

Week 4 Lab Worksheet: Heat Transfer in the Oceans
and Atmosphere and Climate Change

Part 1 of 1 -

99.87002 Points

Question 1 of 20

4.73 Points

The Wind-Driven Oceanic Circulation Surface Currents on pg 133 in the Lab Manual supports the idea that winds can moderate global temperatures by circulating heat energy via ocean currents.
Refer to pg **LM-38**, pg 133/Chap#41:Ekman Transport lab manual.

- ☒ True
☐ False

Answer Key: True

Question 2 of 20

4.73 Points

The El-Nino Southern Oscillation in the Pacific causes a major shift in cloud formations and a "piling up" of warmer water towards Australia. Refer to Fig 6.36, pg 176 in the **textbook**.

- ☒ True
☐ False

Answer Key: False

Feedback: On pg 177 it shows the water piling up near Indonesia & Australia and Indonesia in a **normal year** (non-El Nino). Clouds reflect sunlight but they also trap heat against the ground, especially in the winter. That's why clear nights in the winter are colder as the Earth radiates heat back to space. Cloud cover moderates that a bit.
El Nino pushes cloud masses effecting sea-surface temperatures and thus weather world-wide.

Question 3 of 20

4.73 Points

The El Nino phenomenon occurs due to prevailing air flow between _____ and _____.
See pg 176 in the text.

- ☐ A.Africa and South America
☐ B.Australia and New Zealand
☐ C.Japan and Mexico
☒ D.Indonesia and South America

Answer Key: D