

***McKnight's Physical Geography, 11e (Hess)***

**Chapter 2 Portraying Earth**

1) A disadvantage of globes compared to maps is that globes are NOT \_\_\_\_\_.

- A) conformal
- B) accurate
- C) suitable for use in class
- D) equivalent
- E) as portable

Answer: E

Diff: 1

Topic/Section: 2.1 Maps and Globes

Bloom's Taxonomy: A. Knowledge

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.1 Explain why no map of the world can be as accurate as a globe.

2) A map made to show the distribution of one or more phenomenon is a(n) \_\_\_\_\_ map.

- A) conic
- B) isoline
- C) equivalent
- D) compromise
- E) thematic

Answer: E

Diff: 1

Topic/Section: 2.1 Maps

Bloom's Taxonomy: A. Knowledge

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.1 Explain why no map of the world can be as accurate as a globe.

3) The relationship between the map distance and the corresponding distance on the ground is known as the \_\_\_\_\_.

- A) vector
- B) azimuth
- C) map quotient
- D) loxodrome
- E) scale

Answer: E

Diff: 1

Topic/Section: 2.2 Map Scale

Bloom's Taxonomy: A. Knowledge

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.2 Define map scale.

4) The scale of 1:63,360 is the same as one inch equals \_\_\_\_\_.

- A) one foot
- B) one mile
- C) one furlong
- D) one meter
- E) one yard

Answer: B

Diff: 1

Topic/Section: 2.2 Map Scale

Bloom's Taxonomy: A. Knowledge

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.6 Identify examples of fractional scales from a map.

5) "Scale" relates \_\_\_\_\_ to \_\_\_\_\_.

- A) Earth distance, Earth distance
- B) map distance, map distance
- C) map distance, Earth distance
- D) Earth distance, map distortion
- E) map distortion, map distance

Answer: C

Diff: 1

Topic/Section: 2.2 Map Scale

Bloom's Taxonomy: A. Knowledge

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.2 Define map scale.

6) The largest scale among the following representative fractions is \_\_\_\_\_.

- A) 1:100,000
- B) 1:1,000,000
- C) 1:24,000
- D) 1:10,000
- E) 1:50,000

Answer: D

Diff: 2

Topic/Section: 2.2 Map Scale

Bloom's Taxonomy: C. Application

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.5 Define fractional scale of a map.

7) A scale of one inch equals one mile is \_\_\_\_\_ in a representative fraction.

- A) 1:10,000
- B) 1:63,360
- C) 1:100,000
- D) 1:1,000,000
- E) 1:250,000

Answer: B

Diff: 2

Topic/Section: 2.2 Map Scale

Bloom's Taxonomy: D. Analysis

Geog Standards: 1. How to use maps

Science Outcomes: 4. Demonstrate the quantitative skills necessary to succeed in Introductory Geography.

Learning Outcome: 2.6 Identify examples of fractional scales from a map.

8) A(n) \_\_\_\_\_ scale remains correct even if the map is enlarged or reduced when reproduced.

- A) isogonic
- B) large
- C) graphic
- D) representative fraction
- E) color

Answer: C

Diff: 3

Topic/Section: 2.2 Map Scale

Bloom's Taxonomy: F. Evaluation

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.2 Define map scale.

9) On small scale maps, it is difficult to achieve \_\_\_\_\_.

- A) a circle of tangency
- B) proper scale
- C) equivalency
- D) pole-centered perspective
- E) conformality

Answer: C

Diff: 1

Topic/Section: 2.2 Large and Small Map Scales

Bloom's Taxonomy: B. Comprehension

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.2 Define map scale.

10) The smallest scale of the following is \_\_\_\_\_.

- A) 1:100,000
- B) 1:200,000
- C) 1:500,000
- D) 1:750,000
- E) 1:900,000

Answer: E

Diff: 2

Topic/Section: 2.2 Large and Small Map Scales

Bloom's Taxonomy: C. Application

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.2 Define map scale.

11) The scale of "an inch on the map represents two miles on the surface of the Earth" would be CLOSEST to which representative fraction?

- A) 1:120,000
- B) 1:200,000
- C) 1:1,000,000
- D) 1:60,000
- E) 1:12

Answer: A

Diff: 2

Topic/Section: 2.2 Large and Small Map Scales

Bloom's Taxonomy: C. Application

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.5 Define fractional scale of a map.

12) All map projections have this in common.

- A) small scale
- B) some distortion
- C) equivalence
- D) conformality
- E) perfect portrayal of the globe

Answer: B

Diff: 1

Topic/Section: 2.3 Map Projections

Bloom's Taxonomy: A. Knowledge

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.1 Explain why no map of the world can be as accurate as a globe.

13) Conformal maps greatly distort \_\_\_\_\_ of continents in higher latitudes.

- A) shapes
- B) sizes
- C) the number
- D) the latitude
- E) the longitude

Answer: B

Diff: 1

Topic/Section: 2.3 Map Projections

Bloom's Taxonomy: B. Comprehension

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.13 Explain when a conformal map is most suited for use in geographic studies.

14) Every map projection consists of an orderly arrangement of \_\_\_\_\_.

- A) scale
- B) the geographic grid
- C) legend
- D) title
- E) interruptions

Answer: B

Diff: 1

Topic/Section: 2.3 Map Projections

Bloom's Taxonomy: A. Knowledge

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.2 Define map scale.

15) A(n) \_\_\_\_\_ is a line joining points of equal magnetic declination.

- A) contour line
- B) isohyet
- C) isotherm
- D) isomag
- E) isogonic line

Answer: E

Diff: 1

Topic/Section: 2.3 Map Projections

Bloom's Taxonomy: B. Comprehension

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.23 Explain how isolines are used to convey information on a map.

16) Most of the maps drawn on \_\_\_\_\_ projections are for an optimal portrayal of worldwide distributions.

- A) equivalent
- B) conformal
- C) conic
- D) azimuthal
- E) gnomonic

Answer: A

Diff: 2

Topic/Section: 2.3 Map Projections

Bloom's Taxonomy: B. Comprehension

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.12 Explain when an equivalent map projection is most suited for use in geographic studies.

17) You wish to navigate your yacht from Europe to the United States. Which type of map projection would be most useful?

- A) conic
- B) Mercator
- C) interrupted
- D) equivalent
- E) cylindrical

Answer: B

Diff: 2

Topic/Section: 2.3 Map Projections

Bloom's Taxonomy: C. Application

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.16 Describe some of the best uses for maps with a cylindrical projection.

18) Which of the following map projections is impossible to construct?

- A) Mercator
- B) conic
- C) cylindrical
- D) equivalent
- E) a projection without distortion

Answer: E

Diff: 3

Topic/Section: 2.3 Map Projections

Bloom's Taxonomy: F. Evaluation

Geog Standards: 1. How to use maps

Science Outcomes: 2. Demonstrate the ability to think critically and employ critical thinking skills.

Learning Outcome: 2.1 Explain why no map of the world can be as accurate as a globe.

19) One difference between any two different map projections must always be \_\_\_\_\_.

- A) scale
- B) how the geographic grid is arranged
- C) the number of degrees from the Equator to the North Pole
- D) how accurately shapes are portrayed
- E) how accurately relative sizes are portrayed

Answer: B

Diff: 3

Topic/Section: 2.3 Map Projections

Bloom's Taxonomy: F. Evaluation

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.1 Explain why no map of the world can be as accurate as a globe.

20) Map projections are mainly derived \_\_\_\_\_.

- A) mathematically
- B) from interpolation
- C) from aerial reconnaissance
- D) by analogy
- E) by osmosis

Answer: A

Diff: 3

Topic/Section: 2.3 Map Projections

Bloom's Taxonomy: E. Synthesis

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.1 Explain why no map of the world can be as accurate as a globe.

21) \_\_\_\_\_ is the "major dilemma" of mapmaking explained by the text.

- A) Conformality versus scale
- B) Scale versus equivalence
- C) Equivalence versus conformality
- D) Conic versus azimuthal projections
- E) The inclusion of too much information on a map

Answer: C

Diff: 1

Topic/Section: 2.3 Map Properties

Bloom's Taxonomy: A. Knowledge

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.12 Explain when an equivalent map projection is most suited for use in geographic studies.

22) On large scale maps, equivalence and conformity can be \_\_\_\_\_.

- A) simultaneously present
- B) simultaneously approximated for small areas
- C) disregarded if the map is of high latitudes
- D) considered to be the same map property
- E) any of the above

Answer: B

Diff: 2

Topic/Section: 2.3 Map Properties

Bloom's Taxonomy: B. Comprehension

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.11 Describe compromise map projection.

23) The property of equivalence portrays accurate size although it \_\_\_\_\_.

- A) bends parallels
- B) renders the Poles as lines
- C) stretches the circle of tangency
- D) distorts shapes
- E) all of the above

Answer: D

Diff: 2

Topic/Section: 2.3 Map Properties

Bloom's Taxonomy: D. Analysis

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.12 Explain when an equivalent map projection is most suited for use in geographic studies.

24) Which map making method would be used to minimize distortion of continents on a world map?

- A) a perfectly equivalent projection
- B) a large scale
- C) a conic projection
- D) an interrupted projection
- E) a Mercator projection

Answer: D

Diff: 3

Topic/Section: 2.3 Map Properties

Bloom's Taxonomy: F. Evaluation

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.12 Explain when an equivalent map projection is most suited for use in geographic studies.



25) The characteristic of projections which portray accurate sizes but distort the shapes of land masses is called \_\_\_\_\_.

- A) conformality
- B) sinusoidal
- C) equivalence
- D) azimuthality
- E) polyconic

Answer: C

Diff: 3

Topic/Section: 2.3 Map Properties

Bloom's Taxonomy: F. Evaluation

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.12 Explain when an equivalent map projection is most suited for use in geographic studies.

26) The most famous and most widely used of all the map projections is the \_\_\_\_\_ projection.

- A) gnomonic
- B) Mercator
- C) polyconic
- D) sinusoidal
- E) Mollweide

Answer: B

Diff: 1

Topic/Section: 2.4 Cylindrical Projections

Bloom's Taxonomy: B. Comprehension

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.16 Describe some of the best uses for maps with a cylindrical projection.

27) A loxodrome is another term for \_\_\_\_\_.

- A) rhumb line
- B) X-ray
- C) gnomon
- D) thermal scanner
- E) meridian

Answer: A

Diff: 1

Topic/Section: 2.4 Cylindrical Projections

Bloom's Taxonomy: A. Knowledge

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.15 Describe cylindrical projection.

28) The original purpose of the Mercator projection was \_\_\_\_\_.

- A) to produce an accurate, equal area map
- B) for the guidance of intercontinental missiles
- C) for ocean navigation
- D) to make the first map of the world
- E) to befuddle introductory physical geography students

Answer: C

Diff: 1

Topic/Section: 2.4 Cylindrical Projections

Bloom's Taxonomy: B. Comprehension

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.16 Describe some of the best uses for maps with a cylindrical projection.

29) In the Mercator projection, which piece of the Earth is portrayed ridiculously large in comparison to its actual size?

- A) low-latitude locations
- B) Greenland
- C) Brazil
- D) the continental U.S.
- E) the continent of Africa

Answer: B

Diff: 1

Topic/Section: 2.4 Cylindrical Projections

Bloom's Taxonomy: B. Comprehension

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.16 Describe some of the best uses for maps with a cylindrical projection.

30) A loxodrome is \_\_\_\_\_.

- A) line of constant compass bearing
- B) a curved line on a Mercator projection
- C) the opposite of a rhumb line
- D) a tracing of the exact great circle route
- E) part of a sundial

Answer: A

Diff: 1

Topic/Section: 2.4 Cylindrical Projections

Bloom's Taxonomy: B. Comprehension

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.16 Describe some of the best uses for maps with a cylindrical projection.

31) A Mercator map is constructed by projecting the grid of the globe onto a(n) \_\_\_\_\_.

- A) flat surface
- B) cone
- C) cylinder
- D) interrupted surface
- E) circle

Answer: C

Diff: 1

Topic/Section: 2.4 Cylindrical Projections

Bloom's Taxonomy: A. Knowledge

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.15 Describe cylindrical projection.

32) The \_\_\_\_\_ projection is probably the most famous and well-used projection for world maps.

- A) global
- B) large scale
- C) small scale
- D) Mercator
- E) U.S.G.S. topographic quadrangle

Answer: D

Diff: 1

Topic/Section: 2.4 Cylindrical Projections

Bloom's Taxonomy: A. Knowledge

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.16 Describe some of the best uses for maps with a cylindrical projection.

33) Misuse of the Mercator projection is a result of \_\_\_\_\_.

- A) inaccurate projection of latitude and longitude
- B) the Cold War
- C) the fact that it is so old
- D) the curved loxodromes
- E) latitudinal differences in scale

Answer: E

Diff: 3

Topic/Section: 2.4 Cylindrical Projections

Bloom's Taxonomy: F. Evaluation

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.13 Explain when a conformal map is most suited for use in geographic studies.

34) The main purpose of the interruption of projections is \_\_\_\_\_.

- A) to improve portrayal of the oceans
- B) to provide a stereoscopic view
- C) to make maps compatible with air photos
- D) to show the continents in an equal area rendition
- E) to save ink during printing

Answer: D

Diff: 1

Topic/Section: 2.4 Psuedocylindrical Projections

Bloom's Taxonomy: B. Comprehension

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.22 Describe some of the best uses for maps with a pseudocylindrical projection.

35) Central meridians are essential features on a(n) \_\_\_\_\_ projection.

- A) perfectly conformal
- B) large scale
- C) small scale
- D) interrupted
- E) Mercator

Answer: D

Diff: 2

Topic/Section: 2.4 Psuedocylindrical Projections

Bloom's Taxonomy: B. Comprehension

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.21 Describe pseudocylindrical projection.

36) If one wished to produce a map which focused on the continents and showed little of the world's oceans, then she/he should use a(n) \_\_\_\_\_ projection.

- A) large scale
- B) equal area
- C) interrupted
- D) conical
- E) azimuthal

Answer: C

Diff: 2

Topic/Section: 2.4 Psuedocylindrical Projections

Bloom's Taxonomy: C. Application

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.22 Describe some of the best uses for maps with a pseudocylindrical projection.

37) Together, title, date, and legend on a map are known as \_\_\_\_\_.

- A) marginal information
- B) necessary information
- C) cartographic license
- D) map essentials
- E) optional pieces

Answer: D

Diff: 1

Topic/Section: 2.5 Map Essentials

Bloom's Taxonomy: B. Comprehension

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.3 Define graphic scale of a map.

38) Of the following, which is NOT considered a map essential?

- A) title
- B) date
- C) color
- D) legend
- E) scale

Answer: C

Diff: 2

Topic/Section: 2.5 Map Essentials

Bloom's Taxonomy: C. Application

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.2 Define map scale.

39) Which of the following should contain a brief summary of the map's content or purpose?

- A) the title
- B) the legend
- C) the scale
- D) the area within the map boundaries
- E) the data source

Answer: A

Diff: 3

Topic/Section: 2.5 Map Essentials

Bloom's Taxonomy: F. Evaluation

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.1 Explain why no map of the world can be as accurate as a globe.

40) The explanations of symbols used on a map should be contained in \_\_\_\_\_.

- A) the title
- B) the scale
- C) the legend
- D) the space under the north arrow
- E) the data source

Answer: C

Diff: 3

Topic/Section: 2.5 Map Essentials

Bloom's Taxonomy: F. Evaluation

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.2 Define map scale.

41) A(n) \_\_\_\_\_ is the generic term for any map line which joins points of equal value.

- A) projection
- B) meridian
- C) rhumb line
- D) isoline
- E) legend

Answer: D

Diff: 1

Topic/Section: 2.5 Isolines

Bloom's Taxonomy: A. Knowledge

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.23 Explain how isolines are used to convey information on a map.

42) A line connecting points with equal precipitation is known as an \_\_\_\_\_.

- A) isoneph
- B) isobar
- C) isotherm
- D) isogonic line
- E) isohyet

Answer: E

Diff: 1

Topic/Section: 2.5 Isolines

Bloom's Taxonomy: A. Knowledge

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.23 Explain how isolines are used to convey information on a map.

43) To represent elevation on maps, cartographers use \_\_\_\_\_, which are a form of isoline.

- A) rhumb lines
- B) contour lines
- C) isoamplitudes
- D) meters
- E) isotherms

Answer: B

Diff: 1

Topic/Section: 2.5 Isolines

Bloom's Taxonomy: A. Knowledge

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.23 Explain how isolines are used to convey information on a map.

44) A(n) \_\_\_\_\_ map contains lines joining points of equal elevation.

- A) isobar
- B) contour
- C) isohyet
- D) isotherm
- E) isogonic

Answer: B

Diff: 1

Topic/Section: 2.5 Isolines

Bloom's Taxonomy: A. Knowledge

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.23 Explain how isolines are used to convey information on a map.

45) Isolines have all the properties EXCEPT the following:

- A) They are always closed loops.
- B) They may cross each other.
- C) The numerical difference between isolines are intervals.
- D) Close isolines indicate a steep gradient.
- E) They were first used on a map about 300 years ago.

Answer: B

Diff: 3

Topic/Section: 2.5 Isolines

Bloom's Taxonomy: F. Evaluation

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

46) A(n) \_\_\_\_\_ joins points of equal magnetic declination.

- A) isotherm
- B) isogonic line
- C) meridian
- D) parallel
- E) loxodrome

Answer: B

Diff: 3

Topic/Section: 2.5 Isolines

Bloom's Taxonomy: F. Evaluation

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.23 Explain how isolines are used to convey information on a map.

47) To construct an isoline on a map it is necessary to \_\_\_\_\_.

- A) make the map both equivalent and conformal
- B) note the magnetic declination
- C) color it purple
- D) first draw the line on a globe
- E) interpolate between points of known value

Answer: E

Diff: 3

Topic/Section: 2.5 Isolines

Bloom's Taxonomy: F. Evaluation

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.23 Explain how isolines are used to convey information on a map.

48) Which of the following is essential for GPS to function?

- A) highly accurate clocks
- B) a nearby base station on Earth's surface
- C) a small radar unit
- D) a GIS unit in a receiver
- E) locations on land instead of ocean

Answer: A

Diff: 1

Topic/Section: 2.6 GPS - The Global Positioning System

Bloom's Taxonomy: B. Comprehension

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.24 Describe how a GPS unit determines its location.



49) Which of the following is the acronym for the system of U.S. Department of Defense satellites which are used to establish exact locations on Earth?

- A) GIS
- B) Landsat
- C) GPS
- D) EOS
- E) color infrared

Answer: C

Diff: 1

Topic/Section: 2.6 GPS - The Global Positioning System

Bloom's Taxonomy: B. Comprehension

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.25 Describe some common uses of GPS.

50) The U.S. version of GPS is dependent on triangulation using a network of \_\_\_\_\_ satellites

- A) 2
- B) 3
- C) 5
- D) 24
- E) 108

Answer: D

Diff: 1

Topic/Section: 2.6 GPS - The Global Positioning System

Bloom's Taxonomy: A. Knowledge

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.24 Describe how a GPS unit determines its location.

51) The global positioning system (GPS) is based on \_\_\_\_\_.

- A) aerial photography
- B) infrared light sources
- C) data from satellites
- D) large, expensive receivers
- E) gravity waves from the Sun and Moon

Answer: C

Diff: 1

Topic/Section: 2.6 GPS - The Global Positioning System

Bloom's Taxonomy: A. Knowledge

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.24 Describe how a GPS unit determines its location.

52) Which of the following is NOT part of a Geographic Information System?

- A) collection, input, and correction of data
- B) human drawing of isolines on maps
- C) data storage and retrieval
- D) output and reporting
- E) manipulation and analysis of data layers

Answer: B

Diff: 2

Topic/Section: 2.6 GPS - The Global Positioning System

Bloom's Taxonomy: C. Application

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.

53) Which of the following has NOT been accomplished using geopositioning technology?

- A) ocean floor mapping
- B) earthquake prediction
- C) natural disaster damage assessment
- D) volcano monitoring
- E) counting individual people in the U.S. Census

Answer: E

Diff: 3

Topic/Section: 2.6 GPS - The Global Positioning System

Bloom's Taxonomy: F. Evaluation

Geog Standards: 2. How to use mental maps to organize information about people, places, and environments in a spatial context

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.25 Describe some common uses of GPS.

54) Geopositioning technology \_\_\_\_\_.

- A) typically uses receivers larger than filing cabinets
- B) has accuracies better than the best base maps
- C) has never been commercially successful
- D) began in the 1920s
- E) is another term for the drawing of isolines

Answer: B

Diff: 3

Topic/Section: 2.6 GPS - The Global Positioning System

Bloom's Taxonomy: F. Evaluation

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.25 Describe some common uses of GPS.

55) For the geographer, the new mapping tools like remote sensing, GPS, and GIS are best viewed as \_\_\_\_\_.

- A) replacements for traditional geographic description
- B) in the test mode and too expensive for most geographers to use
- C) adjuncts to field study
- D) aids to the study of small areas
- E) too difficult for geographers to use

Answer: C

Diff: 3

Topic/Section: 2.6 GPS - The Global Positioning System

Bloom's Taxonomy: F. Evaluation

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.28 Explain how GIS helps in the analysis of geographic data.

56) Which of the following is TRUE concerning GPS technology?

- A) It appears useful but receivers are very expensive.
- B) It usually cannot pinpoint locations with an accuracy greater than 1 km.
- C) The GPS satellites are owned by a private corporation.
- D) The technology is freely available to the public.
- E) The GPS technology allows "perfect" maps to be drawn.

Answer: D

Diff: 3

Topic/Section: 2.6 GPS - The Global Positioning System

Bloom's Taxonomy: F. Evaluation

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.24 Describe how a GPS unit determines its location.

57) \_\_\_\_\_ is the science of obtaining reliable measurements from photographs.

- A) Sonar
- B) Orthophoto mapping
- C) Remote sensing
- D) Photogrammetry
- E) Satellite imaging

Answer: D

Diff: 1

Topic/Section: 2.7 Remote Sensing

Bloom's Taxonomy: A. Knowledge

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.

58) The first airborne platform for aerial photography was a(n) \_\_\_\_\_.

- A) balloon
- B) airplane
- C) kite
- D) satellite
- E) lighthouse

Answer: A

Diff: 1

Topic/Section: 2.7 Remote Sensing

Bloom's Taxonomy: A. Knowledge

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.26 Define remote sensing.

59) \_\_\_\_\_ is the science of taking reliable measurements from aerial photographs.

- A) Cartography
- B) Photogrammetry
- C) Map projection
- D) Multispectral scanning
- E) Symap

Answer: B

Diff: 1

Topic/Section: 2.7 Remote Sensing

Bloom's Taxonomy: A. Knowledge

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.

60) In \_\_\_\_\_ film photography, the photographic film is sensitive to wavelengths longer than visible light.

- A) color infrared
- B) passive microwave
- C) true color
- D) panchromatic
- E) Landsat

Answer: A

Diff: 1

Topic/Section: 2.7 Remote Sensing

Bloom's Taxonomy: B. Comprehension

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.

61) The type of remote sensing which penetrates clouds at night for accurate terrain representation is \_\_\_\_\_.

- A) radar
- B) sonar
- C) passive microwave
- D) thermal infrared
- E) Landsat

Answer: A

Diff: 1

Topic/Section: 2.7 Remote Sensing

Bloom's Taxonomy: B. Comprehension

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.

62) Which of the following is NOT a form of remote sensing?

- A) aerial photography
- B) color infrared photography
- C) radar
- D) thermal infrared imaging
- E) measurement by thermometer

Answer: E

Diff: 1

Topic/Section: 2.7 Remote Sensing

Bloom's Taxonomy: F. Evaluation

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.26 Define remote sensing.

63) On an orthophoto map, one might expect to find \_\_\_\_\_.

- A) distortion-free photographs
- B) many problems with map distortion
- C) sketches rather than true projections
- D) cultural but not physical features
- E) symbols that are difficult to read

Answer: A

Diff: 1

Topic/Section: 2.7 Remote Sensing

Bloom's Taxonomy: B. Comprehension

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.

64) Which of the below is an active remote sensing system?

- A) color infrared photography
- B) Landsat
- C) microwave remote sensing
- D) thermal infrared imagery
- E) black and white aerial photography

Answer: C

Diff: 2

Topic/Section: 2.7 Remote Sensing

Bloom's Taxonomy: C. Application

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.

65) Aside from normal photographic film, \_\_\_\_\_ film has proven very valuable for interpretation of Earth resources from airborne cameras.

- A) color infrared
- B) ultraviolet
- C) thermal infrared
- D) X-ray
- E) gamma ray

Answer: A

Diff: 2

Topic/Section: 2.7 Remote Sensing

Bloom's Taxonomy: F. Evaluation

Geog Standards: 18. How to apply geography to interpret the present and plan for the future

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.

66) On which type of aerial imagery would a football field of artificial grass be discernible from natural grass?

- A) color photography
- B) black and white photography
- C) color infrared photography
- D) radar imagery
- E) microwave imagery

Answer: C

Diff: 2

Topic/Section: 2.7 Remote Sensing

Bloom's Taxonomy: C. Application

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.

67) Which of the following refers to an "active" remote sensing system?

- A) radar
- B) color infrared photography
- C) GPS
- D) thermal infrared imagery
- E) black and white photography

Answer: A

Diff: 2

Topic/Section: 2.7 Remote Sensing

Bloom's Taxonomy: D. Analysis

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.

68) Unlike aerial photography, Landsat imagery is interpreted through \_\_\_\_\_.

- A) remote sensing
- B) numerical processing
- C) a stereoscopic
- D) film
- E) visual analysis

Answer: B

Diff: 2

Topic/Section: 2.7 Remote Sensing

Bloom's Taxonomy: D. Analysis

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.

69) Which of the following bands are NOT used by the Earth-sensing satellites mentioned in the text?

- A) X-rays
- B) color infrared
- C) panchromatic
- D) thermal infrared
- E) visible red

Answer: A

Diff: 2

Topic/Section: 2.7 Remote Sensing

Bloom's Taxonomy: D. Analysis

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.

70) A satellite that remains over the same spot over all the time is \_\_\_\_\_.

- A) geosynchronous
- B) photogrammetric
- C) a "low orbiter"
- D) Landsat mission
- E) an impossibility

Answer: A

Diff: 2

Topic/Section: 2.7 Remote Sensing

Bloom's Taxonomy: D. Analysis

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.

71) Which of the below wavelengths have been most useful in expanding measure biomass?

- A) ultraviolet
- B) X-rays
- C) near infrared
- D) radio wavelengths
- E) gamma wavelengths

Answer: C

Diff: 2

Topic/Section: 2.7 Remote Sensing

Bloom's Taxonomy: D. Analysis

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.

72) The major advantage of orthophotos as compared to regular vertical air photographs is that \_\_\_\_\_.

- A) the view is more familiar
- B) they are more generalized (less detailed)
- C) distortion has been eliminated
- D) they are usually classified by the government
- E) shadows make identification of Earth features impossible

Answer: C

Diff: 3

Topic/Section: 2.7 Remote Sensing

Bloom's Taxonomy: F. Evaluation

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.



73) Which remote sensing systems sense the longest wavelengths?

- A) Landsat
- B) color photography
- C) thermal infrared imaging
- D) radar
- E) black and white photography

Answer: D

Diff: 3

Topic/Section: 2.7 Remote Sensing

Bloom's Taxonomy: F. Evaluation

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.

74) Commercial satellites data usually \_\_\_\_\_.

- A) do not employ remote sensing
- B) are provided for free
- C) have very high resolution data
- D) are mainly concerned with photography
- E) are owned by the U.S. government

Answer: C

Diff: 3

Topic/Section: 2.7 Remote Sensing

Bloom's Taxonomy: F. Evaluation

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 2. Demonstrate the ability to think critically and employ critical thinking skills.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.

75) MODIS is associated with which satellite series?

- A) Landsat
- B) GOES
- C) Space Shuttle
- D) NIMBUS
- E) EOS

Answer: E

Diff: 3

Topic/Section: 2.7 Remote Sensing

Bloom's Taxonomy: F. Evaluation

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.26 Define remote sensing.

76) Which of the following is an advantage of radar over all other remote sensing techniques?

- A) It can operate at high altitude.
- B) It can operate at night.
- C) It can operate in clear weather.
- D) It can operate at wavelengths shorter than 1 micrometer.
- E) It can operate without using an electrical source.

Answer: B

Diff: 3

Topic/Section: 2.7 Remote Sensing

Bloom's Taxonomy: F. Evaluation

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.

77) In terms of remote sensing, geographers \_\_\_\_\_.

- A) should not stop using maps and field study
- B) have shown very little interest
- C) will someday identify one remote sensing type best for all purposes
- D) have never used remote sensing
- E) should never use remote sensing

Answer: A

Diff: 3

Topic/Section: 2.7 Remote Sensing

Bloom's Taxonomy: F. Evaluation

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.

78) The first aerial photographs were taken \_\_\_\_\_.

- A) in the middle 1800s
- B) during World War II
- C) during the Vietnam War
- D) during the Korean War
- E) in the middle 1600s

Answer: A

Diff: 1

Topic/Section: 2.7 Aerial Photographs

Bloom's Taxonomy: A. Knowledge

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.

79) A geometrically corrected map consisting of aerial photographs is known as a(n) \_\_\_\_\_ map.

- A) projected
- B) Mercator
- C) orthophoto
- D) color infrared
- E) large-scale

Answer: C

Diff: 1

Topic/Section: 2.7 Aerial Photographs

Bloom's Taxonomy: A. Knowledge

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.

80) \_\_\_\_\_ are multicolored, distortion-free photographic image maps. Displacements caused by camera tilt or differences in terrain elevations have been removed.

- A) Aerial photographs
- B) Vertical aerial photographs
- C) Orthophoto maps
- D) GIS maps
- E) Mercator projections

Answer: C

Diff: 2

Topic/Section: 2.7 Aerial Photographs

Bloom's Taxonomy: C. Application

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.26 Define remote sensing.

81) The "false color" imagery of some aerial photographs is also termed \_\_\_\_\_.

- A) Landsat
- B) microwave
- C) color IR
- D) sonar
- E) radar

Answer: C

Diff: 1

Topic/Section: 2.7 Visible Light and Infrared Sensing

Bloom's Taxonomy: B. Comprehension

Geog Standards: 18. How to apply geography to interpret the present and plan for the future

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.

82) On color infrared photography, living green vegetation appears \_\_\_\_\_.

- A) blue
- B) orange
- C) red
- D) green
- E) violet

Answer: C

Diff: 1

Topic/Section: 2.7 Visible Light and Infrared Sensing

Bloom's Taxonomy: A. Knowledge

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.

83) \_\_\_\_\_ is the type of remote sensing imagery best suited to use at night.

- A) Visible
- B) An orthophoto map
- C) Color infrared
- D) Polaroid
- E) Thermal infrared

Answer: E

Diff: 2

Topic/Section: 2.7 Visible Light and Infrared Sensing

Bloom's Taxonomy: C. Application

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.

84) Which of the following portions of the electromagnetic spectrum is sensed on FILM?

- A) microwave
- B) radar
- C) thermal infrared
- D) color infrared
- E) multispectral

Answer: D

Diff: 2

Topic/Section: 2.7 Visible Light and Infrared Sensing

Bloom's Taxonomy: B. Comprehension

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.

85) By far, the greatest use of IR scanning systems has been \_\_\_\_\_.

- A) to penetrate clouds
- B) onboard meteorological satellites
- C) in surface weather thermometer shelters
- D) in making orthophoto quadrangles
- E) to sense underwater features

Answer: B

Diff: 1

Topic/Section: 2.7 Thermal Infrared Sensing

Bloom's Taxonomy: A. Knowledge

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.

86) The most important Earth resources satellite series was started in the 1970s and is known as \_\_\_\_\_.

- A) Landsat
- B) Sputnik
- C) TIROS
- D) Seasat
- E) GOES

Answer: A

Diff: 1

Topic/Section: 2.7 Multispectral Remote Sensing

Bloom's Taxonomy: B. Comprehension

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.26 Define remote sensing.

87) Satellite data are analyzed in individual pieces representing several to many meters on the Earth's surface. These pieces are known as \_\_\_\_\_.

- A) pixels
- B) RBVs
- C) false color images
- D) scan lines
- E) computer maps

Answer: A

Diff: 1

Topic/Section: 2.7 Multispectral Remote Sensing

Bloom's Taxonomy: B. Comprehension

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.

88) Radar senses energy in wavelengths longer than 1 \_\_\_\_\_.

- A) angstrom
- B) micrometer
- C) millimeter
- D) meter
- E) kilometer

Answer: C

Diff: 1

Topic/Section: 2.7 Multispectral Remote Sensing

Bloom's Taxonomy: A. Knowledge

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.

89) The ERTS series of satellites, launched in the 1970s, is now known as \_\_\_\_\_.

- A) GOES
- B) TIROS
- C) EOS
- D) AVHRR
- E) Landsat

Answer: E

Diff: 1

Topic/Section: 2.7 Multispectral Remote Sensing

Bloom's Taxonomy: A. Knowledge

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.

90) Which of the following forms of remote sensing is based on sound?

- A) sonar
- B) microwave sensing
- C) radar
- D) thermal infrared imaging
- E) color infrared photography

Answer: A

Diff: 1

Topic/Section: 2.7 Multispectral Remote Sensing

Bloom's Taxonomy: B. Comprehension

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.

91) Radar imagery is suited for sensing \_\_\_\_\_.

- A) emitted heat
- B) reflected light
- C) terrain
- D) crop health
- E) fluctuations in Earth's orbit

Answer: C

Diff: 2

Topic/Section: 2.7 Multispectral Remote Sensing

Bloom's Taxonomy: C. Application

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.26 Define remote sensing.

92) Landsat has a resolution of \_\_\_\_\_ meters.

- A) 0.3
- B) 3
- C) 30
- D) 300
- E) 3,000

Answer: C

Diff: 2

Topic/Section: 2.7 Multispectral Remote Sensing

Bloom's Taxonomy: D. Analysis

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.

93) Which of the following is the most recent type of Earth resource satellites?

- A) Landsat
- B) GOES
- C) NEXRAD
- D) EOS
- E) GPS

Answer: D

Diff: 3

Topic/Section: 2.7 Multispectral Remote Sensing

Bloom's Taxonomy: F. Evaluation

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.26 Define remote sensing.

94) Which of the following is most closely identified with "multispectral remote sensing"?

- A) radar imaging
- B) color infrared photography
- C) Landsat
- D) microwave imaging
- E) thermal infrared scanning

Answer: C

Diff: 3

Topic/Section: 2.7 Multispectral Remote Sensing

Bloom's Taxonomy: F. Evaluation

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.

95) How much area is shown in an entire Landsat image?

- A) a few square centimeters
- B) a few square meters
- C) a few square kilometers
- D) a few thousand square kilometers
- E) approximately half of the Earth

Answer: D

Diff: 3

Topic/Section: 2.7 Multispectral Remote Sensing

Bloom's Taxonomy: E. Synthesis

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.

96) The basic imaging instrument in the Landsat series of satellites is known as the \_\_\_\_\_.

- A) camera
- B) radar screen
- C) pixel
- D) thematic mapper
- E) Skylab data

Answer: D

Diff: 3

Topic/Section: 2.7 Multispectral Remote Sensing

Bloom's Taxonomy: E. Synthesis

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.



97) Aqua, CERES, and Terra are examples of \_\_\_\_\_ satellites.

- A) useless
- B) EOS
- C) Landsat
- D) GOES
- E) SPOT

Answer: B

Diff: 3

Topic/Section: 2.7 Multispectral Remote Sensing

Bloom's Taxonomy: F. Evaluation

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.

98) Which of the following is NOT associated with Landsat images?

- A) thematic mapper
- B) multispectral scanning system
- C) a series of several satellites over many years
- D) the ultraviolet portion of the spectrum
- E) millions of pieces of data (pixels) per image

Answer: D

Diff: 3

Topic/Section: 2.7 Multispectral Remote Sensing

Bloom's Taxonomy: F. Evaluation

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.

99) EOS is \_\_\_\_\_.

- A) another name for Landsat
- B) a type of orthophoto map
- C) radar technology
- D) a satellite of the global positioning system
- E) an Earth-observing series of satellites

Answer: E

Diff: 3

Topic/Section: 2.7 Multispectral Remote Sensing

Bloom's Taxonomy: F. Evaluation

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.

100) A GIS is a library of information based on \_\_\_\_\_.

- A) satellites
- B) stereoscopic image viewing
- C) many land survey records stored on microfilm
- D) manual cartography
- E) maps

Answer: E

Diff: 2

Topic/Section: 2.8 Geographic Information Systems (GIS)

Bloom's Taxonomy: D. Analysis

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.28 Explain how GIS helps in the analysis of geographic data.

101) A geographic information systems allows a link between data and a(n) \_\_\_\_\_.

- A) scientific theory
- B) map
- C) computer
- D) color
- E) orthophoto mapping

Answer: B

Diff: 2

Topic/Section: 2.8 Geographic Information Systems (GIS)

Bloom's Taxonomy: F. Evaluation

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.28 Explain how GIS helps in the analysis of geographic data.

102) Probably the largest concern with the geographer's use of maps and imagery is \_\_\_\_\_.

- A) choosing the most effective maps and imagery
- B) making sure it is available on the Internet
- C) to always use GIS
- D) to make sure the property of equivalence is always preserved
- E) to use images instead of maps when possible

Answer: A

Diff: 3

Topic/Section: 2.8 Geographic Information Systems (GIS)

Bloom's Taxonomy: F. Evaluation

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.28 Explain how GIS helps in the analysis of geographic data.

103) Which of the following would be used for overlay map analysis where two or more map layers are superimposed or integrated?

- A) GIS
- B) Landsat
- C) GPS
- D) EOS
- E) color infrared

Answer: A

Diff: 3

Topic/Section: 2.8 Geographic Information Systems (GIS)

Bloom's Taxonomy: F. Evaluation

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.28 Explain how GIS helps in the analysis of geographic data.

104) Geographic information system technology is a direct result of advances in all EXCEPT

\_\_\_\_\_.

- A) surveying
- B) computer cartography
- C) spatial statistics
- D) remote sensing
- E) cartographic theory

Answer: E

Diff: 3

Topic/Section: 2.8 Geographic Information Systems (GIS)

Bloom's Taxonomy: F. Evaluation

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.28 Explain how GIS helps in the analysis of geographic data.

105) Which of the following would be a type of application in which a geographic information system would NOT be used?

- A) integrating topographic information with vegetation information
- B) environment site assessment
- C) resource management
- D) environmental monitoring
- E) monitoring of weather data at a single weather station

Answer: E

Diff: 3

Topic/Section: 2.8 Geographic Information Systems (GIS)

Bloom's Taxonomy: F. Evaluation

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.28 Explain how GIS helps in the analysis of geographic data.

106) Which of the following choices represents a technology into which the other choices can be used as inputs?

- A) GPS
- B) GIS
- C) Landsat imagery
- D) field data
- E) aerial photography

Answer: B

Diff: 3

Topic/Section: 2.8 Geographic Information Systems (GIS)

Bloom's Taxonomy: F. Evaluation

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.28 Explain how GIS helps in the analysis of geographic data.

107) A globe is a better model of Earth as a whole than any map.

Answer: TRUE

Diff: 1

Topic/Section: 2.1 Maps and Globes

Bloom's Taxonomy: B. Comprehension

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.1 Explain why no map of the world can be as accurate as a globe.

108) Maps are inherently inaccurate because of their attempt to depict the curved Earth on a flat surface.

Answer: TRUE

Diff: 1

Topic/Section: 2.1 Maps and Globes

Bloom's Taxonomy: B. Comprehension

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.1 Explain why no map of the world can be as accurate as a globe.

109) There are major discrepancies between the true shape of the Earth and that of a globe.

Answer: FALSE

Diff: 1

Topic/Section: 2.1 Maps and Globes

Bloom's Taxonomy: A. Knowledge

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.1 Explain why no map of the world can be as accurate as a globe.

110) There is no possible way to avoid distortion on a map projection.

Answer: TRUE

Diff: 1

Topic/Section: 2.1 Maps and Globes

Bloom's Taxonomy: B. Comprehension

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.1 Explain why no map of the world can be as accurate as a globe.

111) Because they are shaped like the real Earth, globes are usually the best way to convey Earth information.

Answer: FALSE

Diff: 2

Topic/Section: 2.1 Maps and Globes

Bloom's Taxonomy: D. Analysis

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.1 Explain why no map of the world can be as accurate as a globe.

112) A globe maintains the properties of conformality and equivalence.

Answer: TRUE

Diff: 2

Topic/Section: 2.1 Maps and Globes

Bloom's Taxonomy: C. Application

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.1 Explain why no map of the world can be as accurate as a globe.

113) The maps in your physical geography textbook are an example of automated cartography and were produced using desktop computers.

Answer: TRUE

Diff: 2

Topic/Section: 2.1 Maps

Bloom's Taxonomy: D. Analysis

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.12 Explain when an equivalent map projection is most suited for use in geographic studies.

114) At a scale of 1:10,000, the distance of an inch on a map would represent more than a mile on the ground.

Answer: FALSE

Diff: 2

Topic/Section: 2.2 Map Scale

Bloom's Taxonomy: D. Analysis

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.2 Define map scale.

115) The scale of a map can never be constant all over the entire map.

Answer: TRUE

Diff: 2

Topic/Section: 2.2 Map Scale

Bloom's Taxonomy: B. Comprehension

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.2 Define map scale.

116) A map which showed your classroom building as being 6 inches long on the map would be a large scale map.

Answer: TRUE

Diff: 3

Topic/Section: 2.2 Map Scale

Bloom's Taxonomy: C. Application

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.2 Define map scale.

117) A map is usually much smaller than the part of the Earth's surface it represents.

Answer: TRUE

Diff: 1

Topic/Section: 2.2 Large and Small Map Scales

Bloom's Taxonomy: B. Comprehension

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.2 Define map scale.

118) A map at large scale generally shows a large portion (continental size or larger) of Earth's surface.

Answer: FALSE

Diff: 1

Topic/Section: 2.2 Large and Small Map Scales

Bloom's Taxonomy: A. Knowledge

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.2 Define map scale.

119) An example of a large-scale map is a classroom wall map of the world.

Answer: FALSE

Diff: 2

Topic/Section: 2.2 Large and Small Map Scales

Bloom's Taxonomy: C. Application

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.2 Define map scale.

120) The one inch to the mile scale map is a small scale map.

Answer: FALSE

Diff: 2

Topic/Section: 2.2 Large and Small Map Scales

Bloom's Taxonomy: C. Application

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.2 Define map scale.

121) Compromise projections maintain both equivalence and conformality.

Answer: FALSE

Diff: 1

Topic/Section: 2.3 Map Projections

Bloom's Taxonomy: B. Comprehension

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.11 Describe compromise map projection.

122) Choosing the appropriate equivalence projection will result in a map with no distortion in its depiction of Earth features or areas.

Answer: FALSE

Diff: 2

Topic/Section: 2.3 Map Projections

Bloom's Taxonomy: C. Application

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.1 Explain why no map of the world can be as accurate as a globe.

123) All conformal projections have meridians and parallels crossing each other at right angles, just as they do on the globe.

Answer: TRUE

Diff: 1

Topic/Section: 2.3 Map Properties

Bloom's Taxonomy: B. Comprehension

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.10 Describe conformal map projection.

124) The Mercator projection is very close to maintaining equivalence in low latitudes.

Answer: TRUE

Diff: 1

Topic/Section: 2.3 Map Properties

Bloom's Taxonomy: B. Comprehension

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.16 Describe some of the best uses for maps with a cylindrical projection.

125) Conformality and equivalence are, in general, mutually exclusive properties.

Answer: TRUE

Diff: 1

Topic/Section: 2.3 Map Properties

Bloom's Taxonomy: B. Comprehension

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.11 Describe compromise map projection.

126) A Mercator map shows loxodromes as straight lines.

Answer: TRUE

Diff: 1

Topic/Section: 2.3 Map Properties

Bloom's Taxonomy: A. Knowledge

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.21 Describe pseudocylindrical projection.

127) On a Mercator projection, the North Pole would be represented by a line as long as the Equator.

Answer: TRUE

Diff: 2

Topic/Section: 2.3 Map Properties

Bloom's Taxonomy: D. Analysis

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.13 Explain when a conformal map is most suited for use in geographic studies.



128) All map projections have the basic property of equivalence.

Answer: FALSE

Diff: 2

Topic/Section: 2.3 Map Properties

Bloom's Taxonomy: D. Analysis

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.12 Explain when an equivalent map projection is most suited for use in geographic studies.

129) "Equivalency" in map projections means having no scale changes over the entire map.

Answer: FALSE

Diff: 2

Topic/Section: 2.3 Map Properties

Bloom's Taxonomy: A. Knowledge

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.9 Describe equivalent map projection.

130) It is important that all maps have their meridians parallel to each other as they extend east to west.

Answer: FALSE

Diff: 2

Topic/Section: 2.3 Map Properties

Bloom's Taxonomy: D. Analysis

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.17 Describe planar projection.

131) On Mercator projection, Greenland's size relative to the United States is greatly exaggerated.

Answer: TRUE

Diff: 1

Topic/Section: 2.4 Cylindrical Projections

Bloom's Taxonomy: B. Comprehension

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.15 Describe cylindrical projection.

132) The original purpose of the Mercator projection was for navigation.

Answer: TRUE

Diff: 1

Topic/Section: 2.4 Cylindrical Projections

Bloom's Taxonomy: A. Knowledge

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.16 Describe some of the best uses for maps with a cylindrical projection.

133) The Mercator projection should not be used to show tropical areas because they are greatly distorted in area on this projection.

Answer: FALSE

Diff: 2

Topic/Section: 2.4 Cylindrical Projections

Bloom's Taxonomy: C. Application

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.16 Describe some of the best uses for maps with a cylindrical projection.

134) Interrupted projections are neither conformal nor equidistant.

Answer: FALSE

Diff: 1

Topic/Section: 2.4 Psuedocylindrical Projections

Bloom's Taxonomy: B. Comprehension

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.21 Describe pseudocylindrical projection.

135) Digital elevation models have been used for almost a hundred years.

Answer: TRUE

Diff: 2

Topic/Section: 2.5 Portraying the Three-Dimensional Landscape

Bloom's Taxonomy: C. Application

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.23 Explain how isolines are used to convey information on a map.

136) GPS was originally developed by the U.S. Department of Defense to guide missiles.

Answer: TRUE

Diff: 1

Topic/Section: 2.6 GPS - The Global Positioning System

Bloom's Taxonomy: A. Knowledge

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.25 Describe some common uses of GPS.

137) The earliest aerial photographs were taken from balloons.

Answer: TRUE

Diff: 1

Topic/Section: 2.7 Remote Sensing

Bloom's Taxonomy: A. Knowledge

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.

138) A major advantage in using remote sensing is the ability to obtain precision measurements of Earth's surface.

Answer: TRUE

Diff: 2

Topic/Section: 2.7 Remote Sensing

Bloom's Taxonomy: B. Comprehension

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.26 Define remote sensing.

139) The main useful trait of color infrared photography is its depiction of the states of vegetation.

Answer: TRUE

Diff: 1

Topic/Section: 2.7 Visible Light and Infrared Sensing

Bloom's Taxonomy: B. Comprehension

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.

140) Thermal infrared imagery is the most useful type of image for detecting different vegetation types.

Answer: FALSE

Diff: 2

Topic/Section: 2.7 Thermal Infrared Sensing

Bloom's Taxonomy: D. Analysis

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.

141) Landsat images are unavailable for public use owing to their "top secret" classification by the U.S. government.

Answer: FALSE

Diff: 1

Topic/Section: 2.7 Multispectral Remote Sensing

Bloom's Taxonomy: A. Knowledge

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.

142) Images from radar sensors can be acquired only during the daytime.

Answer: FALSE

Diff: 1

Topic/Section: 2.7 Multispectral Remote Sensing

Bloom's Taxonomy: B. Comprehension

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.

143) Radar remote sensing is associated with wavelengths much shorter than those of visible light.

Answer: FALSE

Diff: 1

Topic/Section: 2.7 Multispectral Remote Sensing

Bloom's Taxonomy: B. Comprehension

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.

144) Radar imagery is especially appropriate for terrain analysis.

Answer: TRUE

Diff: 1

Topic/Section: 2.7 Multispectral Remote Sensing

Bloom's Taxonomy: A. Knowledge

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.

145) Satellites in the SPOT and Landsat series carry identical sensors.

Answer: FALSE

Diff: 2

Topic/Section: 2.7 Multispectral Remote Sensing

Bloom's Taxonomy: D. Analysis

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.

146) The thematic mapper on the newer Landsat satellites is a great improvement because it increases the spectral range within each spectral band used.

Answer: FALSE

Diff: 2

Topic/Section: 2.7 Multispectral Remote Sensing

Bloom's Taxonomy: D. Analysis

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.

147) A(n) \_\_\_\_\_ scale is a type of map scale which makes use of a line marked off in graduated distances.

Answer: graphic

Diff: 2

Topic/Section: 2.2 Map Scale

Bloom's Taxonomy: B. Comprehension

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.4 Identify examples of graphic scales from a map.

148) The representative fraction equivalent to the statement "one inch equals one mile" is \_\_\_\_\_.

Answer: 1:63,360 or 1:62,500

Diff: 2

Topic/Section: 2.2 Map Scale

Bloom's Taxonomy: A. Knowledge

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.6 Identify examples of fractional scales from a map.

149) Equivalence is the property of map projections which \_\_\_\_\_.

Answer: causes areas to be shown in their correct relative sizes on a map projection

Diff: 1

Topic/Section: 2.3 Map Projections

Bloom's Taxonomy: B. Comprehension

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.9 Describe equivalent map projection.

150) A(n) \_\_\_\_\_ (2 words) is another name for a loxodrome.

Answer: rhumb line

Diff: 1

Topic/Section: 2.3 Map Properties

Bloom's Taxonomy: B. Comprehension

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.10 Describe conformal map projection.

151) A problem with conformal projections is that \_\_\_\_\_.

Answer: areas must be distorted to show proper shapes

Diff: 1

Topic/Section: 2.3 Map Properties

Bloom's Taxonomy: B. Comprehension

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.10 Describe conformal map projection.

152) Title, date, and legend are three of the five \_\_\_\_\_ (2 words).

Answer: map essentials

Diff: 3

Topic/Section: 2.5 Map Essentials

Bloom's Taxonomy: E. Synthesis

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.2 Define map scale.

153) \_\_\_\_\_ is the measurement or acquisition of information by a recording device which is not in physical contact with the object under study.

Answer: Remote sensing

Diff: 1

Topic/Section: 2.7 Remote Sensing

Bloom's Taxonomy: A. Knowledge

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.26 Define remote sensing.

154) \_\_\_\_\_ is the Landsat spectral band used for identification of wetlands, organic soils, and water bodies.

Answer: The near infrared

Diff: 1

Topic/Section: 2.7 Visible Light and Infrared Sensing

Bloom's Taxonomy: B. Comprehension

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.

155) \_\_\_\_\_ micrometers is a wavelength of visible light. (ANY of the wavelengths will do.)

Answer: Any wavelength between .36 and .72 micrometers is acceptable.

Diff: 3

Topic/Section: 2.7 Visible Light and Infrared Sensing

Bloom's Taxonomy: C. Application

Geog Standards: 7. The physical processes that shape the patterns of earth's surface

Science Outcomes: 2. Demonstrate the ability to think critically and employ critical thinking skills.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.

156) Explain how the properties of conformality and equivalence always pose a dilemma to the mapmaker.

Answer: This is the classic problem for the mapmaker. A map cannot preserve both shape and relative size. A cartographer must choose one or the other or neither.

Diff: 2

Topic/Section: 2.3 Map Properties

Bloom's Taxonomy: C. Application

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.9 Describe equivalent map projection.

157) Name the 6 map essentials and the purpose of each one.

Answer: Title, date, legend, scale, direction, location. Include definition of each.

Diff: 3

Topic/Section: 2.5 Map Essentials

Bloom's Taxonomy: E. Synthesis

Geog Standards: 1. How to use maps

Science Outcomes: 3. Read and interpret graphs and data.

158) Explain how the Global positioning system operates to locate your position within a few meters.

Answer: GPS trilaterates position by using the distance and direction to several polar orbiting satellites. The orbits are well known and a satellite is located via radio transmissions from the satellite.

Diff: 1

Topic/Section: 2.6 GPS - The Global Positioning System

Bloom's Taxonomy: B. Comprehension

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.24 Describe how a GPS unit determines its location.

159) Compare/contrast the purposes of Landsat and commercial high resolution satellites.

Answer: Landsat in the public domain for Earth resources. Commercial satellites also study Earth resources but at higher resolution and the user is charged considerable money to do so.

Diff: 3

Topic/Section: 2.7 Multispectral Remote Sensing

Bloom's Taxonomy: E. Synthesis

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.

160) Explain how the use of multispectral scanning is an advantage over the use of a single band when identifying Earth features via remote sensing.

Answer: Various bands are best for various features—give example(s). The point is that a combination of bands should be superior.

Diff: 3

Topic/Section: 2.7 Multispectral Remote Sensing

Bloom's Taxonomy: E. Synthesis

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 3. Read and interpret graphs and data.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.

161) Suppose a geographer was hired to help assess the health/vigor of the winter wheat crop (to be harvested in the late spring) in an agricultural county of a Great Plains state; the object would be to predict the winter wheat yield two months in advance. What sort of remote sensing techniques might be used and why?

Answer: Answers will vary. The student should mention some form of remote sensing (photography or satellite imaging) that uses the near infrared portion of the spectrum sensitive to plant greenness.

Diff: 3

Topic/Section: 2.7 Multispectral Remote Sensing

Bloom's Taxonomy: E. Synthesis

Geog Standards: 3. How to analyze the spatial organization of people, places, and environments

Science Outcomes: 2. Demonstrate the ability to think critically and employ critical thinking skills.

Learning Outcome: 2.27 Discuss the kinds of information that can be gathered by remote sensing.