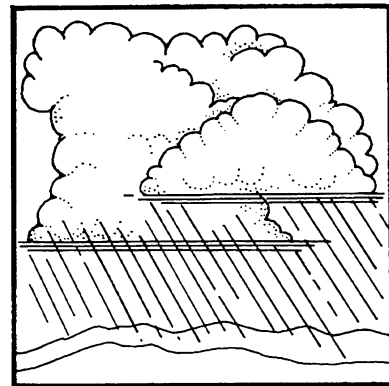


Introduction

The use of trade books can enhance the study of science. The key to selecting these books is to check them for scientific accuracy and appropriateness for the level of the students. *The Magic School Bus*® series, written by Joanna Cole, provides outstanding examples of books which can help students enjoy and learn about science. These books are delightfully written and scientifically accurate, thanks to the thorough research done by the author.

This **Science/Literature Unit** is directly related to *The Magic School Bus*® *Inside a Hurricane*. The activities in this unit are particularly appropriate for intermediate years. Teachers who use this unit will find a variety of lessons to do based on the book. These include the following:

- Pre-reading Activities
 - making your own thermometer
 - discovering how temperature changes, depending upon location
- A Biographical Sketch and Picture of the Author
- A Book Summary
- Activity-oriented lessons which expand the topics covered in the story:
 - learning about the atmospheric layers of our earth
 - performing demonstrations on air pressure
 - building an anemometer to measure wind speed
 - building a weather vane to determine wind direction
 - determining the dew point of the air
 - building a sling psychrometer to measure relative humidity
 - making a cloud in a bottle
 - observing and recording cloud formations
 - plotting the weather on a map, using the symbols used by meteorologists
- Post-reading Activities
 - plotting the path of a hurricane as it approaches land
- Unit Assessment



This unit is designed to help you present exciting lessons for your students so that they can develop their understanding and appreciation of weather.

Table of Contents

Introduction	3
About the Author	4
Book Summary	5
Before the Book (Pre-reading Activities)	
Hot and Cold	6
Make Your Own Thermometer	7
A Degree in History	8
Temperature and Height	9
Temperatures Around a Building	12
Hands-On Lessons	
Atmosphere and Air Pressure	
Air Pressure and Elevation	15
Atmospheric Layers	16
Air Pressure Demonstration	17
Barometers and Air Pressure	18
Wind	
The Beaufort Scale	19
Building an Anemometer	20
Using Your Anemometer	21
Building a Weather Vane	22
Weather Vane Patterns	23
Using Your Weather Vane	24
Density of Air	
Investigating Density of Air	25
Humidity	
Dew Point	26
Build a Sling Psychrometer	27
Clouds	
Cloud Formation	30
Cloud in a Bottle—Teacher Demonstration	32
Types of Clouds	33
Clouds in the Atmosphere	34
Recording Cloud Formations	35
Weather	
Weather Fronts	36
Weather Symbols	38
Hurricanes	
How Hurricanes Are Formed	40
Name That Hurricane	41
Coriolis Effect	42
After the Book (Post-reading Activities)	
Tracking a Hurricane	43
Unit Assessment	
What Did You Learn?	46