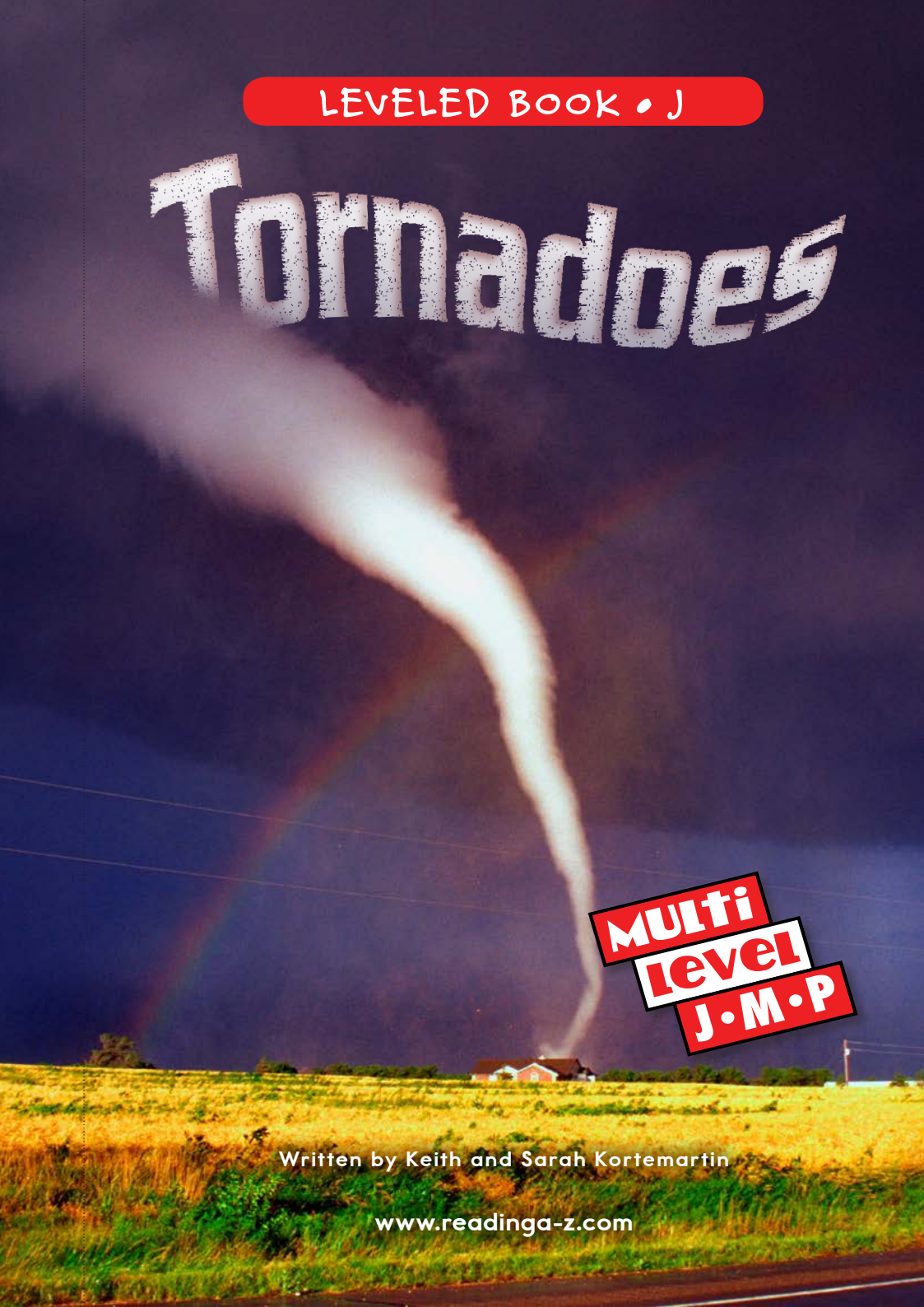
LEVELED BOOK • J

Tornadoes



Multi Level J•M•P

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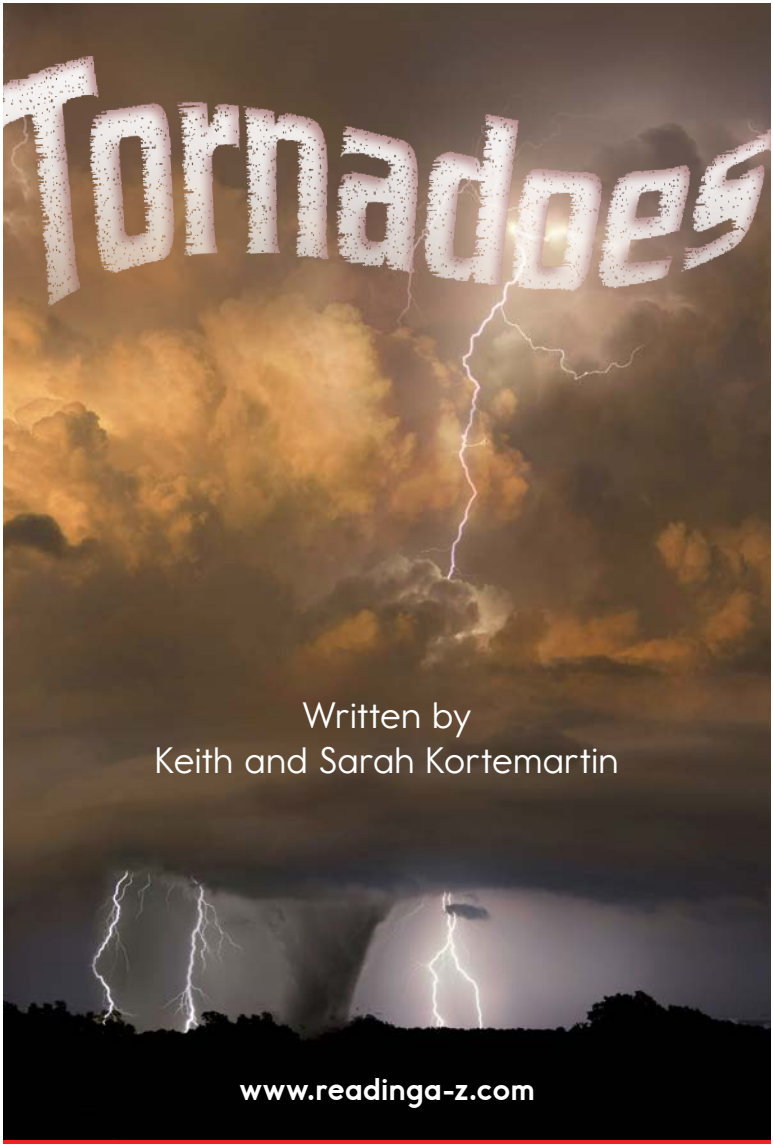


Focus Question

What are tornadoes, and why are they dangerous?

Table of Contents

A tornado went through this house's roof and walls, and it turned the car upside down.

Introduction

What can lift roofs from buildings and sweep houses into the air?

Tornadoes can!

Tornadoes come in many sizes.

Some tornadoes are only a few feet (1 meter) across.

Others are more than a mile (1.6 km) wide.

Some tornadoes touch down for a short time.

Others travel for hundreds of miles.

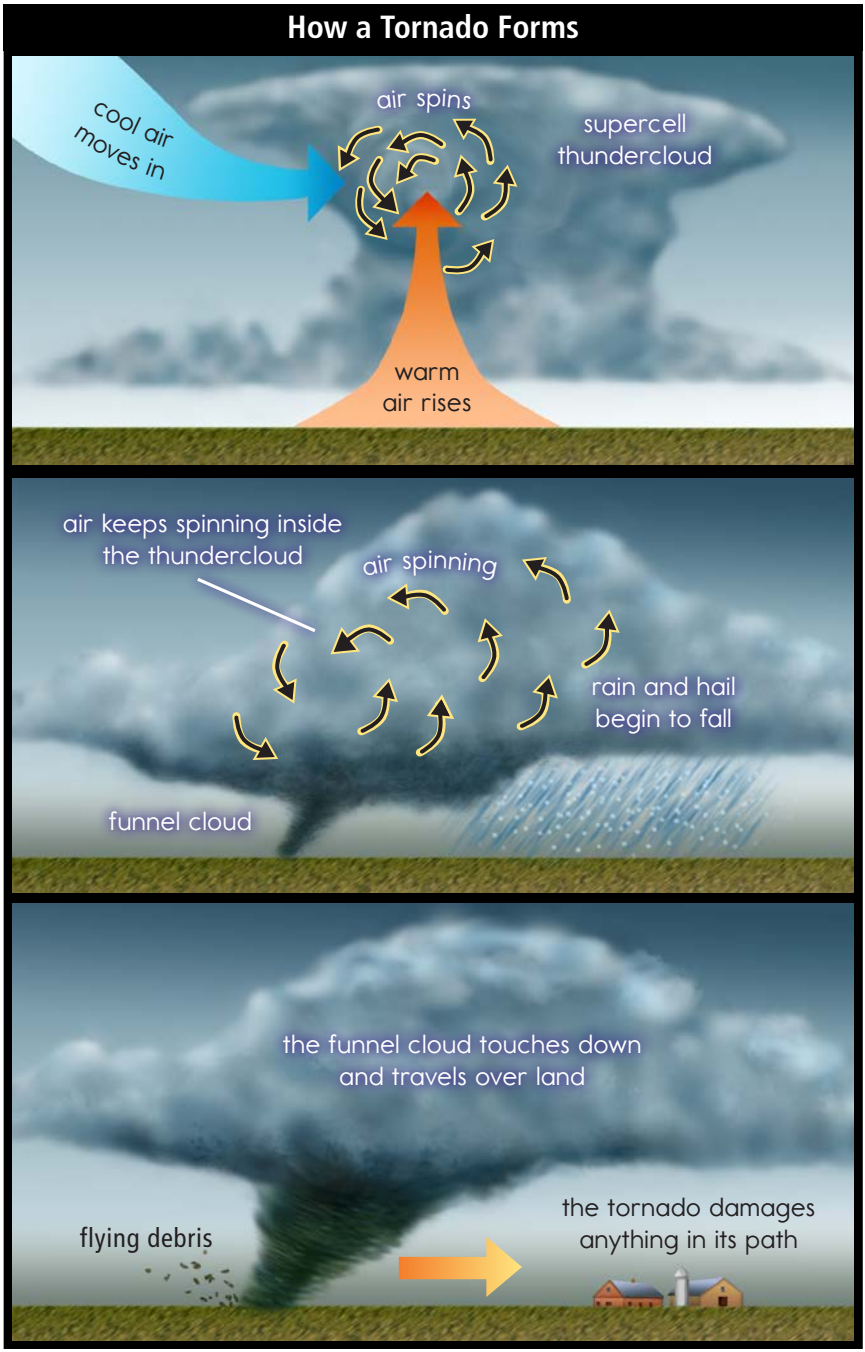
How Tornadoes Form

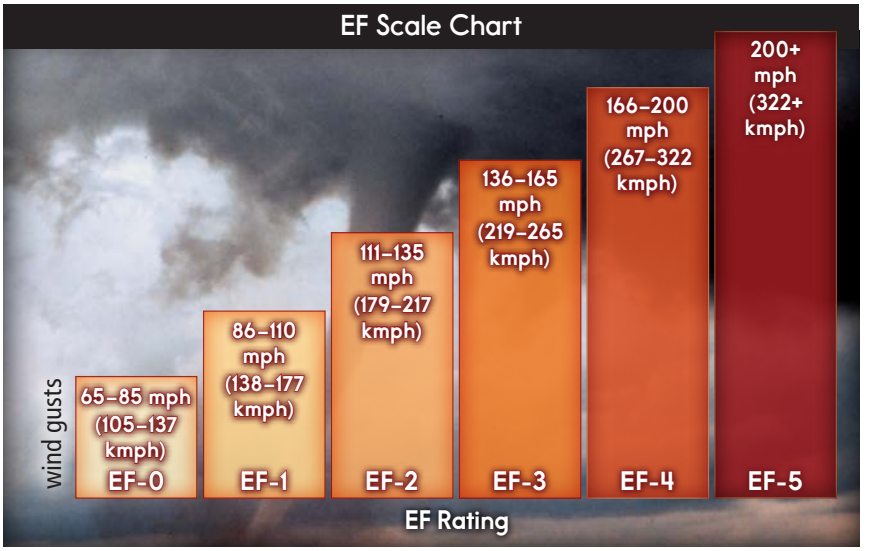
Why do tornadoes happen? Scientists are not sure. Tornadoes come from giant thunderstorms called **supercells**. A supercell happens when warm, **moist** air rises to mix with cold, dry air.

A supercell thunderstorm moves across Nebraska in June 2004. The thunderstorm led to a few tornadoes.

This funnel cloud became a strong tornado that hit Kansas in 2004.

The mixing of cold and warm air causes the air to spin.
The spinning wind turns into a cloud in a **funnel** shape.
As the cloud turns, the wind becomes stronger.
When the funnel cloud touches the ground, it is a tornado.


How a Tornado Forms
cool air moves in
air spins
supercell thundercloud
warm air rises
air keeps spinning inside the thundercloud
air spinning
rain and hail begin to fall
funnel cloud
the funnel cloud touches down and travels over land
flying debris
the tornado damages anything in its path

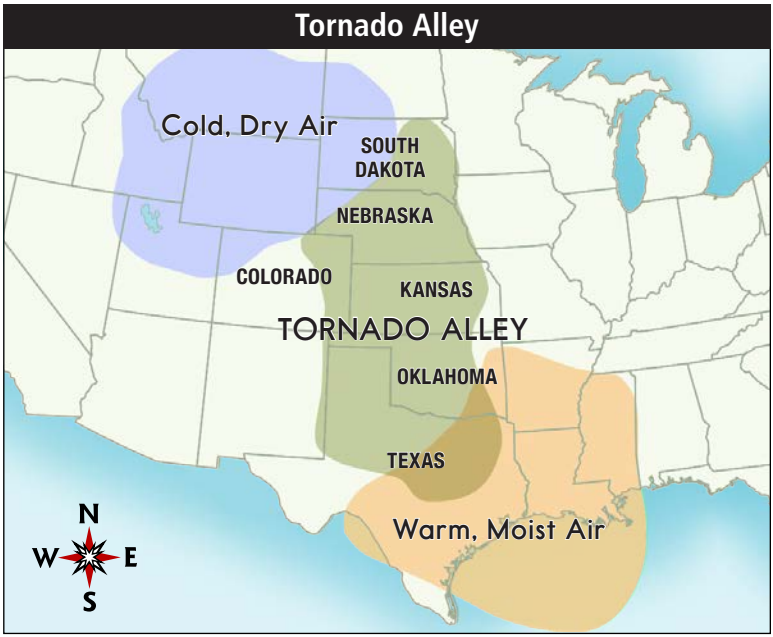


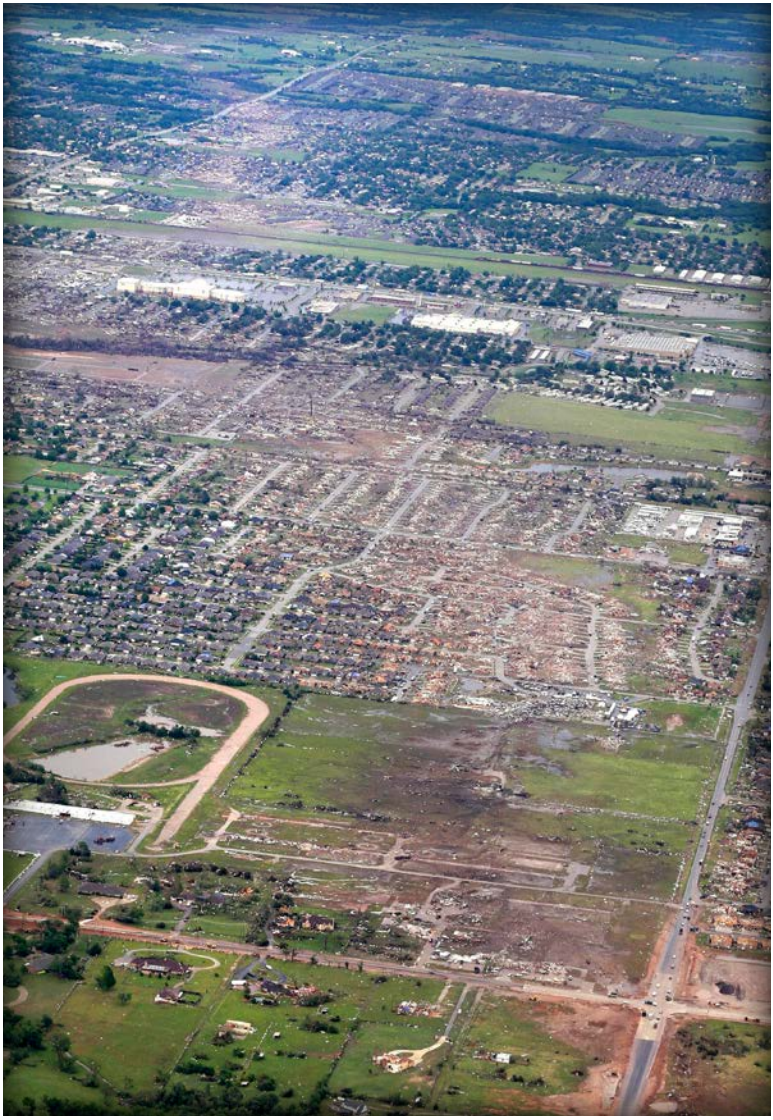
Measuring Tornadoes

Scientists have a way to measure the strength of tornadoes. They look at the harm caused by a tornado. They use the amount of harm to estimate the wind speed. They use a special scale called the **EF Scale**. The EF Scale measures the strength of the tornado.

Where Tornadoes Form

Tornadoes may be hard to measure, but scientists have a good idea where they'll **strike**. It's true that a tornado can hit anywhere in the world at any time. Most tornadoes happen in the central part of the United States. This area is called Tornado Alley.





The giant tornado that hit Moore, Oklahoma, in 2013 left behind a clear path.

More than one thousand tornadoes strike Tornado Alley each year.

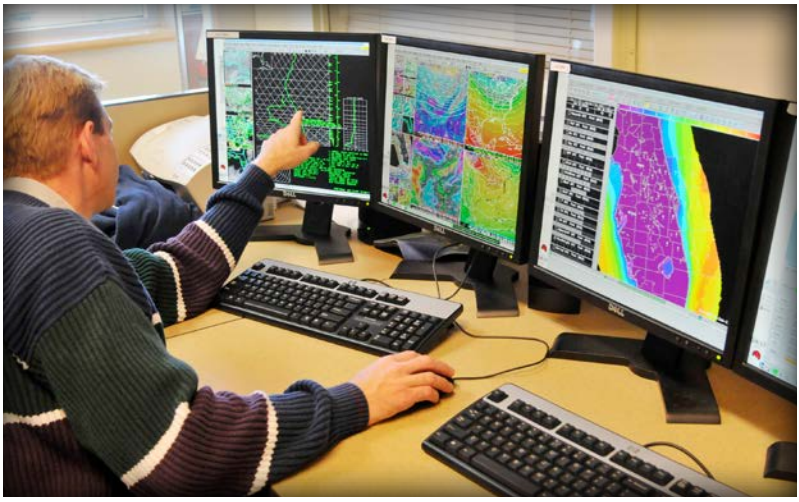
Tornado Safety

There is no way to be sure that a tornado will strike.

The National Weather Service (NWS) tries to help people stay safe during tornadoes.

If they put out a tornado *watch*, a tornado might strike.

If they put out a tornado *warning*, a tornado has been spotted.



Weather scientists study weather maps to try to spot when a tornado will strike next.

A tornado destroyed an entire house, but the underground shelter next to the house was not harmed.

If there is a tornado warning, it's important to get to a safe place. Go indoors. The safest place is a basement. If you can't get to a basement, go into a closet or bathroom. Stay away from windows.

This sign tells people that a shelter is nearby where they can find safety during a tornado strike.

The spinning air in a tornado
makes things fly around.
This can be dangerous.
It's always important to protect
your head.
You should get close to the ground.
Go under a desk or table.
You can even lie down in a bathtub.

Children prepare for a tornado strike in school by bending down and crouching under their desks.

It is not safe to stay in a mobile home in a tornado. If you are in a tall building, go to the stairs. If you are in a car, wear your seatbelt and lean forward. If you are outside, lie down on the ground.

A tornado that hit Kansas in 2003 was so powerful that it caused a child's bicycle to wrap around a tree.

Famous Tornadoes

- A tornado in 1925 traveled more than 300 miles (483 km) through Missouri, Illinois, and Indiana. It killed 695 people, the highest number of people killed by a tornado in U.S. history.
- In 1992, a tornado in Mississippi carried a baby up into the air and left the child hanging from the branch of a tree. The baby was hurt but lived.
- In March 2012, a giant tornado swept through Henryville, Indiana. It was huge—150 yards (138 m) wide—and traveled a far distance—52 miles (84 km).

A tornado moves quickly across an open field.

Conclusion

Tornadoes are amazing—and scary—examples of the power of nature.

People still have many questions about tornadoes.

What causes a tornado?

What is it really like inside a tornado?

Maybe we will find out one day.

Glossary

EF Scale *(n.)* a way of measuring and rating tornadoes from 0 to 5 based on their wind speeds and the damage they cause; Enhanced Fujita Scale (p. 8)

funnel *(n.)* a cone-shaped tube that is wider at the top and is often used to pour liquid or powder into a small opening (p. 6)

moist *(adj.)* slightly wet; damp (p. 5)

strike *(v.)* to happen suddenly or appear (p. 9)

supercells *(n.)* large rotating thunderclouds that reach high into the sky and often produce tornadoes, hail, and lightning (p. 5)

tornadoes *(n.)* fast-spinning, funnel-shaped clouds that touch Earth's surface (p. 4)

Words to Know

EF Scale	strike
funnel	supercells
moist	tornadoes

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Correlation

LEVEL J	
Fountas & Pinnell	J
Reading Recovery	17
DRA	18

Tornadoes

A Reading A–Z Level J Leveled Book
Word Count: 438

Connections

Writing

Write a newspaper article for children about tornadoes. Include facts from the book in your article.

Social Studies and Art

Make a poster explaining how to stay safe during a tornado. Share your poster with your class.

Grade 1
Book 67