Handout 1 (pink) Climate Name_____ Period_____

Climate Change
Standard 3 Objective 3 Indicators a, b, c, d, and e
Chapter 25: Section 3: Directed Reading   Pages 641-646

Section: Climate Change (page 641)
1. What two questions do scientists work to answer?

2. Define *climatologist*.

STUDYING CLIMATE CHANGE (page 641)
3. What practice helps climatologists make predictions about future climates?

Use the terms from the list below to complete the sentences that follow. Each term may be used only once.

sea-floor sediment	ice cores	general circulation models (GCMs)
fossils	tree rings	

4. When scientists find high ^{18}O levels in _____, they know that the water was cool in the past.
5. Thin _____ indicate cool weather and low precipitation in the past.
6. High levels of CO_2 found in _____ indicate warmer climate in the past, whereas ice ages follow decreases in CO_2.
7. By studying _____, scientists can learn how animals adapted to changing climates.
8. Computer-generated climate models that simulate changes in one variable when other variables remain unchanged are called _____.

9. What are three climate conditions that computer models can be used to predict?

POTENTIAL CAUSES OF CLIMATE CHANGE (page 643)
10. What are three factors that might cause climate changes?

11. The movement of continents over millions of years caused by _____ may affect climate changes.

12. According to the Milankovitch theory, what three factors can lead to climate changes?

13. The shape of Earth's orbit changes from _____to circular, affecting Earth's distance from the sun and therefore Earth's temperature and climate.
14. Decreasing _____decreases temperature differences between seasons.

15. The wobble of Earth on its axis changes the direction of Earth's tilt and can reverse the _____.

16. What human activities are responsible for releasing carbon dioxide, CO_2, into the atmosphere?.

17. What can increases in CO_2 levels lead to?

POTENTIAL IMPACTS OF CLIMATE CHANGE (page 644)
18. Climate change can affect what three life-forms?

19. What are three potential climate changes that could make survival of life on Earth more difficult for both humans and other species?

20. Define *global warming*.

21. How could global warming affect plants and animals?

22. How could the melting of polar ice caps affect the shoreline and its inhabitants?

WHAT HUMANS CAN DO   (page 646)
23. What actions have countries taken to reduce the potential effects of global warming?

24. List three actions individuals can take to reduce CO_2 concentrations in the atmosphere that are caused by pollution.

25. Name two ways that people can change their transportation habits to reduce the release of CO_2 into the atmosphere.

26. When driving, what are two things that can be done to make sure the car is burning fuel more efficiently?

27. How can hybrid cars reduce the amount of carbon dioxide in the atmosphere?