Name _____ Class_____Date_____

Skills Worksheet

Directed Reading

SECTION: FINDING LOCATIONS ON EARTH

1. What shape is Earth?

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2. What can be used on Earth to establish reference points?

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3. For what purpose are the points where Earth's axis of rotation intersects Earth's surface used?

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4. What are the reference points where Earth's axis intersects Earth's surface?

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5. What is the equator?

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6. What is used to locate places on Earth's surface?

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LATITUDE

_____ 7. arallels are a set of circles on the reference grid

a. that describe positions north and south of the equator.
b. that describe positions north and south of the Greenwich Meridian.
c. that crisscross the Earth parallel to the poles and the equator.
d. that describe positions east and west of the equator.

_____ 8. How did parallels get their name?
- a. They run around the world east and west of the equator.
- b. They run around the world perpendicular to the equator.
- c. hey run around the world parallel to the equator.
- d. hey run around the world horizontal to the poles.

_____ 9. What is latitude?
- a. the distance around Earth at the equator
- b. the distance between meridians
- c. the actual distance north and south of the equator
- d. the angular distance north and south of the equator

_____ 10. How is latitude measured?
- a. in hours
- b. in degrees
- c. in kilometers
- d. in miles

_____ 11. What is the latitude of the equator?
- a. 10° latitude
- b. 0° longitude
- c. 90° latitude
- d. 0° latitude

_____ 12. What part of a circle is the distance from the equator to either pole?
- a. one-half
- b. one-eighth
- c. one-fourth
- d. a whole circle

_____ 13. What is the latitude of both the North Pole and the South Pole?
- a. 25°
- b. 180°
- c. 360°
- d. 90°

_____ 14. What is the actual distance in kilometers of 1° of latitude?
- a. 1 kilometer
- b. 11 kilometers
- c. 111 kilometers
- d. 1,111 kilometers

_____ 15. How are parallels north and south of the equator labeled?
- a. E and W
- b. N and S
- c. degrees and minutes
- d. latitude and longitude

_____ 16. What does each degree of latitude consist of?
- a. 90 equal parts, called minutes
- b. 30 equal parts, called minutes
- c. 60 equal parts, called seconds
- d. 60 equal parts, called minutes

17. Into how many portions is each minute of latitude divided?

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_____

18. What is the latitude of Washington, D.C., including minutes and seconds?

_____

LONGITUDE

_____ 19. To determine the specific location of a place, you need to know
- a. the latitude, and how far north or south that place is along its circle of latitude.
- b. the latitude, and how far east or west that place is along its circle of latitude.
- c. the longitude, and how far east or west that place is along its circle of longitude.
- d. only the longitude.

_____ 20. How are east-west locations established?
- a. by using meridians
- b. by using north-south locations
- c. by counting degrees
- d. by using a map

_____ 21. What is a meridian?
- a. a circle that runs around the globe through the poles
- b. half of a semicircle that runs from the equator to a pole
- **c.** a semicircle that runs from pole to pole
- d. the same thing as latitude

_____ 22. By international agreement, one meridian was selected to be
- a. 360°.
- b. the number one meridian.
- c. 180°.
- d. 0°.

_____ 23. What is the 0° meridian, which passes through Greenwich, England, called?
- a. the number one meridian
- b. the prime meridian
- c. the 180° meridian
- d. the English meridian

_____ 24. What is longitude?
- a. the angular distance, measured in degrees, east or west of the prime meridian
- b. the angular distance, measured in degrees, north or south of the prime meridian
- c. the angular distance, measured in minutes, east or west of the prime meridian
- d. the angular distance, measured in degrees, east or west of the equator

_____ 25. Where is the meridian that is opposite the prime meridian located?
- a. all the way around the world
- b. 90°, or a quarter of the way, around the world
- c. 180°, or halfway, around the world
- d. at the equator

_____ 26. All locations east of the prime meridian have
- a. longitudes between 0° and 180°W.
- b. longitudes between 0° and 180°E.
- c. latitudes between 0° and 180°E.
- d. latitudes between 0° and 180°W.

_____ 27. All locations west of the prime meridian have
- a. latitudes between 0° and 180°W.
- b. longitudes between 0° and 180°E.
- c. latitudes between 0° and 180°E.
- d. longitudes between 0° and 180°W.

28 Like latitude, how can longitude be expressed more precisely?

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29. What is the precise location of Washington, D.C. in degrees, minutes, and seconds?

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30. What does the distance covered by a degree of longitude depend on?

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31. What does a degree of longitude equal in kilometers at the equator?

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32. Where do all meridians meet?

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33. What happens to a degree of longitude as you move from the equator toward the poles?

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GREAT CIRCLES

_____ 34. What is a great circle often used for?
- a. navigation, especially by ships at sea
- b. navigation, especially by long-distance aircraft
- c. navigation, especially by short-distance aircraft
- d. navigation, especially by ships on inland lakes

_____ 35. What is a great circle?
- a. any circle that divides the globe into halves, or marks the diameter of the globe
- b. any circle that divides the globe into degrees, or marks the circumference of the globe
- **c.** any circle that divides the globe into halves, or marks the circumference of the globe
- d. any circle around the globe

_____ 36. Any circle formed by two meridians of longitude directly across the globe from each other is
- a. a great circle.
- b. a minor circle.
- c. longitude.
- d. latitude.

_____ 37. What is the only line of latitude that is a great circle?
- a. the prime meridian
- b. the North Pole
- c. the South Pole
- d. the equator

_____ 38. Great circles can run
- a. only in a north-south direction around the globe.
- b. in any direction around the globe.
- c. only in a east-west direction around the globe.
- d. only around the equator

_____ 39. Why do air and sea routes often travel along great circles?
- a. because they are the longest distance between two points on Earth
- b. because they are the only safe routes between two points on Earth
- c. because they are the only routes that connect two points on Earth
- d. because they are the shortest distance between two points on Earth

FINDING DIRECTION

_____ 40. A magnetic compass can indicate direction because Earth has magnetic properties
- a. as if a powerful bar-shaped magnet were buried at Earth's center.
- b. as if a powerful horseshoe magnet were buried at Earth's center.
- c. that apparently originate in outer space.
- d. as if it were a giant sphere-shaped magnet.

_____ 41. Earth's magnetic poles are
- a. at an angle to the sun and the other planets.
- b. constantly reversing polarity.
- c. at an angle to the sun's axis of rotation.
- d. at an angle to Earth's axis of rotation.

_____ 42. What are the geomagnetic poles?
- a. the areas on Earth's surface just above where the poles of the imaginary magnet would be
- b. the areas opposite where the poles of the imaginary magnet would be on the other side of Earth
- c. the areas on Earth's surface just below where the poles of the imaginary magnet would be
- d. the areas around the poles where large magnets are buried in Earth

_____ 43. What is true of the geomagnetic poles and the geographic poles?
- a. hey are both at areas where magnets are found in Earth.
- b. They are located in different places.
- c. They are the same thing but have different names.
- d. They are located in the same places.

_____ 44. Where does the needle of a compass point to?
- a. the geographic North Pole
- b. the geomagnetic south pole
- c. the geomagnetic north pole
- d. the geographic South Pole

45. What is magnetic declination?

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46. How is magnetic declination measured in the Northern Hemisphere?

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47. What will a compass needle align with at all locations along the line of 0° magnetic declination?

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48. By using magnetic declination, what can a person use a compass to determine?

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49. What is the global positioning system used for?

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50. What is the global positioning system?

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51. How does a GPS receiver work?

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