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## Hurricanes

Hurricanes are the most powerful storms on the planet. Fueled by warm water from oceans, they can produce torrential rain and incredibly strong winds. Hurricanes often stay out to sea, where they only threaten ocean-going ships. But sometimes hurricanes will veer toward land, causing devastating flooding and wind damage. Scientists have learned quite a lot about hurricanes, but there is still much to discover!

First, go to **www.worldbookonline.com**  
Then, click on "Advanced." If prompted, log on  
with your ID and Password.

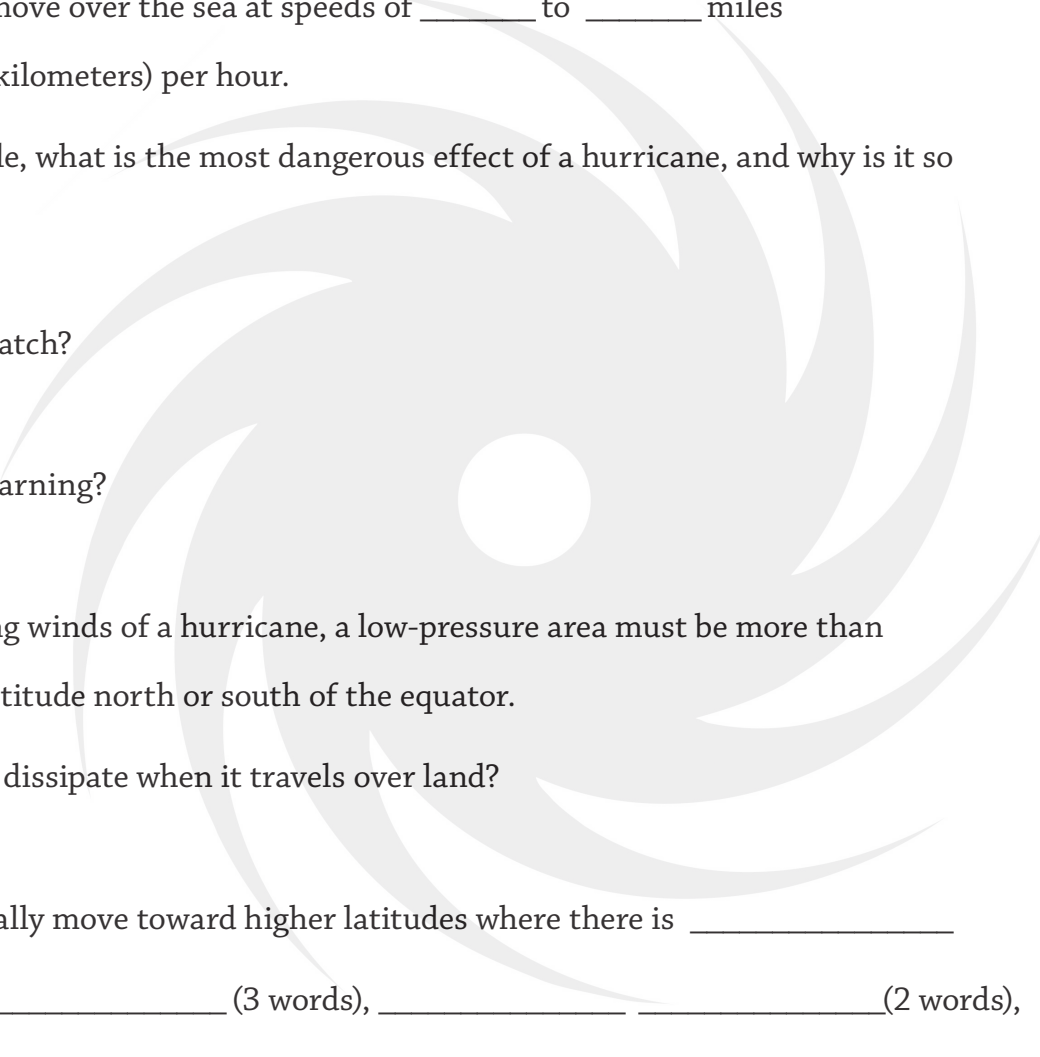


### Find It!

Use the World Book search tool to find the answers to the questions below. Since this activity is about hurricanes, it is recommended you start by searching the key word "hurricane." Write the answer below each question.

- In the North Atlantic, hurricanes are most common during the \_\_\_\_\_  
and \_\_\_\_\_ (2 words).
- Who is a meteorologist?
- The winds of a hurricane swirl around a calm central zone called the \_\_\_\_\_.
- These winds can reach nearly \_\_\_\_\_ miles (\_\_\_\_\_ kilometers) per hour.
- The effect of the rotating Earth on wind flow is called the \_\_\_\_\_  
(2 words).
- Hurricanes last an average of \_\_\_\_\_ to \_\_\_\_\_ days.
- A long-lived storm may wander \_\_\_\_\_ to \_\_\_\_\_ miles ( \_\_\_\_\_ to \_\_\_\_\_ kilometers).

**\*Users of the Advanced database can find extension activities at the end of this webquest.**

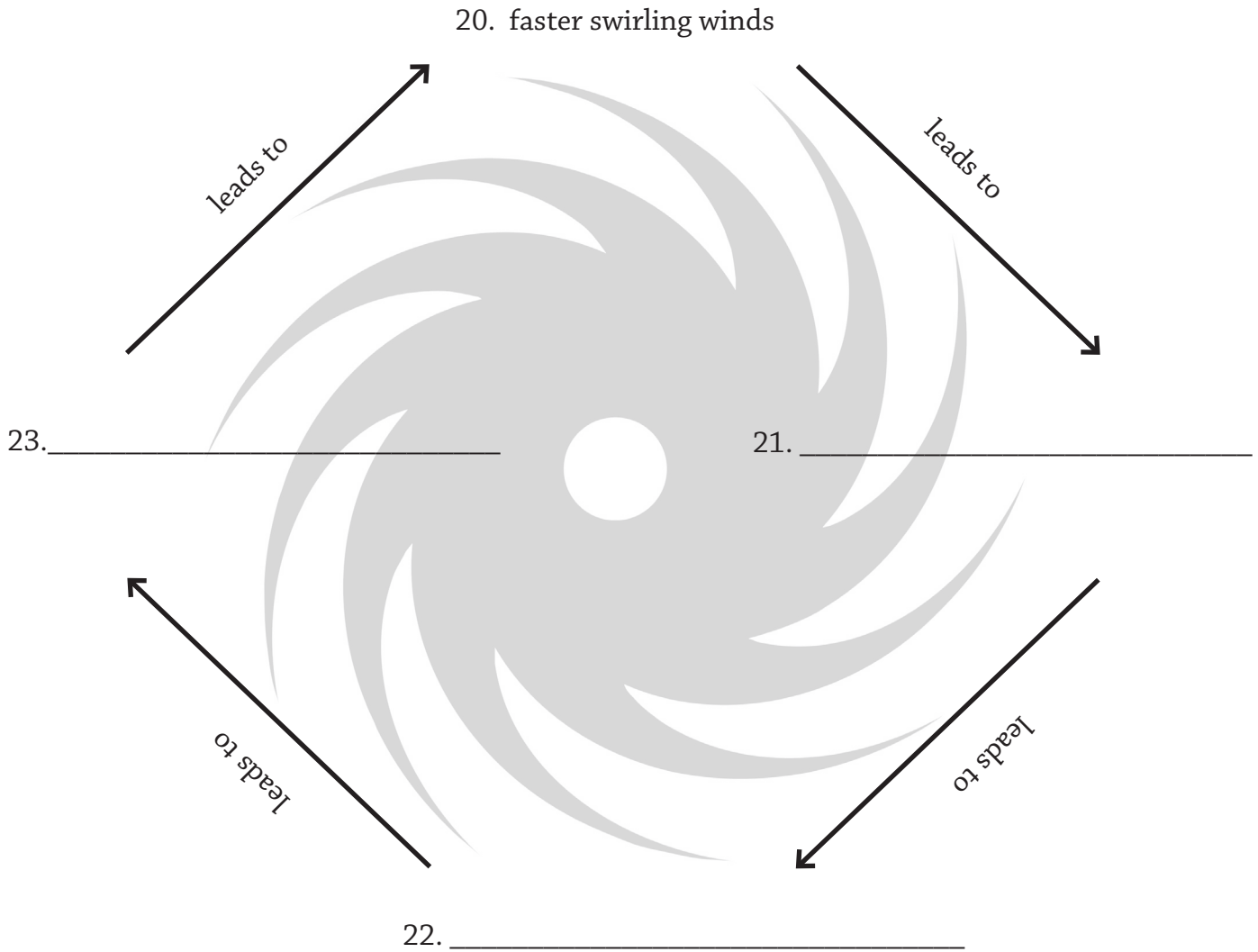
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8. Hurricanes typically move over the sea at speeds of \_\_\_\_\_ to \_\_\_\_\_ miles ( \_\_\_\_\_ to \_\_\_\_\_ kilometers) per hour.
  9. According to the article, what is the most dangerous effect of a hurricane, and why is it so dangerous?
  10. What is a hurricane watch?
  11. What is a hurricane warning?
  12. To produce the swirling winds of a hurricane, a low-pressure area must be more than \_\_\_\_\_ degrees of latitude north or south of the equator.
  13. Why does a hurricane dissipate when it travels over land?
  14. All hurricanes eventually move toward higher latitudes where there is \_\_\_\_\_  
\_\_\_\_\_ (3 words), \_\_\_\_\_ (2 words),  
and \_\_\_\_\_ (3 words).
  15. When did U.S. storms start receiving names? \_\_\_\_\_

.....  
*Match the feature of storm with the correct phase of hurricane.*

- |                                |  |
|--------------------------------|--|
| _____ 16. tropical disturbance | A. winds begin to blow in a circular pattern       |
| _____ 17. tropical depression  | B. storm has a well-defined circular shape         |
| _____ 18. tropical storm       | C. winds exceed 74 miles (119 kilometers) per hour |
| _____ 19. hurricane            | D. cumulonimbus clouds begin to form               |

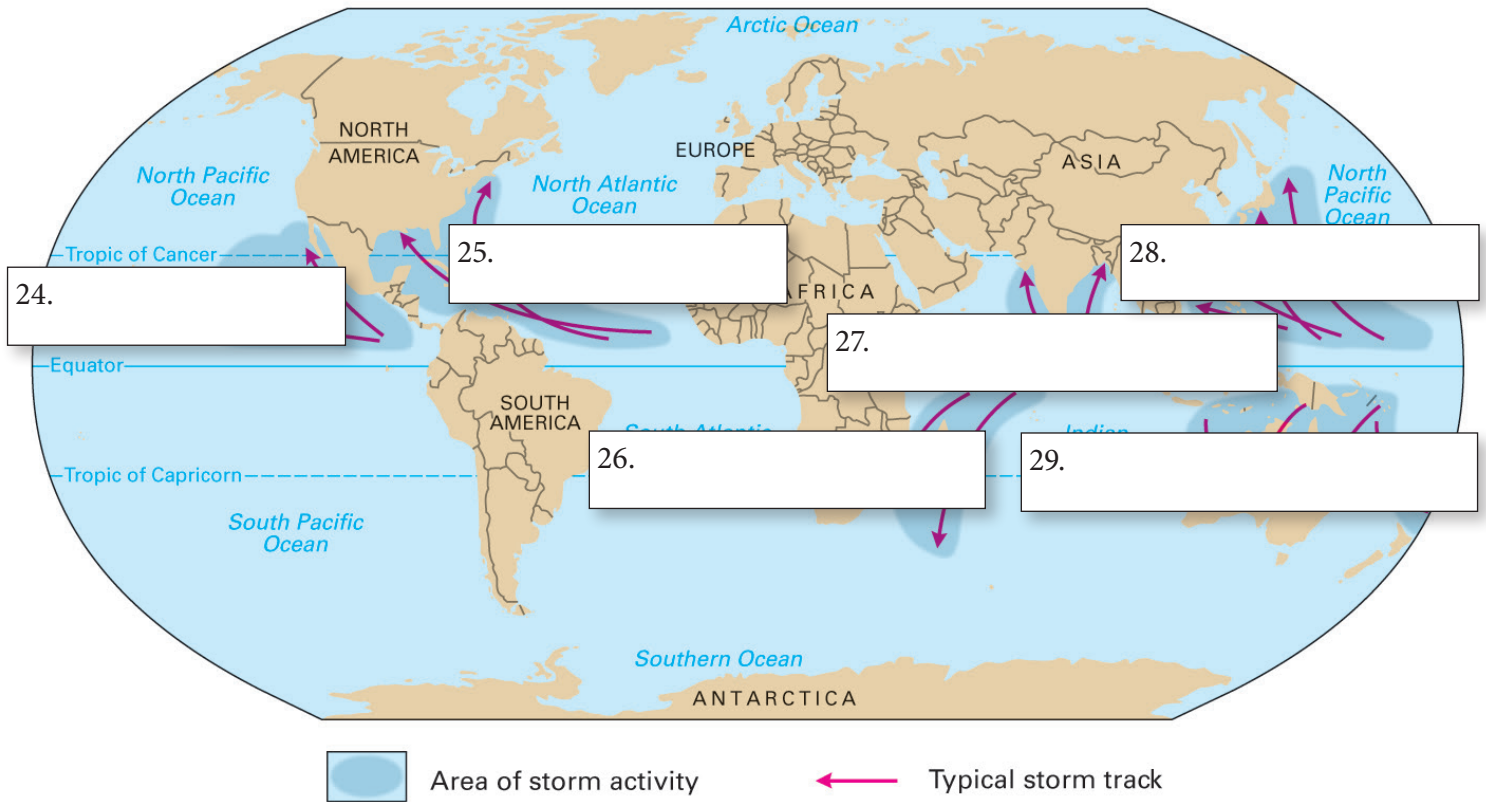
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Around the hurricane, list the stages of the positive feedback loop that make hurricanes grow stronger.  
The first answer is given for you.



**Map It!** (24-29)

Within the World Book article Hurricane, you will find the map “When hurricanes strike.” Study the map and write down what hurricanes are called in different parts of the world.



**What's the Word?**

A hurricane's powerful winds scrambled these vocabulary words! Unscramble each one and write it in the space provided.

30. sand brain \_\_\_\_\_ (1 word) (hint: part of hurricane)

31. walleye \_\_\_\_\_ (1 word) (hint: part of hurricane)

32. dumb cumin soul locus \_\_\_\_\_ (2 words)  
(hint: make up hurricane)

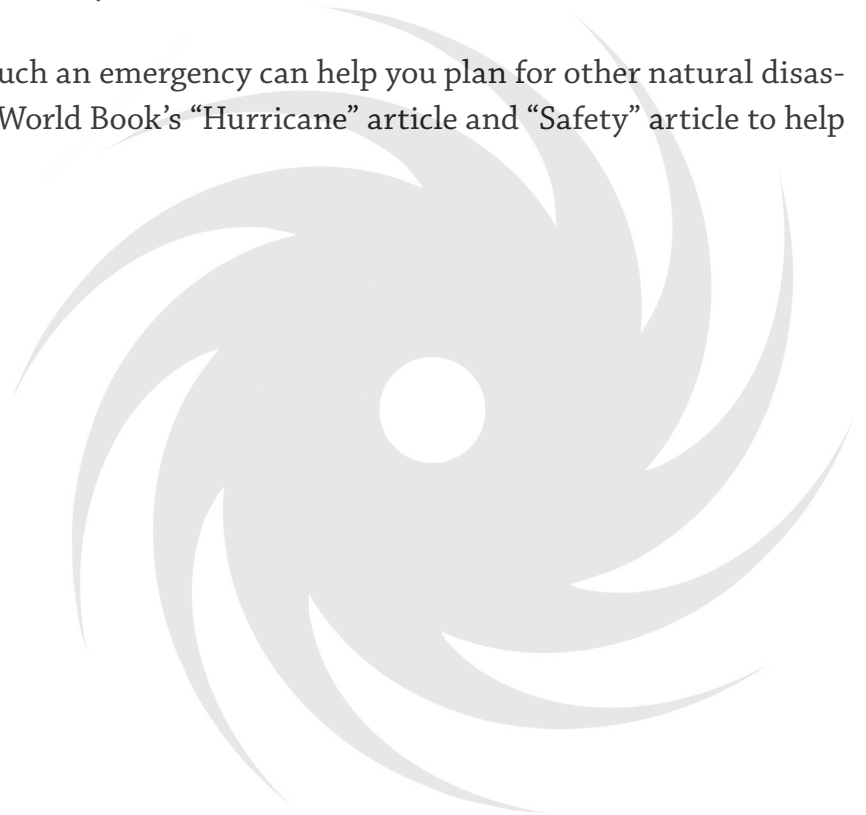
33. shine ward \_\_\_\_\_ (2 words) (hint: hurts hurricane)

34. russet gorm \_\_\_\_\_ (2 words) (hint: effect of hurricane)
35. cannot so dine \_\_\_\_\_ (1 word) (hint: helps power hurricane)
36. supper at chrome rises \_\_\_\_\_ (2 words)  
(hint: weight of air)
37. litter goes moo \_\_\_\_\_ (1 word) (hint: studies weather)
38. icicles to offer \_\_\_\_\_ (2 words) (hint: spins hurricane)
39. vote on a pair \_\_\_\_\_ (1 word) (hint: helps power hurricane)
- .....

**Extension Activity 1:** Planning Ahead

Imagine that you live in a place where hurricanes or tropical cyclones can occur. Create an illustrated safety manual to show to how you can prepare for a hurricane, as well as what you would do if a hurricane was about to strike the place where you live.

Thinking about what you would do in such an emergency can help you plan for other natural disasters that might occur in your area. Use World Book’s “Hurricane” article and “Safety” article to help plan your answer.





# Teacher Page

## Answers:

1. summer, early fall.
2. A meteorologist is a scientist who studies weather.
3. eye
4. 200, 320
5. Coriolis effect
6. 3, 14
7. 3,000, 4,000; 4,800, 6,400
8. 20, 30; 16, 32
9. The storm surge is the most dangerous effect of a hurricane because it can flood densely-populated coastal regions.
10. A hurricane watch advises an area that there is a good possibility of a hurricane within 36 hours.
11. A hurricane warning means that an area is in danger of being struck by a hurricane in 24 hours or less.
12. 5
13. The storm no longer receives heat energy and moisture from warm tropical water.
14. colder ocean water, less moisture, greater wind shear
15. 1950
16. D. cumulonimbus clouds begin to form
17. A. winds begin to blow in a circular pattern
18. B. storm has a well-defined circular shape
19. C. winds exceed 74 miles (119 kilometers) per hour
20. faster swirling winds
21. more evaporation and condensation
22. more heat released
23. faster rising air
24. hurricane
25. hurricane
26. tropical cyclone
27. severe cyclonic storm

28. typhoon
29. severe tropical cyclone
30. rainbands
31. eyewall
32. cumulonimbus clouds
33. wind shear
34. storm surge
35. condensation
36. atmospheric pressure
37. meteorologist
38. Coriolis effect
39. evaporation

***Extension Activity 1:*** Answers will vary.