

Worksheet: Weather, Storms

name:

*Use sentences.

1. *Read about air masses (starts on p. 552). Look at figure 19.3 on p. 554. In what two ways would a continental polar air mass be different from one that formed over the Gulf of Alaska?
2. Look at the maps in figure 19.3. What three types of air masses have the most influence on our weather in Montana? Write the names out. Do not use the abbreviations.
3. *Read about fronts (starts on page 555). Look at the diagrams atop pages 556 and 557. When warm air and cold air meet, why does the warmer air always get forced aloft (upward)?
4. *What are the two differences that cause weather along cold fronts to be more violent than weather along warm fronts?
5. *Explain what a “stationary front” is.
6. *Look at figure 19.8 on page 557. Explain how an “occluded front” forms.
7. What type of cyclone is shown on page 558 and also in the map on page 559?
8. *What is the purpose of the series of diagrams above and below the map on page 558?
9. *Where does warm air eventually end up after the occluded front has formed?
10. Look at the diagram atop page 561. What is happening to the air near the surface beneath an area of high pressure? Circle three.

Air is rising.
Air is sinking.

Air is flowing toward the center.
Air is flowing away from the center.

Air is flowing clockwise.
Air is flowing counterclockwise.

11. Besides mid-latitude cyclones, what are two other types of cyclones? (p. 561)
12. According to the map on page 563, how many days per year with thunderstorms does Helena have?
13. Which state has the most days per year with thunderstorms?
14. *Look at figure 19.17 on p. 564. In terms of airflow, what is the big difference between the mature stage and the other two?
15. Describe an average tornado in terms of diameter, ground speed, and swath of destruction in both English and metric units.

Diameter:

Ground speed:

Swath of destruction:
16. *Examine figure 19.20. Describe the general area in the USA that experiences the most tornadoes.
17. *What is the point of the map atop page 571?
18. *What must be true in order for a “tropical storm” to be upgraded to a “hurricane”?
19. According to text pages 573-574, what are three ways that hurricanes cause destruction?
20. * Explain how Hurricane Ike caused the damage shown in Fig. 15.9 on page 434.