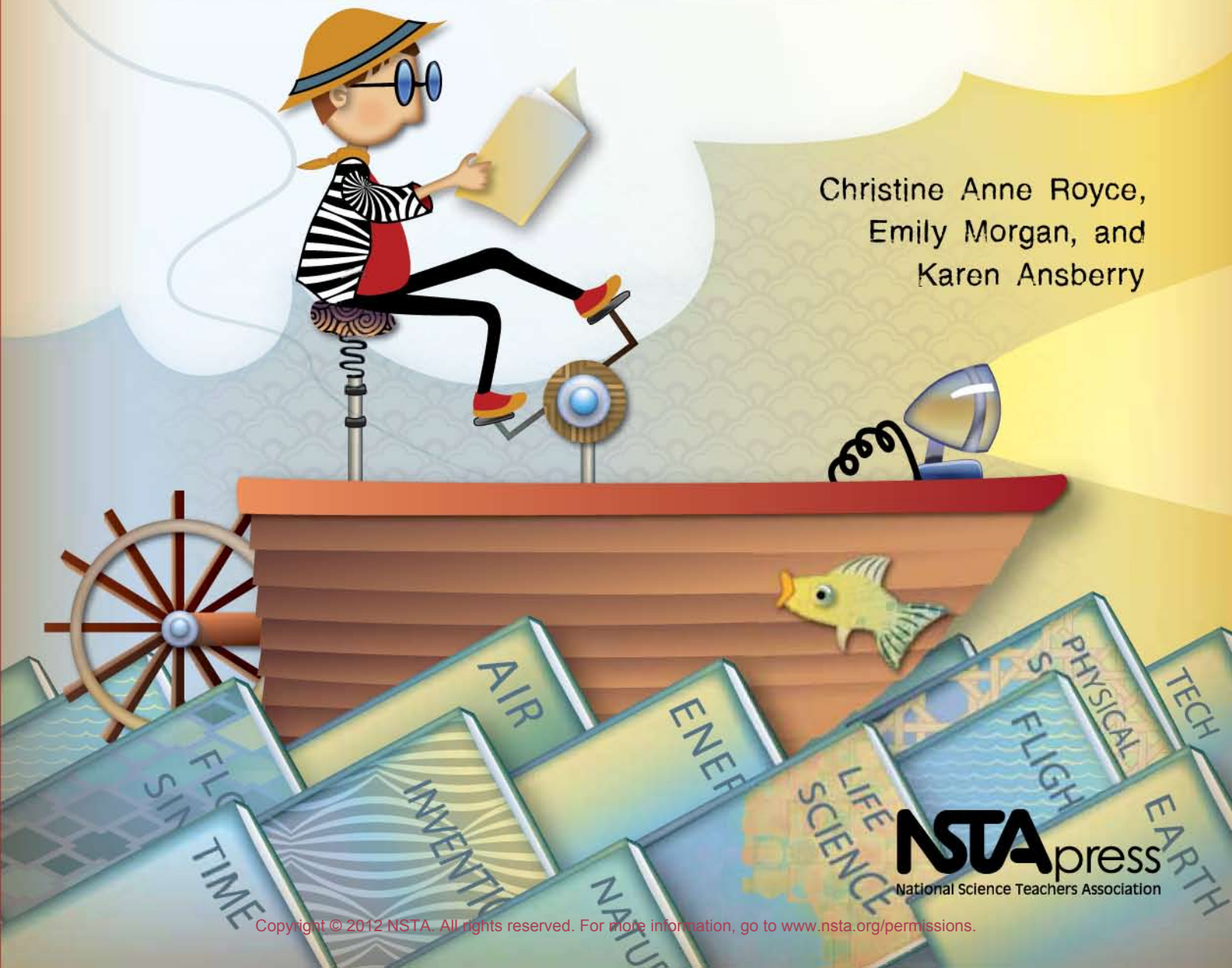


# TEACHING SCIENCE THROUGH TRADE BOOKS

Christine Anne Royce,  
Emily Morgan, and  
Karen Ansberry



**NSTA**press  
National Science Teachers Association

TEACHING  
**SCIENCE**  
THROUGH  
**TRADE BOOKS**

# TEACHING SCIENCE THROUGH TRADE BOOKS

*By Christine Anne Royce, Emily Morgan, and Karen Ansberry*



**NSTA**press  
National Science Teachers Association

Arlington, Virginia



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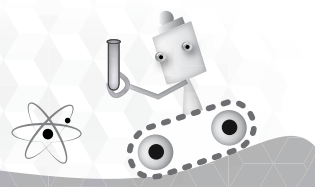
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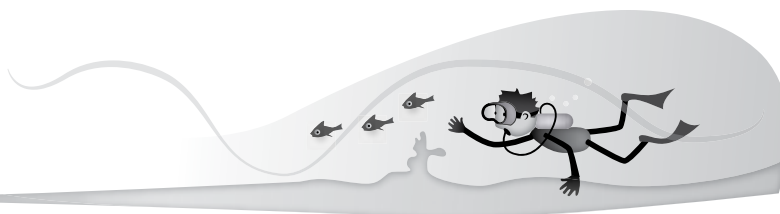
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Christine, Emily, and Karen are coauthors of the "Teaching Through Trade Books" column from NSTA's elementary school journal, *Science and Children*.



# National Science Education Standards: Content Standards K–4

	Content Standard A: Science as Inquiry	Content Standard B: Physical Science	Content Standard C: Life Science	Content Standard D: Earth and Space Science	Content Standard E: Science and Technology	Content Standard F: Science in Personal and Social Perspectives	Content Standard G: History and Nature of Science
Thought-Provoking Questions	◆						
A Closer Look	◆	◆					
Science Measures Up	◆				◆		
Going Wild With Graphs	◆						
Wild About Data	◆						
Taking Note of Natural Resources						◆	
Words to the Wild							◆
Into the Woods	◆						
Discover Reading							◆
How It's Made					◆	◆	◆
It's About Time				◆			◆
If You Build It ...		◆			◆		



	Content Standard A: Science as Inquiry	Content Standard B: Physical Science	Content Standard C: Life Science	Content Standard D: Earth and Space Science	Content Standard E: Science and Technology	Content Standard F: Science in Personal and Social Perspectives	Content Standard G: History and Nature of Science
Imaginative Inventions					◆	◆	
Let's Try It Out in the Air	◆	◆				◆	
A Balancing Act	◆	◆					
Gravity	◆	◆					
Roller Coasters!		◆			◆		
Secrets of Flight		◆					◆
Flick a Switch		◆				◆	
The Wonder of Water	◆	◆					
Kitchen Chemistry	◆	◆					
Secrets of Seeds	◆		◆				
Pumpkins!	◆						
Flower Power			◆				
Crazy for Loco Beans	◆		◆				
Seeing and Sorting Seashells	◆		◆				
Unusual Creatures	◆		◆				
Can You See Me Now?			◆				



	Content Standard A: Science as Inquiry	Content Standard B: Physical Science	Content Standard C: Life Science	Content Standard D: Earth and Space Science	Content Standard E: Science and Technology	Content Standard F: Science in Personal and Social Perspectives	Content Standard G: History and Nature of Science
Survival Skills			◆				
Antarctic Adaptations			◆				
The Mystery of Migration			◆				
Whoo Eats What?			◆				
A Habitat Is a Home			◆				
Exploring Your Environment			◆				
You Are What You Eat!			◆			◆	
Moving My Body			◆				
Science From the Heart	◆					◆	
Disease Detectives						◆	
Rock Solid Science				◆			
Rocking Around the Rock Cycle				◆			
The Dirt on Soil				◆			
Fascinating Fossil Finds	◆			◆			



	Content Standard A: Science as Inquiry	Content Standard B: Physical Science	Content Standard C: Life Science	Content Standard D: Earth and Space Science	Content Standard E: Science and Technology	Content Standard F: Science in Personal and Social Perspectives	Content Standard G: History and Nature of Science
Mysteries of the Past	◆			◆			
Earthquakes!				◆			
Delving Into Disasters	◆						
Cloud Watchers				◆			
Weather Watchers	◆			◆			
Sunrise, Sunset	◆			◆			
Moon Phases and Models	◆			◆			
Seeing Stars				◆			

# National Science Education Standards: Content Standards 5–8

	Content Standard A: Science as Inquiry	Content Standard B: Physical Science	Content Standard C: Life Science	Content Standard D: Earth and Space Science	Content Standard E: Science and Technology	Content Standard F: Science in Personal and Social Perspectives	Content Standard G: History and Nature of Science
Thought-Provoking Questions	◆						
A Closer Look	◆						
Science Measures Up	◆				◆		
Going Wild With Graphs	◆						
Wild About Data	◆						
Taking Note of Natural Resources						◆	
Words to the Wild							◆
Into the Woods							◆
Discover Reading							◆
How It's Made					◆	◆	◆
It's About Time				◆	◆		◆
If You Build It ...						◆	



	Content Standard A: Science as Inquiry	Content Standard B: Physical Science	Content Standard C: Life Science	Content Standard D: Earth and Space Science	Content Standard E: Science and Technology	Content Standard F: Science in Personal and Social Perspectives	Content Standard G: History and Nature of Science
Imaginative Inventions					◆	◆	
Let's Try It Out in the Air	◆	◆					
A Balancing Act	◆	◆					
Gravity	◆	◆					
Roller Coasters!		◆			◆		
Secrets of Flight		◆					◆
Flick a Switch		◆				◆	
The Wonder of Water	◆	◆					
Kitchen Chemistry	◆	◆					
Secrets of Seeds	◆						
Pumpkins!	◆						
Flower Power			◆				
Crazy for Loco Beans	◆		◆				
Seeing and Sorting Seashells	◆						
Unusual Creatures	◆		◆				



	Content Standard A: Science as Inquiry	Content Standard B: Physical Science	Content Standard C: Life Science	Content Standard D: Earth and Space Science	Content Standard E: Science and Technology	Content Standard F: Science in Personal and Social Perspectives	Content Standard G: History and Nature of Science
Can You See Me Now?			◆				
Survival Skills			◆				
Antarctic Adaptations			◆				
The Mystery of Migration			◆				
Whoo Eats What?			◆				
A Habitat Is a Home			◆				
Exploring Your Environment			◆				
You Are What You Eat!						◆	
Moving My Body			◆				
Science From the Heart	◆		◆			◆	
Disease Detectives			◆			◆	
Rock Solid Science				◆			
Rocking Around the Rock Cycle				◆			



	Content Standard A: Science as Inquiry	Content Standard B: Physical Science	Content Standard C: Life Science	Content Standard D: Earth and Space Science	Content Standard E: Science and Technology	Content Standard F: Science in Personal and Social Perspectives	Content Standard G: History and Nature of Science
The Dirt on Soil			◆	◆			
Fascinating Fossil Finds	◆			◆			
Mysteries of the Past	◆			◆			◆
Earthquakes!				◆	◆		
Delving Into Disasters	◆			◆			
Cloud Watchers				◆			◆
Weather Watchers	◆			◆			
Sunrise, Sunset	◆			◆			
Moon Phases and Models	◆			◆			
Seeing Stars				◆			




# Alignment With A Framework for K–12 Science Education: Practices, Crosscutting Concepts, and Core Ideas

	Dimension #1: Scientific and Engineering Practices	Dimension #2: Crosscutting Concepts	Dimension #3: Disciplinary Core Ideas— Physical Sciences	Dimension #3: Disciplinary Core Ideas— Life Sciences	Dimension #3: Disciplinary Core Ideas— Earth and Space Sciences	Dimension #3: Disciplinary Core Ideas— Engineering, Technology, and Applications of Science
Thought-Provoking Questions	◆					
A Closer Look	◆					
Science Measures Up	◆					◆
Going Wild With Graphs	◆					
Wild About Data	◆					
Taking Note of Natural Resources					◆	
Words to the Wild	◆					
Into the Woods				◆		
Discover Reading	◆					



	Dimension #1: Scientific and Engineering Practices	Dimension #2: Crosscutting Concepts	Dimension #3: Disciplinary Core Ideas— Physical Sciences	Dimension #3: Disciplinary Core Ideas— Life Sciences	Dimension #3: Disciplinary Core Ideas— Earth and Space Sciences	Dimension #3: Disciplinary Core Ideas— Engineering, Technology, and Applications of Science
How It's Made		◆				
It's About Time		◆			◆	◆
If You Build It ...		◆				◆
Imaginative Inventions		◆				◆
Let's Try It Out in the Air	◆		◆			
A Balancing Act	◆		◆			
Gravity						
Roller Coasters!			◆			◆
Secrets of Flight			◆			◆
Flick a Switch			◆			
The Wonder of Water	◆		◆			
Kitchen Chemistry	◆		◆			
Secrets of Seeds	◆					
Pumpkins!	◆					
Flower Power				◆		
Crazy for Loco Beans	◆			◆		



	Dimension #1: Scientific and Engineering Practices	Dimension #2: Crosscutting Concepts	Dimension #3: Disciplinary Core Ideas— Physical Sciences	Dimension #3: Disciplinary Core Ideas— Life Sciences	Dimension #3: Disciplinary Core Ideas— Earth and Space Sciences	Dimension #3: Disciplinary Core Ideas— Engineering, Technology, and Applications of Science
Seeing and Sorting Seashells	◆	◆				
Unusual Creatures	◆			◆		
Can You See Me Now?				◆		
Survival Skills				◆		
Antarctic Adaptations				◆		
The Mystery of Migration				◆		
Whoo Eats What?				◆		
A Habitat Is a Home				◆		
Exploring Your Environment				◆		
You Are What You Eat!				◆		
Moving My Body				◆		
Science From the Heart	◆			◆		
Disease Detectives		◆		◆		
Rock Solid Science					◆	



	Dimension #1: Scientific and Engineering Practices	Dimension #2: Crosscutting Concepts	Dimension #3: Disciplinary Core Ideas— Physical Sciences	Dimension #3: Disciplinary Core Ideas— Life Sciences	Dimension #3: Disciplinary Core Ideas— Earth and Space Sciences	Dimension #3: Disciplinary Core Ideas— Engineering, Technology, and Applications of Science
Rocking Around the Rock Cycle					◆	
The Dirt on Soil					◆	
Fascinating Fossil Finds	◆				◆	
Mysteries of the Past	◆				◆	
Earthquakes!					◆	
Delving Into Disasters	◆				◆	
Cloud Watchers					◆	
Weather Watchers	◆				◆	
Sunrise, Sunset	◆				◆	
Moon Phases and Models	◆	◆			◆	
Seeing Stars		◆			◆	

## Chapter 48

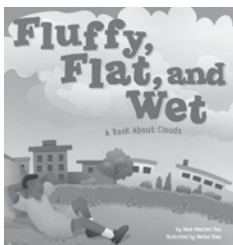


# Cloud Watchers

By Emily Morgan, Karen Ansberry, and Colleen Phillips-Birdsong

**W**eather is a topic in science that is applicable to our lives on an everyday basis. The weather often determines what we wear, where we go, and what we do. The activities here focus on clouds and the part they play in determining our weather. In the K–3 lesson, students learn about different cloud types and sculpt each type out of shaving cream. In the lesson for grades 4–6, students learn about Luke Howard—the man responsible for naming clouds—and then investigate clouds by collecting real data for NASA’s S’COOL project (see Internet Resource).

### Trade Books



#### ***Fluffy, Flat, and Wet: A Book About Clouds***

By Dana Meachen Rau, illustrated by Denise Shea  
Picture Window Books, 2006  
ISBN 978-1-4048-1729-6  
Grades K–3

#### **SYNOPSIS**

*Simple text and colorful illustrations help students understand what clouds are made of, how clouds form, and the differences among cloud types. The author includes fun facts and a cloud journal activity.*



#### ***The Man Who Named the Clouds***

By Julie Hannah and Joan Holub, illustrated by Paige Billin-Frye  
Albert Whitman & Company, 2006  
ISBN 978-0-8075-4974-2  
Grades 4–6

#### **SYNOPSIS**

*This book details the life and work of Luke Howard, who loved clouds and weather so much that he created the first practical scientific system for naming them.*

## Curricular Connections

The *National Science Education Standards (NSES)* suggest that students in grades K–4 observe the sky regularly, write and draw descriptions, and identify patterns (NRC 1996). Young students should understand that objects in the sky have properties and movements that can be observed and described and that weather changes from day to day and from season to season. The most important part of this lesson is the general understanding that different types of clouds bring different types of weather. In this K–3 lesson, students spend time observing clouds and recording their wonderings, read about the different types of clouds, and make models of the three main cloud types. Students are then introduced to the type of weather associated with each cloud. In the lesson for grades 4–6, students not only learn about different types of clouds and the weather associated with them, but they also learn about an important person in weather history, Luke Howard. Through reading about Luke Howard, students understand the need for a cloud classification system and the process Howard used in developing this system. The *NSES* suggest that by studying individuals that have contributed to the traditions of science, students can gain further understanding of scientific inquiry, the nature of science, and the relationship between science and society. Finally, students apply what they have learned about clouds and the nature of science to become part of a NASA project to study how clouds may affect Earth's climate.

## Grades K–3: Cloud Sculpting

### Materials

- Classroom-size O-W-L chart
- Shaving cream (not gel)
- Thermometer
- Cloud Watchers overhead (p. 283)
- My Weather Forecast student page (p. 284)

## Engage/Explore

Take students outside and give them a few minutes to observe the clouds silently. Then allow them to talk to a partner about what they observed. Return to the classroom and give each pair of students a photo set of various cloud types (see Internet Resources). Next, gather students around a cloud-shaped O-W-L (Observations, Wonderings, Learnings) chart. Ask them to share their observations about clouds. Write their observations in the O section of the chart. Then explain that observations often lead to questions or “wonderings.” Write some wonderings—such as, “What are clouds made of?”—in the W column of the chart. Ask students what questions they have about clouds. Record some of their questions in the W section of the chart.

## Explain

Tell students that you have a nonfiction book to help them answer some of their questions about clouds. As you read *Fluffy, Flat, and Wet: A Book About Clouds*, have them signal when they hear the answer to one of the questions from the W section of the O-W-L chart. After reading, add to the L column of the chart. This chart can be posted in the room and added to.

## Elaborate

Tell students that they are going to sculpt three of the cloud shapes that they learned about in the book. Squirt a mound of shaving cream (not gel) directly onto the desk in front of each student (check to be sure students do not have allergies or sensitivities in advance). Students should wear goggles for safety. First, have the students sculpt their shaving cream into fluffy, rounded clouds. Underneath their cloud sculptures, have them spread a thin layer of shaving cream and write the word *cumulus*. Explain that cumulus clouds bring different kinds of weather depending on where they are in the sky: low (bright, sunny), middle (thunderstorms), high (getting colder). Next, have students sculpt flat, blanketlike clouds with the word *stratus* written in a thin layer

## Cloud Watchers

of shaving cream. Explain that stratus clouds bring different kinds of weather depending on where they are in the sky: low (a little rain), middle (rain), high (rain or snow). Finally, have students sculpt wispy, featherlike clouds and write the word *cirrus* in shaving cream. Explain that cirrus clouds occur high in the sky on sunny, dry days. Explain that there are other types of clouds as well.

### Evaluate

Now students are going to use what they have learned about clouds to be meteorologists, or scientists who study the weather. Observe clouds again, this time three different times in one day, and record the air temperature each time. Project an image of the Cloud Watchers page (p. 283) and record the students' observations. You may want to watch NASA's Cloud Types Tutorial (see Internet Resources) to assist students in determining cloud cover. Then, analyze the data as a class. What do they think the weather will be and why? Tell students that clouds are just one thing that meteorologists look at when predicting weather (they also look at air pressure and wind speed). Next, pass out the My Weather Forecast student page (p. 284) and have each student make a weather forecast based on their cloud observations and temperature measurements. Have each student make a picture in the box showing what they think the weather will be and draw themselves dressed for the weather.

## Grades 4–6: Cloud Watching

### Materials

- Cloud Watchers Journals (pp. 285–286)
- Photos of various cloud types
- S'COOL Report Form (p. 287)

### Engage

Give each student a copy of the Cloud Watchers Journal (pp. 285–286) and have them keep observations of clouds for at least two weeks. Students should record the date, time, description of the

clouds they observe, and drawings of the clouds. Have students share their journals in pairs and then come up with a few questions to share. Students can write these “Cloud Wonderings” on sticky notes and post them on a cloud-shaped chart in the classroom.

### Explore

Ask students whether they have ever heard names for different kinds of clouds. Have them turn and talk with a partner about any cloud names they may have heard. Next, provide students with photo sets of various cloud types (see Internet Resources). Ask them to sort the photos into groups and come up with names for them based on their observations. Have students share the names they have come up with. (Be sure to number each photo in advance so that students in different groups can know which photo is being described by another group.)

### Explain

Tell students that you have a story to share about a boy who loved to look at the clouds. Show them the cover of *The Man Who Named the Clouds*. Point out that the man on the cover is writing in a weather journal, just as they have done. Tell them to listen for the names of three main cloud types and what those names mean. Read the book aloud, skipping the Weather Journal insets to read at another time. After reading, have students recall the three main types of clouds: cirrus (which means *curl of hair*), cumulus (which means *heap*), and stratus (which means *layer*). Ask students how these names compare to the names they came up with. Next, have them classify their cloud pictures into those three categories. You may also want to show them NASA's cloud types tutorial (see Internet Resources).

### Elaborate/Evaluate

To give your students a real-life science connection to what they have learned about clouds, you can register your class in NASA's S'COOL project. Students worldwide are making *ground truth measurements* for the Clouds and the Earth's Radiant



Energy System (CERES) experiment. Ground truth measurements are land-based observations to compare with satellite data for the purpose of improving the satellite results. Scientists are using the satellite data to study how clouds may affect Earth's climate. Participants are asked to make some basic weather observations and to record the type and features of clouds in the sky at the time that one of the satellites carrying CERES instruments passes over their location. The S'COOL website has a variety of tutorials and other materials to help prepare students to make these observations and enter them into NASA's database. Teachers can use the S'COOL Report Form (p. 287) to evaluate student learning.

## Reference

National Research Council (NRC). 1996. *National science education standards*. Washington, DC: National Academies Press.

## Internet Resources

### Cloud Types Tutorial

<http://science-edu.larc.nasa.gov/SCOOL/tutorial/clouds/cloudtypes.html>


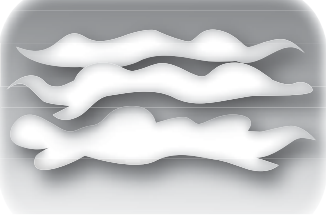

### NASA's S'COOL Project

<http://scool.larc.nasa.gov>

### Photos of Various Cloud Types

<http://science-edu.larc.nasa.gov/SCOOL/cldchart.html>

# Cloud Watchers

Weather Forecasting Chart					
Cumulus		Stratus		Cirrus	
					
<i>If the cloud is:</i>	<i>The weather could be:</i>	<i>If the cloud is:</i>	<i>The weather could be:</i>	<i>If the cloud is:</i>	<i>The weather could be:</i>
Low	Sunny	Low	A little rain	High	Sunny, dry
Medium	Thunderstorms	Medium	Rain		
High	Getting colder	High	Rain or snow		

Our Cloud Observations for \_\_\_\_\_ (date)

Observation #1 Time: \_\_\_\_\_

Drawing	Shape	Level	Color	Temp.	Rain?
	Cumulus	Low	White		Yes
	Stratus	Medium	Light Gray		No
	Cirrus	High	Dark Gray		

Observation #2 Time: \_\_\_\_\_

Drawing	Shape	Level	Color	Temp.	Rain?
	Cumulus	Low	White		Yes
	Stratus	Medium	Light Gray		No
	Cirrus	High	Dark Gray		

Observation #3 Time: \_\_\_\_\_

Drawing	Shape	Level	Color	Temp.	Rain?
	Cumulus	Low	White		Yes
	Stratus	Medium	Light Gray		No
	Cirrus	High	Dark Gray		



# My Weather Forecast

for \_\_\_\_\_ by \_\_\_\_\_  
(date) (meteorologist's name)

I think the weather will be

\_\_\_\_\_

because \_\_\_\_\_

\_\_\_\_\_.

Draw what you think the weather will look like. Draw yourself dressed for the weather in the picture!

A large, empty rectangular box with a thin black border, intended for a student to draw their weather forecast and themselves dressed for the weather.

# Cloud Watchers Journal

by: \_\_\_\_\_  
*meteorologist's name*

**Observation #1**

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Observations: \_\_\_\_\_

Sketch:

**Observation #2**

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Observations: \_\_\_\_\_

Sketch:

**Observation #3**

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Observations: \_\_\_\_\_

Sketch:

**Observation #4**

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Observations: \_\_\_\_\_

Sketch:

**Observation #5**

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Observations: \_\_\_\_\_

Sketch:

**Observation #6**

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Observations: \_\_\_\_\_

Sketch:



# Cloud Watchers Journal

by: \_\_\_\_\_  
*meteorologist's name*

## Observation #7

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Observations: \_\_\_\_\_

Sketch:

## Observation #8

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Observations: \_\_\_\_\_

Sketch:

## Observation #9

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Observations: \_\_\_\_\_

Sketch:

## Observation #10

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Observations: \_\_\_\_\_

Sketch:

## Observation #11

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Observations: \_\_\_\_\_

Sketch:

## Observation #12

Date: \_\_\_\_\_ Time: \_\_\_\_\_

Observations: \_\_\_\_\_

Sketch:

# S'COOL Report Form

Login ID: \_\_\_\_\_ City: \_\_\_\_\_

Date (ex. 2001 09 20): \_\_\_\_\_ Year \_\_\_\_\_ Month \_\_\_\_\_ Day \_\_\_\_\_ Satellites \_\_\_\_\_

Local Time (24 hour Clock ex 14 26): Hour \_\_\_\_\_ Minute \_\_\_\_\_ Universal Time: Hour \_\_\_\_\_ Minute \_\_\_\_\_

**Cloud Observations:** (Select the most prevalent cloud type at each level where clouds exist. Cloud Cover and Visual Opacity must be determined for each level observed. Use the comment section for further descriptions.)

- ☐ Clear Sky - no Clouds observed (skip to the "Surface Cover" section)  
☐ Clouds Present - (continue to level(s) observed - don't forget to count contrails if present)

High Level			
Cloud Type:	Cloud Cover:	Visual Opacity:	
<input type="checkbox"/> Cirrus	<input type="checkbox"/> Clear (0-5%)	<input type="checkbox"/> Opaque	
<input type="checkbox"/> Cirrocumulus	<input type="checkbox"/> Partly Cloudy (5% - 50%)	<input type="checkbox"/> Translucent	
<input type="checkbox"/> Cirrostratus	<input type="checkbox"/> Mostly Cloudy (50% - 95%)	<input type="checkbox"/> Transparent	
	<input type="checkbox"/> Overcast (95% - 100%)		

Mid Level			
Cloud Type:	Cloud Cover:	Visual Opacity:	
<input type="checkbox"/> Altostratus	<input type="checkbox"/> Clear (0-5%)	<input type="checkbox"/> Opaque	
<input type="checkbox"/> Altocumulus	<input type="checkbox"/> Partly Cloudy (5% - 50%)	<input type="checkbox"/> Translucent	
	<input type="checkbox"/> Mostly Cloudy (50% - 95%)	<input type="checkbox"/> Transparent	
	<input type="checkbox"/> Overcast (95% - 100%)		

Low Level			
Cloud Type:	Cloud Cover:	Visual Opacity:	
<input type="checkbox"/> Fog	<input type="checkbox"/> Clear (0-5%)	<input type="checkbox"/> Opaque	
<input type="checkbox"/> Nimbostratus	<input type="checkbox"/> Partly Cloudy (5% - 50%)	<input type="checkbox"/> Translucent	
<input type="checkbox"/> Cumulonimbus	<input type="checkbox"/> Mostly Cloudy (50% - 95%)	<input type="checkbox"/> Transparent	
<input type="checkbox"/> Stratus	<input type="checkbox"/> Overcast (95% - 100%)		
<input type="checkbox"/> Cumulus			
<input type="checkbox"/> Stratocumulus			

## Ground Observations

### Surface Cover: (Mandatory)

- |                          |  |
|--------------------------|--|
| Yes                      | No                                       |
| <input type="checkbox"/> | <input type="checkbox"/> Snow/Ice        |
| <input type="checkbox"/> | <input type="checkbox"/> Standing Water  |
| <input type="checkbox"/> | <input type="checkbox"/> Muddy           |
| <input type="checkbox"/> | <input type="checkbox"/> Dry Ground      |
| <input type="checkbox"/> | <input type="checkbox"/> Leaves on Trees |
| <input type="checkbox"/> | <input type="checkbox"/> Raining/Snowing |

### Surface Measurements: (Optional—you may submit any or all)

Temperatures: \_\_\_\_\_ Celsius or \_\_\_\_\_ Fahrenheit  
 Barometric Pressure: ( Select one )  
 \_\_\_\_\_ hPa \_\_\_\_\_ psi  
 \_\_\_\_\_ mb \_\_\_\_\_ inches Hg  
 \_\_\_\_\_ atm \_\_\_\_\_ torr (mm Hg)  
 Relative Humidity: \_\_\_\_\_ %

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