Name _____

**Inquiry Skills** 8 points each

**17.** It is a cold, rainy day. The weather forecast is for the next day to be warm and sunny. What would you **predict** about the amount of evaporation that will take place on the warm, sunny day? Explain.

**Possible answer: The amount of evaporation will be greater on the warm, sunny day than on the cold, rainy day. Sunlight provides the energy that causes water to evaporate.**

**18.** You are planning a vacation to a resort. Before leaving, you **gather data** about weather forecasts for the region. You learn that a continental polar air mass will be over the region when you arrive, but that it will quickly be replaced by a maritime tropical air mass. What kind of weather can you expect when you arrive? How will the weather change after your arrival?

**Because of the continental polar air mass, the weather will be cool and dry when you arrive at the resort. When the maritime tropical air mass arrives, the weather will change to hot and humid with the possibility of thunderstorms and perhaps even hurricanes.**

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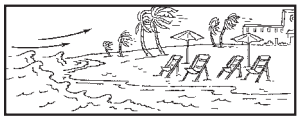
Name _____

**Critical Thinking** 10 points each

**19.** Ann is writing a report to explain the effect of mountain ranges on weather. What should her report say about the air masses and precipitation on both sides of the mountain?

**As air moves up and over mountain ranges, the air cools. Much of the water vapor condenses, resulting in precipitation. At higher elevations, with colder temperatures, snow will be the main form of precipitation. When the air passes to the other side of the mountains, most of the water vapor will no longer be present. The air will warm as it comes down the mountain. There will be little or no precipitation.**

**20.** The diagram shows the wind blowing.



**Part A** In which direction does the wind blow? Explain why this happens.

**The wind is blowing from the sea toward the land because the air over the land is warmer than the air over the sea. The air over land rises, and the air over the sea moves inland.**

**Part B** Why is the seashore a comfortable place to be on hot summer days? Explain.

**The seashore is comfortable on hot summer days because a cool breeze blows inland from the sea, as shown in the diagram.**

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Chapter Assessment

## Earth's Oceans

**Vocabulary** 4 points each

**Match each term in Column B with its meaning in Column A.**

| | Column A | Column B |
|---|---|---|
| B | 1. The part of the ocean floor that drops steeply | A. salinity |
| F | 2. A point of land formed when soft rock wears away | B. continental slope |
| A | 3. A measure of the amount of salt in water | C. abyssal plain |
| H | 4. A wall-like structure that sticks out into the ocean | D. current |
| G | 5. A temporary pool of ocean water | E. shore |
| C | 6. The large, flat area on the bottom of the ocean | F. headland |
| E | 7. The area where the ocean and the land interact | G. tide pool |
| D | 8. A stream of water that flows like a river through the ocean | H. jetty |

**Science Concepts** 4 points each

**Write the letter of the best choice.**

C **9.** What causes waves to form?
- **A.** Earth rotates on its axis.
- **B.** Currents flow through the ocean.
- **C.** Wind blows over the surface of the water.
- **D.** Earth's gravity pulls the water up and down.

F **10.** How does water in a wave move?
- **F.** in a circle
- **G.** back and forth
- **H.** down to the ocean floor
- **J.** up from the ocean floor

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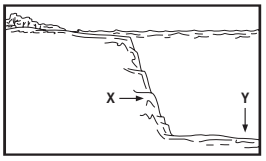
D **11.** What happens as you descend deeper into the ocean?
- **A.** Temperature increases and pressure decreases.
- **B.** Temperature increases and pressure increases.
- **C.** Temperature decreases and pressure decreases.
- **D.** Temperature decreases and pressure increases.

G **12.** Look at the two pictures below. What caused the beach ball to move?



- **F.** gravity
- **G.** a longshore current
- **H.** the phases of the moon
- **J.** an undersea earthquake

**Use the diagram below to answer Questions 13–14.**




C **13.** Which part of the ocean is labeled **X**?
- **A.** abyssal plain
- **B.** continental shelf
- **C.** continental slope
- **D.** mid-ocean ridge

H **14.** Which of the following would **not** be found on the part of the ocean that is labeled **Y**?
- **F.** active volcanoes
- **G.** deep trenches
- **H.** deep canyons formed by rivers
- **J.** mountains formed by plate movement

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C **15.** How is an estuary different from other ocean environments?
- **A.** It receives little light.
- **B.** It does not attract many organisms.
- **C.** Fresh water and salt water mix there.
- **D.** It is where streams join to form a river.

H **16.** Which statement about beach restoration is **not** true?
- **F.** Beach restoration may cost millions of dollars.
- **G.** During beach restoration, channels can be reopened.
- **H.** Beach restoration causes permanent changes to a beach.
- **J.** After beach restoration, the slope of the beach may be changed.

**Inquiry Skills** **8 points each**

**17.** If you were at the shore during a hurricane and the winds were strong and gusty, what kinds of waves would you **observe**? **Infer** what the shoreline would look like after the hurricane.

**Possible answer: The strong, gusty winds would cause waves to surge stronger and higher than normal waves. The waves would be choppy and capped with white. After the storm, the shore might be eroded.**

**18.** Rainwater flows along the side of a street, carrying leaves and twigs and depositing them where the flow turns a corner, which makes the flow slow down. Is this a good **model** for longshore currents that carry beach materials? Explain.

**Possible answer: Yes; longshore currents drop their sediments at a place where the current slows, just as the flow of rainwater deposits leaves and twigs as it slows to turn a corner.**

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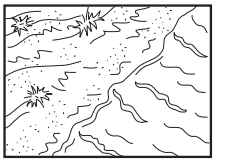
**Critical Thinking** **10 points each**

**19.** Why are waves usually bigger in an ocean than in a small lake?

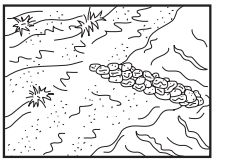
**The size of a wave depends on the area of the water and the strength of the wind. The wind may blow with the same strength over the lake and over the ocean, but the ocean surface is larger. So, the wind blows over a longer distance as it moves over the ocean, producing larger waves.**

**20.** Look at the pictures. Picture X shows a natural beach. Picture Y shows a beach with a jetty. Include information from the pictures in your answers to the questions below.

X



Y



**Part A** How does a jetty work?

**A jetty traps sand carried by the longshore current. Picture Y shows that sand has built up before the jetty.**

**Part B** Why might some beach property owners oppose the building of jetties?

**Picture Y shows that erosion has occurred past the jetty. This is why property owners past a jetty might object.**

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Chapter Assessment

## Earth, Moon, and Beyond

**Vocabulary** **4 points each**

**Use the letters of the terms in the box to complete the sentences.**

| | | | |
|---|---|---|---|
| **A.** solar system | **C.** planet | **E.** universe | **G.** moon phase |
| **B.** galaxy | **D.** constellation | **F.** star | **H.** axis |

1. The sun is a F, a huge ball of very hot gases.
2. The imaginary line that passes through Earth's poles is Earth's H.
3. Each shape the moon seems to have throughout a month is called a G.
4. A pattern of stars is a D.
5. Everything that exists, including planets, stars, dust, and gases, is the E.
6. The gravitational force of a star holds a C in orbit around it.
7. A B contains a group of stars, gas, and dust.
8. A A is made up of a star and all the planets and other objects that revolve around it.

**Science Concepts** **4 points each**

**Write the letter of the best choice.**

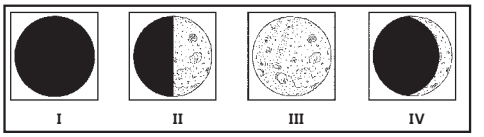
C **9.** How are Earth and the moon alike?
- **A.** Both have liquid water.
- **B.** Both have satellites.
- **C.** Both are rocky and dense.
- **D.** Both have a thick atmosphere.

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**Use the drawings to answer Questions 10–11.**




J **10.** Which of the drawings represents the waxing crescent moon?
- **F.** I
- **G.** II
- **H.** III
- **J.** IV

B **11.** Which of the drawings represents the first-quarter phase of the moon?
- **A.** I
- **B.** II
- **C.** III
- **D.** IV

H **12.** Which of these is the basis for timekeeping on Earth?
- **F.** hemispheres
- **G.** satellites
- **H.** time zones
- **J.** distance from the sun

C **13.** Which of these occurs when it is summer in the Northern Hemisphere?
- **A.** Earth has its winter equinox.
- **B.** The Southern Hemisphere is tilted toward the sun.
- **C.** The sun's rays strike the Northern Hemisphere directly.
- **D.** Earth's equator experiences three months of darkness.

F **14.** Which is a true statement about the planets in our solar system?
- **F.** Only Earth has liquid water.
- **G.** The inner planets are made of frozen gases.
- **H.** The outer planets are located in an asteroid belt.
- **J.** Jupiter is the only outer planet that is small and rocky.

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