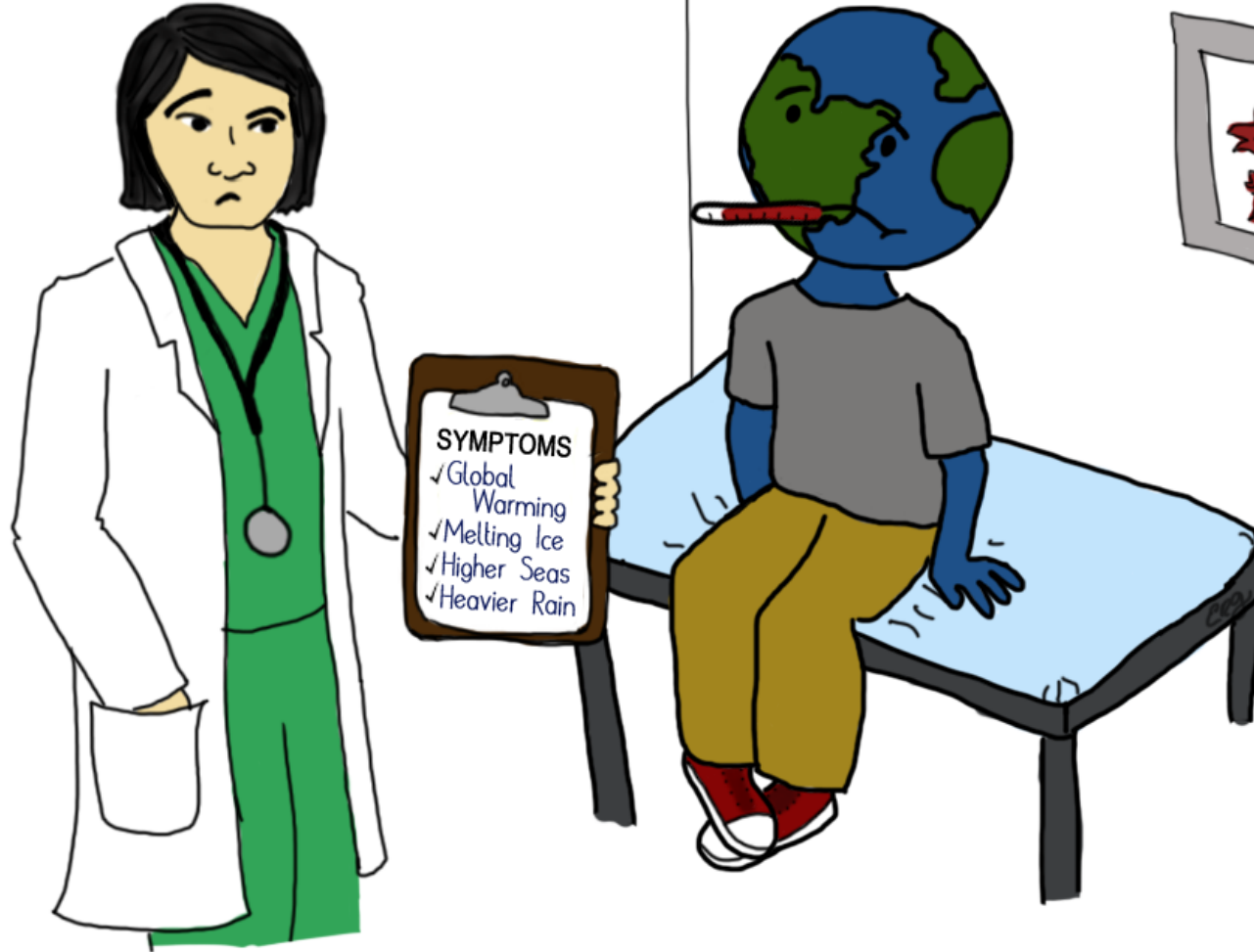
- A long-term change in the Earth's climate, or of a region on Earth
- Climate change includes global warming and everything else that increasing greenhouse gas amounts will affect
 - Melting Glaciers
 - More Severe Storms
 - More Frequent Droughts



Defining Global Warming

- The increase in the average temperature of Earth's air and oceans
 - Refers to surface temperature increases
 - Global Warming is a contributor to Climate Change
 - Years of Global Warming lead to Climate Change





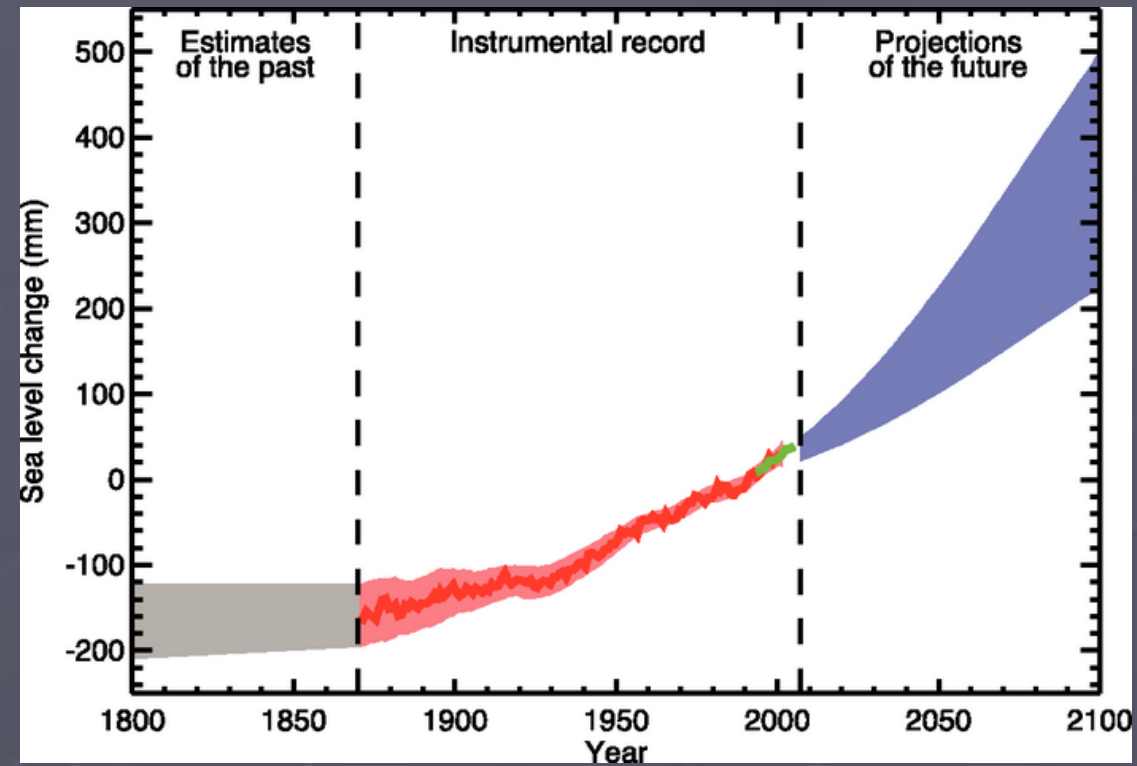
- SYMPTOMS
- ✓ Global Warming
 - ✓ Melting Ice
 - ✓ Higher Seas
 - ✓ Heavier Rain

Your results are back. It's climate change. Just how many greenhouse gases have you been consuming?

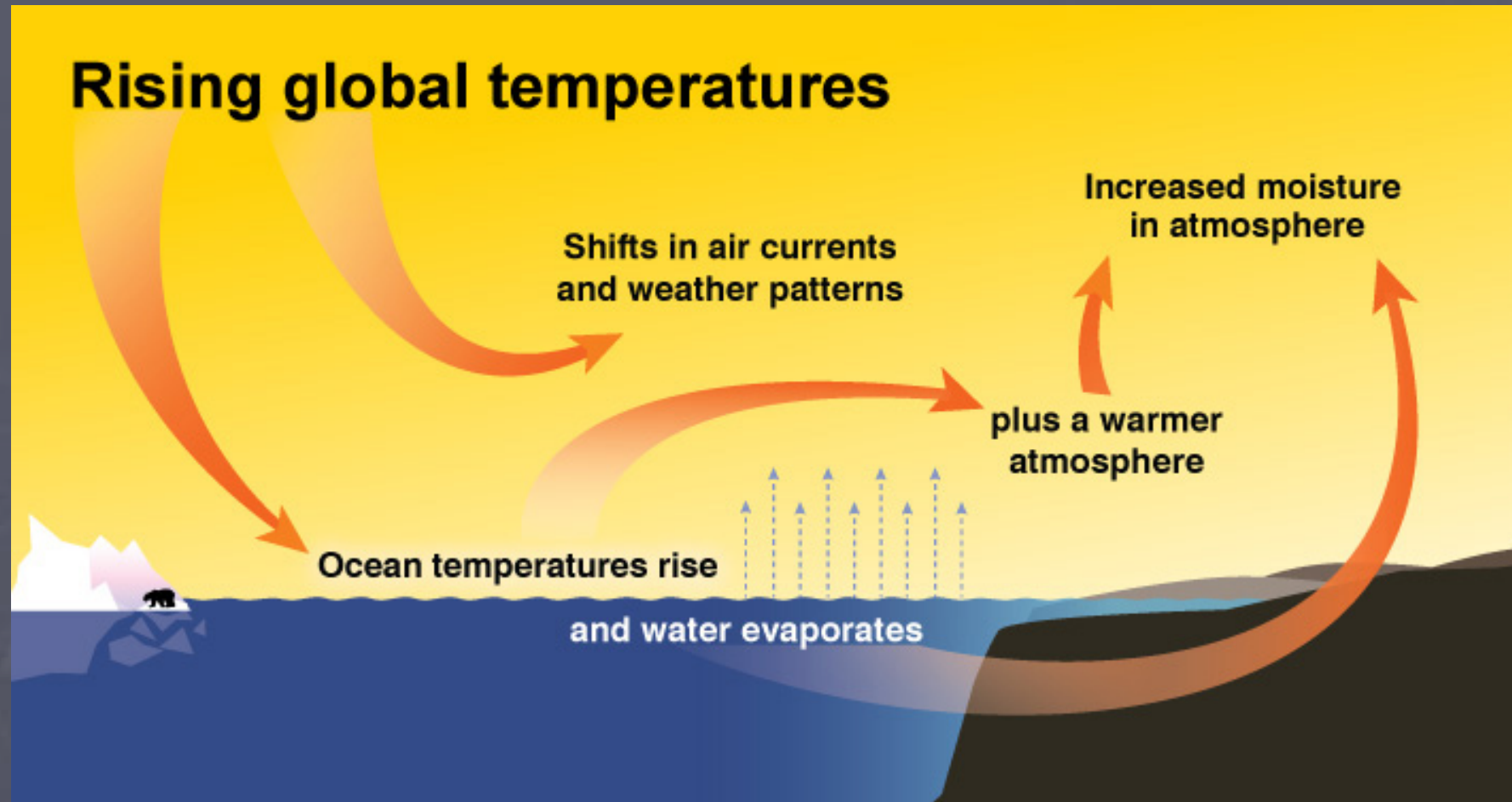
Describe how the cartoon illustrates what you have learned about global warming and climate change

Effects of Climate Change on Sea Level

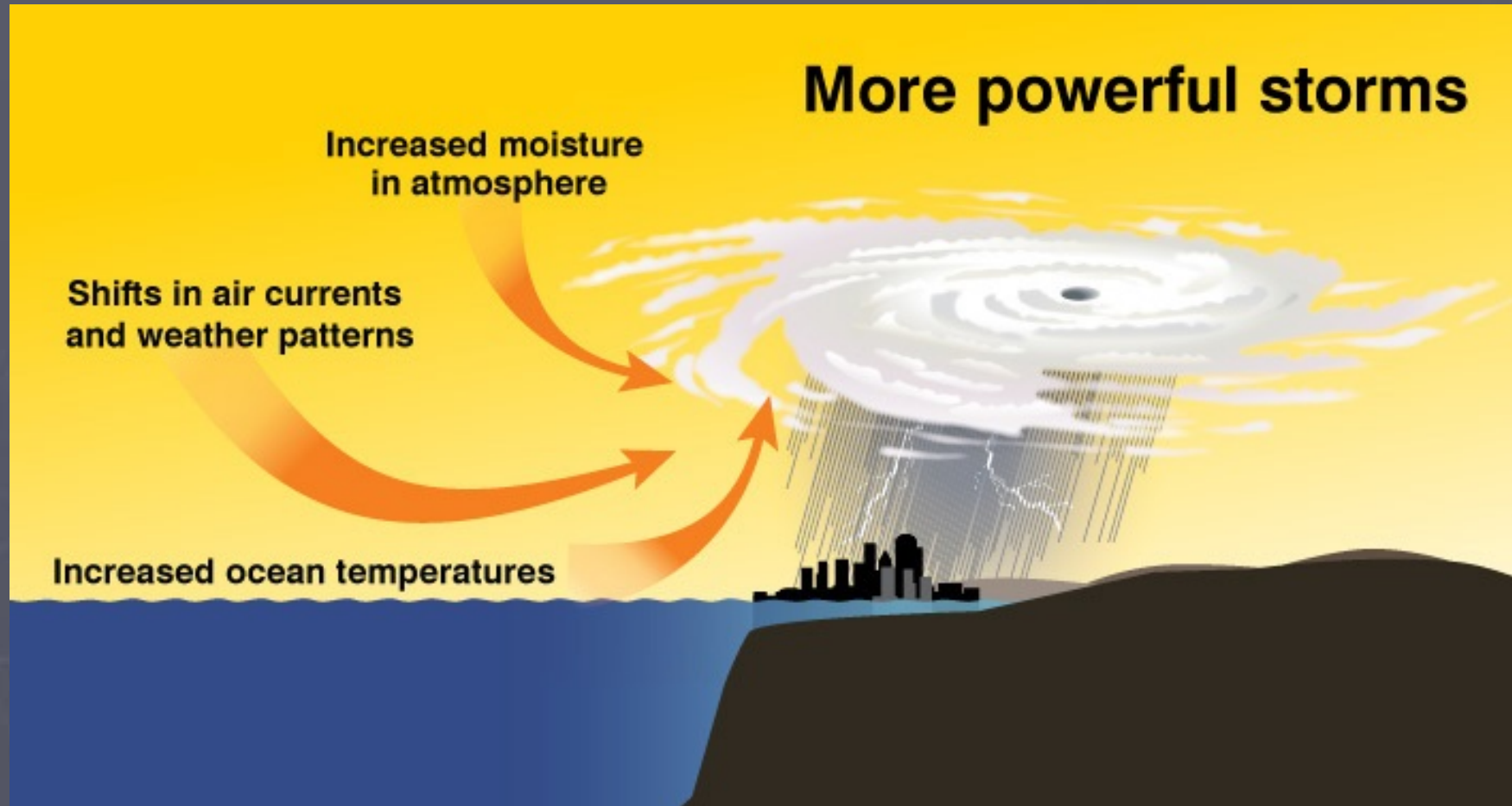
- Records and research show that sea level has been steadily rising at a rate of 0.04 to 0.1 inches per year since 1900
- Since 1992, new methods of satellite altimetry (the measurement of elevation or altitude) indicate a rate of rise of 0.12 inches per year
 - This is a significantly larger rate than the sea level rise averaged over the last several thousand years



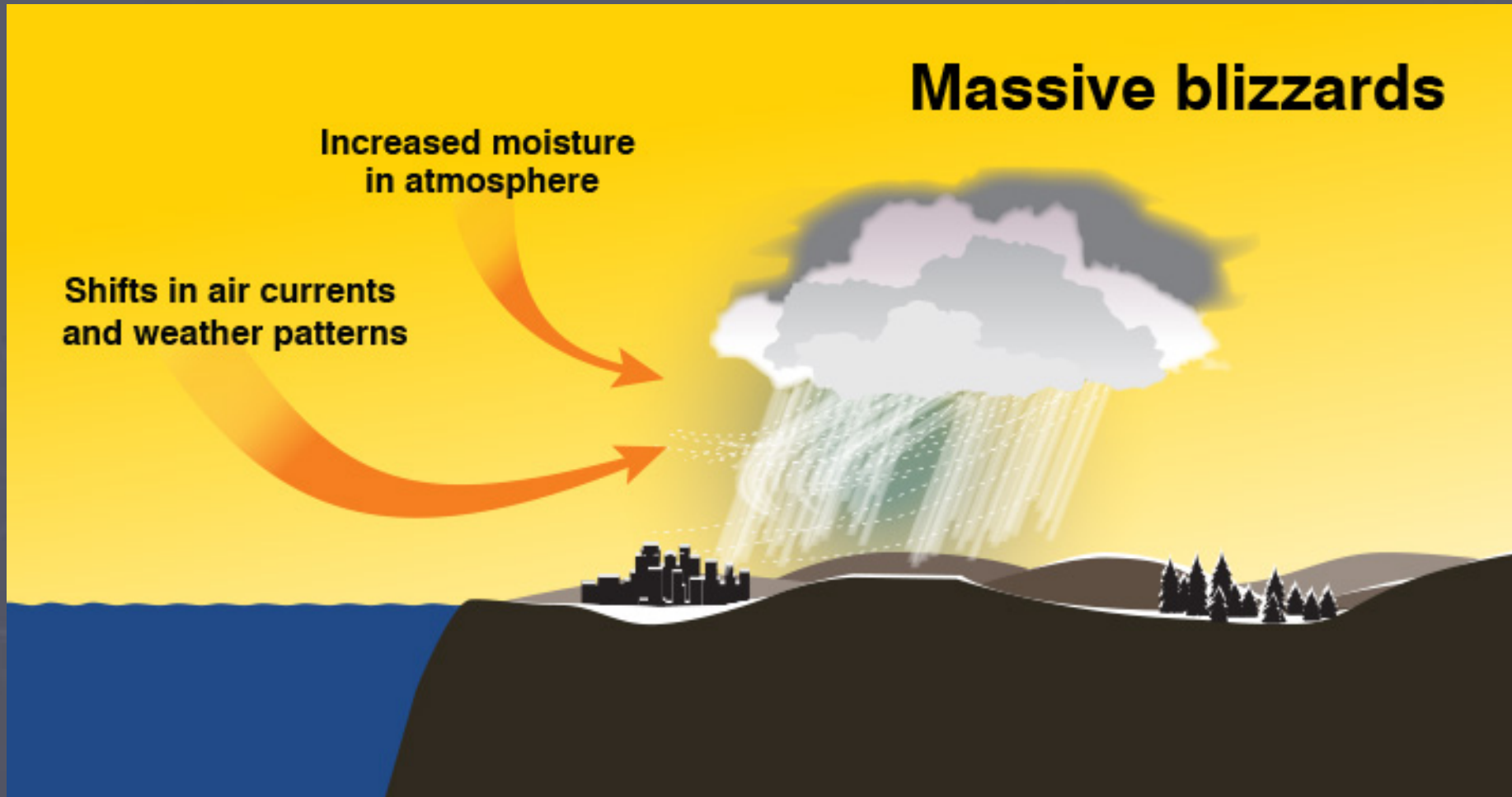
Natural Effects: Warmer Temperatures



Natural Effects: More Powerful Storms

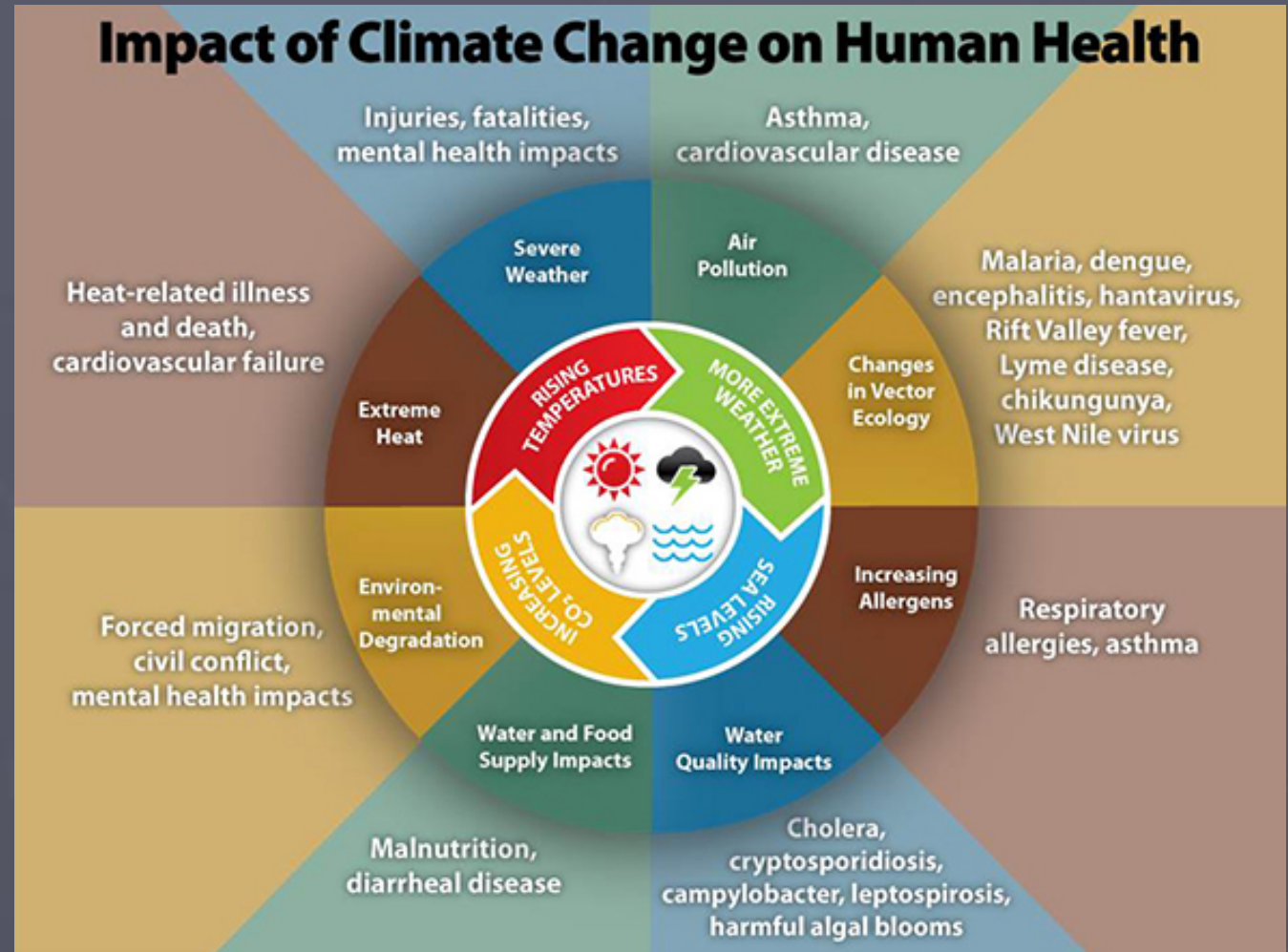


Natural Effects: Massive Blizzards



Human Effects: Health

- Humans are able to adapt to their environment fairly well, but changes in the climate can have many adverse effects on us directly and indirectly



Sources

- "What's the difference between global warming and climate change?", NOAA, Climate.gov
- "Is Sea Level Rising?", NOAA
- "Observations: Oceanic Climate Change and Sea Level." *IPCC Fourth Assessment Report: Climate Change 2007*. Intergovernmental Panel on Climate Change, 2007. Web. 02 Dec. 2016.
- "Climate Effects on Health." *Centers for Disease Control and Prevention*. Centers for Disease Control and Prevention, 26 July 2016. Web. 02 Dec. 2016.
- "Climate Change: Weather on Steroids." *Climate and Energy*. Environmental Defense Fund, n.d. Web. 02 Dec. 2016.
- "The Greenhouse Effect and Climate Change." *Kids Corne*. Center for Climate and Energy Solutions, n.d. Web. 02 Dec. 2016.

Credit

- Lesson Adapted from National Geographic
 - Larson, Elaine, “Climate Change and Rising Seas: How does Melting Ice Cause Sea Levels to Rise?” <http://nationalgeographic.org/activity/climate-change-and-rising-seas/>