



wild dog

**Wild Dog Books
Teachers' Notes**

Extreme Weather – Tornados

Synopsis

Tornados are the result of extreme weather. They are narrow columns of rapidly spinning air, most of which are caused by massive thunderstorms known as supercells. They produce unpredictable winds that are incredibly fast and destructive. They occur on every continent except Antarctica, though the majority of them take place in North America. Every year they kill people and livestock, destroy houses and property and cause billions of dollars in damage. Learn all about these powerful and dangerous whirlwinds.

Writing style

The *Extreme Weather* series has been designed with the needs of young readers and reluctant readers in mind. Text is clean and simple, with only a few sentences on each page. The large format images relate directly to the text, so young readers have multiple entry points to engaging with the information. Further aiding the readers' interest are inset images and interesting facts that support the primary text. There is a brief glossary and index in the back of the book, which will aid young readers in developing the tools of research and analysis.

Study notes

Themes:

- Destructive power of wind
- Increase in wind speed = increase in damage caused
- Environmental Science
- Weather – unpredictable and dangerous
- Changing climates
- Geography
- Human influence on weather
- Impact of weather on humans
- The whirlwind family

Curriculum link: Literacy

Before reading *Tornados*:

- Brainstorm what students know about tornados.
- What is their first response when they look at the cover of the book?
- Where do tornados occur? Are certain countries more likely to have them?
- How are do tornados start? What are they made of?
- How do tornados impact people? How do they impact the landscape?
- What damage do tornados cause?
- What are the different ways tornados can cause damage?
- Brainstorm what students think are the best ways to prepare for a tornado.

While reading *Tornados*:

- Ask the students to take turns reading a paragraph or sentence aloud to the rest of the class. Where appropriate, ask the students what they think certain words may mean.

Curriculum link: Critical and Creative Thinking

After reading *Tornados*:

- Discuss the Enhanced Fujita scale with students. Print off the following link to use as a handout <http://www.srh.noaa.gov/images/ohx/EF-Ratings.png> (NB: wind speeds are in mph). Ask the students why they think that an increase in wind speed results in more damage?

Curriculum link: ICT Capability

After reading *Tornados*:

- Organise the class into groups. Each group should select and research a significant tornado from the past (NB: this will be made easier by looking at American tornados. The following link is a good starting point: http://www.weather.com/outlook/weather-news/severe-weather/articles/tornado-historic-tornado-events_2010-03-30 For Australian tornados, see the following: http://en.wikipedia.org/wiki/List_of_Southern_Hemisphere_tornadoes_and_tornado_outbreaks#Australia)
- Ask each group to research a tornado online. Ask them to look for and print different images relating to their chosen tornado e.g. a map of where it took place, before and after images showing the damage that was done, newspaper reports of the time etc. Their research should aim to answer the following questions:
 - Where did the tornado take place?
 - Does that area experience tornados often? During what time of year?
 - How big was the tornado? How long did it last? What area of land did it affect?
 - Did it cause much damage or loss of life?
 - What were the factors that influenced this level of damage?
 - Were people given much warning of the approaching tornado?
 - What preventative measures were taken to minimize damage and loss of life?
 - What were the after-effects of the tornado? Did it take long for people to rebuild their homes?
- Ask each group to create a poster collage using the images found during their research. Write a short sentence explaining the relationship between each image and the chosen tornado. Once completed, each group is to present their project to the whole class.

Curriculum Theme: Personal and Social Capability

After reading *Tornados*:

- Organise the class into three groups. In one group, ask the students to work as a team to construct a word finder puzzle. Ask each student to suggest an appropriate word about tornados using words they have learnt from the book and/or group presentations. (e.g. supercell, funnel cloud, uproot etc). Once completed, print copies for the other group to complete.
- In the second group, students should work as a team to create a trivia bingo game. Ask each student to suggest a fact they found surprising or interesting from the book and/or group presentations. Combine these facts into a game for the whole class.
- In the third group, students should work as a team to develop a crossword puzzle about tornados. Use the information featured in the book as clues for appropriate words e.g. foundation, lightning, whirlwind etc.

Find out more

- <http://www.weatherwizkids.com/weather-tornado.htm>
- <http://www.sciencekids.co.nz/sciencefacts/weather/tornado.html>
- <http://tornado-facts.com/interesting-tornado-facts/>

Marketing and promotion

Tornados is the third title in the new *Extreme Weather* series. Following on from *Cyclones* and *Fire*, future titles will include *Drought*, *Earthquakes* and *Floods*.