** Climate Change Unit Test Review**

Test Date:

Lesson # 1 – Weather & Climate

* Weather vs. climate
* 4 factors that affect climate
* Solar radiation vs. thermal energy
* 3 layers of the biosphere and how they interact
* Interpreting climatographs

Lesson # 2 – Heat Transfer & The Natural Greenhouse Effect

* How a greenhouse works
* Insolation & net radiation budget
* Natural greenhouse effect & natural greenhouse gases
* Albedo
* Radiation, conduction, convection
* Energy transfer in the atmosphere (Coriolis effect, winds vs. jet streams)
* Energy transfer in the hydrosphere (water cycle, ocean currents)
* Who owns the Arctic? (pg. 286)

*Chapter 7 Review – pg. 292 – 293 # 2, 4, 5, 7, 8, 11, 12, 16, 19-21, 28, 36*

Lesson # 3 – Anthropogenic Greenhouse Effect

* Tree rings
* Greenland ice core project
* Global warming potential & persistence of 3 greenhouse gases
* Anthropogenic vs. natural greenhouse effect
* Sources of 3 greenhouse gases
* Carbon source vs. carbon sink
* Global warming vs. climate change
* Human activities that contribute to climate change

Lesson # 4 – Physical Effects of Climate Change

* Climate change effects on the atmosphere (heat waves, droughts, wildfires, storms, floods)
* Climate change effects on the hydrosphere (melting ice, ocean warming, changing ocean currents)
* Climate change effects on wildlife (range shifts, threatened species, organisms that benefit)

Lesson # 5 – Social and Economic Effects of Climate Change

* Production, Distribution, Consumption – how can we reduce their impact on climate change?
* Societal effects (food, drinkable water, infrastructure breakdown, disease, population displacement)
* G8 countries vs. developing countries and how climate change effects each
* Positive feedback loops & climate change examples
* Positive effects of climate change in Ontario

*Chapter 8 Review – pg. 332-333 # 1, 2, 4, 6-9, 12, 14, 16-18, 20, 22, 26-29*

Lesson # 6 – The Future of Climate Change

* Computer models and confidence levels
* Impact of aerosol pollution
* UNFCCC and Kyoto/Copenhagen Accord
* Emission-reduction credits
* Ontario’s Go Green initiative

Lesson # 7 – Action on Climate Change

* Mitigation
* Renewable resources
* Reducing electricity & fossil fuel consumption
* Carbon sequestration
* Carbon offsets, carbon trading, carbon taxes
* Adapting to climate change (pg. 355)
* Human volcano (pg. 361)

*Chapter 9 Review – pg. 362 – 363 # 1-6, 9, 10, 12-19, 21, 25, 26*

***More Practice: Unit Review – pg. 368-373 # 3, 18, 19, 22, 25, 26, 31, 35, 38, 41, 43, 44, 54, 55, 57***