Chapter 4 Preview Sheet

1. **Weathering** is the process by which natural forces break down rocks.

2. What are the two types of weathering?

**Mechanical and chemical**

3. **Mechanical** weathering is the breaking up of rocks by physical forces.

4. List 4 examples of mechanical weathering. **Ice wedging, pressure release, plant root growth, and abrasion**

5. **Exfoliation** is a process in which layers or sheets of rock gradually break off.

6. **Abrasion** is the process of wearing down by friction, rubbing of one object against another.

7. **Chemical** weathering is the breakdown of rock by chemical reactions that change the rock’s makeup, or composition.

8. List 2 examples of chemical weathering.

**Dissolving and rusting**

9. What is the main cause of chemical weathering? **Water**

10. Does acid rain increase or decrease rates of weathering? **Increase**

11. Which gas in the air helps produce rust? **Oxygen**

12. What three factors affect the rate at which weathering occurs?

**Surface area, rock composition, and climate**

13. In what type of climate does chemical weathering occur the fastest?

**Hot, wet regions**

14. Soil is a mixture of what four materials?

**Weathered rock particles, organic matter, water, and air.**

15. The decayed organic matter in soil is called **humus**.

16. A **soil horizon** is a layer of soil with properties that differ from those of the layer above or below it.

17. The **A** horizon is the upper layer of soil and is commonly called **topsoil**. It contains the most **humus** of the three horizons. It is often the **darkest** of the three horizons.

18. The **B** horizon lies just below the A horizon. It contains very little **humus** and is often **brownish**  or **reddish** in color. It contains **minerals** that have washed down from the A horizon.

19. The **C** horizon is the deepest layer of soil. It consists of the **largest** and **least-**weathered rock particles. It is typically the lightest colored horizon.

20. What are the four kinds of soil that form in different climate regions? **Tropical, desert, temperate, and arctic.**

21. Where does most humus come from? **Plants**

22. List three ways that animals affect soil.**\*They loosen and mix the soils, bring partly weathered rock to the surface, and they return nutrients to the soil when they decompose after death.**

23. What are the four main properties of soil? **Texture, color, pore space, and chemistry**

**24. Why is soil a necessary resource? Soil sustains life by supporting growth of plants, purifying water, and recycling nutrients.**

**25. Describe three land-use practices that impact soil resources?**

**Farming….leads to loss of soil. Overgrazing and desertification resultfrom poor farming practices.**

**Construction and development….causes soil to blow away because the soil’s protective plant cover is removed.**

**Mining….the removal of plant cover causes soil loss. Also, rocks and minerals become exposed to air**

**which increases the rate chemical weathering. Mining may also pollute soil.**

**26. Describe 5 methods of soil conservation.**

**Crop rotation….planting different crops helps to maintain soil fertility.**

**Conservation tillage….limit the number of times fields are plowed.**

**Terraces….steplike areas built on a hill to prevent runoff.**

**Contour plowing….plowing along the curves of the land..helps to prevent runoff.**

**Windbreaks…rows of trees planted between fields to help reduce the force of winds which can carry off soil.**