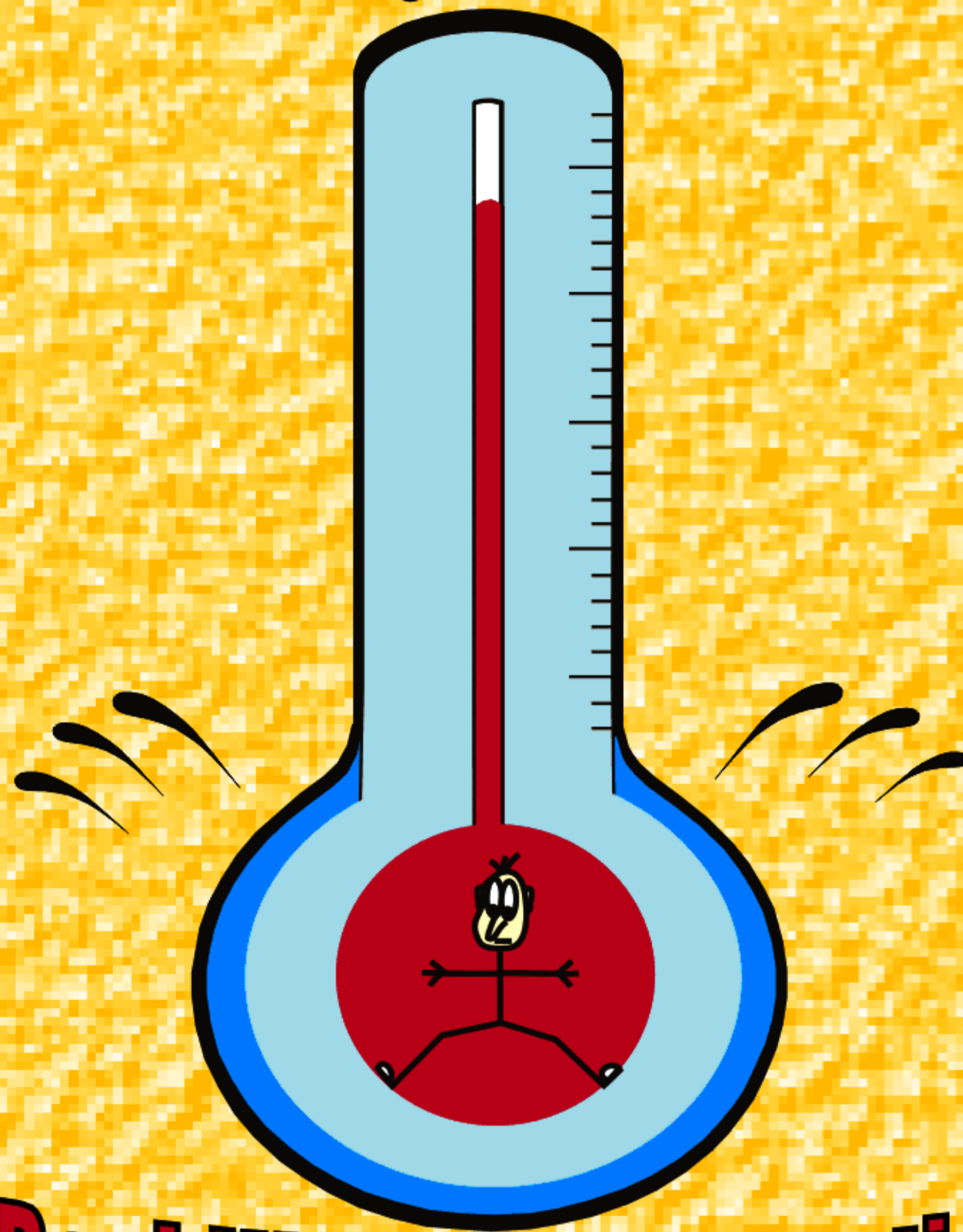


Temperature

From the *Just Turn & Share*™ Centers Series

Kathryn Robinson



Real-World Mathematics

www.writemath.com

Grades 3 - 5



WriteMath Enterprises
2303 Marseille Ct. Suite 104
Valrico, Fl. 33594-7248
813 685 0392

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Just Turn & Share™
Math Centers Series




Temperature

Volume 12

(Grades 3 – 5)

Real-World
Mathematics
that
students
understand

Kathryn Robinson

 WriteMath Enterprises
Valrico, Florida

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- I dedicate this series to my husband, Steve Robinson, for advising, supporting, guiding, and editing years of work and making my dreams possible.
- I would also like to dedicate this series to my brother-in-law, Michael Ghormley, for his expert mathematical advice, patience, and willingness to answer my constant questions over a period of several years.

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Introduction

Temperature is a great center in the ‘Just Turn & Share’ Series. This series gives students **daily** practice in 16 math areas or a math topic of your preference. After gradually working in a center-based atmosphere, students can tackle all 16 centers in half an hour. This program can be used in conjunction with any regular math series. Some students have difficulty attaining proficiency in specific math areas due to the limited practice provided by a textbook. ‘Just Turn & Share’ math centers provide real-world practice with mathematical concepts.

The series is designed for center-based review of concepts or as whole-group overhead instruction. These lessons are designed to provide practice for 30 weeks of the school year. The program contains three-week sets worth of practice in each concept. Each concept is covered for three weeks before a new concept is introduced to the students. During each three-week period, only the numbers change - not the concepts. The first week is designed as a review of the concept, the second provides further practice, and the third is set apart for mastery of the concept. As your students become more proficient in one particular concept, you might choose to eliminate the third week set to move to a new concept. The third week then serves as a review during the last ten weeks of the year or intensive practice prior to standardized testing.

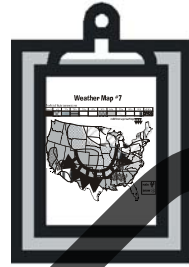
The new concept for the week is listed in the *Table of Contents*. At the onset of a new concept, we recommend that teachers conduct a mini-lesson before releasing students to work the centers. Each center contains concept-information sheets with student-directions about how to perform individual concepts. These information sheets have a third-grade readability level. I recommend that the information sheets remain at the centers as long as possible to accommodate new students entering the class throughout the year. Many weeks in the series contain reference sheets that contain data that students will need to perform certain operations. Both the information sheets and reference sheets are located at the beginning of each week.

This center contains:

1. Information sheets designed to remain at the center.
2. Nine sets of maps and charts that list mathematical information to complete the activities.

Suggestion:

- A Fahrenheit & Celsius thermometer that registers the temperature inside and outdoors will help the students with the concepts.
- Each center sheet should be placed in a plastic protective cover.



Each center is designed for grades 3 through 5 as follows:

- (*) **Grade 3** students calculate the single asterisk activities
- (**) **Grade 4** students calculate the double asterisk activities
- (***) **Grade 5** students calculate the triple asterisk activities

If you are using more than five centers in the classroom, I recommend using the answer sheet to help students keep track of the completed centers. Accompanying each complete set is a set of corrected answer sheets that help students self-correct their responses. Students self-correct their answer sheets three out of the four days. Self-correction prevents embarrassment and allows students time to practice each concept before an assessment. I place a sign-up sheet in the classroom to allow students to sign up for assistance in their less proficient areas. I assist those that have signed up for help during the next day's *Center Time*. The fourth day of each week is teacher-corrected and entered in a grade book. If you have any questions please feel free to e-mail us on our website:

www.writemath.com.

I know that you will have as much fun employing this program as I have had designing it. Remember the program is as simple as *turning each page and sharing* the activities with your class. So go ahead just...

Name:		Date:		Day #1	Day #2	Day #3	Day #4
Time:		Estimation:		Calendar:			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Number Sense:		Grid:		Temperature:			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Place Value:		Volume:		Weight/Mass:			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Algebra:		<input type="checkbox"/>		<input type="checkbox"/>			
Graph:		<input type="checkbox"/>		<input type="checkbox"/>			
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Linear Measure:		Fractions/Decimals:	
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<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Geometry:			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Money:			
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Thinking:			
<i>range:</i>	<i>median:</i>	<i>mean/average:</i>	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
	<i>mode:</i>		
	<input type="checkbox"/>		

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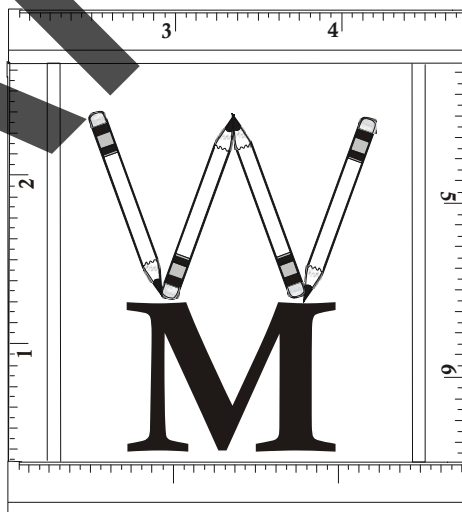
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SAMPLE



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Centers in the 'Just Turn & Share' Math Center Series:

1. Algebra
2. Calendar
3. Estimation
4. Fractions & Decimals
5. Geometry
6. Graph
7. Grid
8. Linear Measure
9. Money
10. Number Sense
11. Place Value
12. Temperature
13. Thinking: Range, Median, Mode, Mean
14. Time
15. Volume
16. Weight & Mass

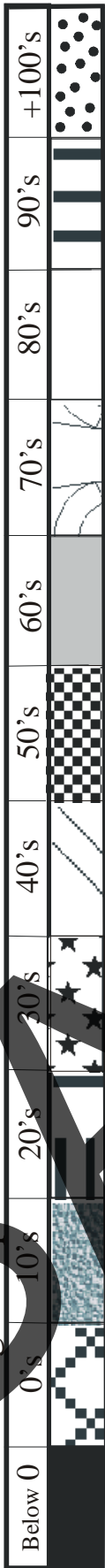
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Weather Map #1

Predicted high temperatures



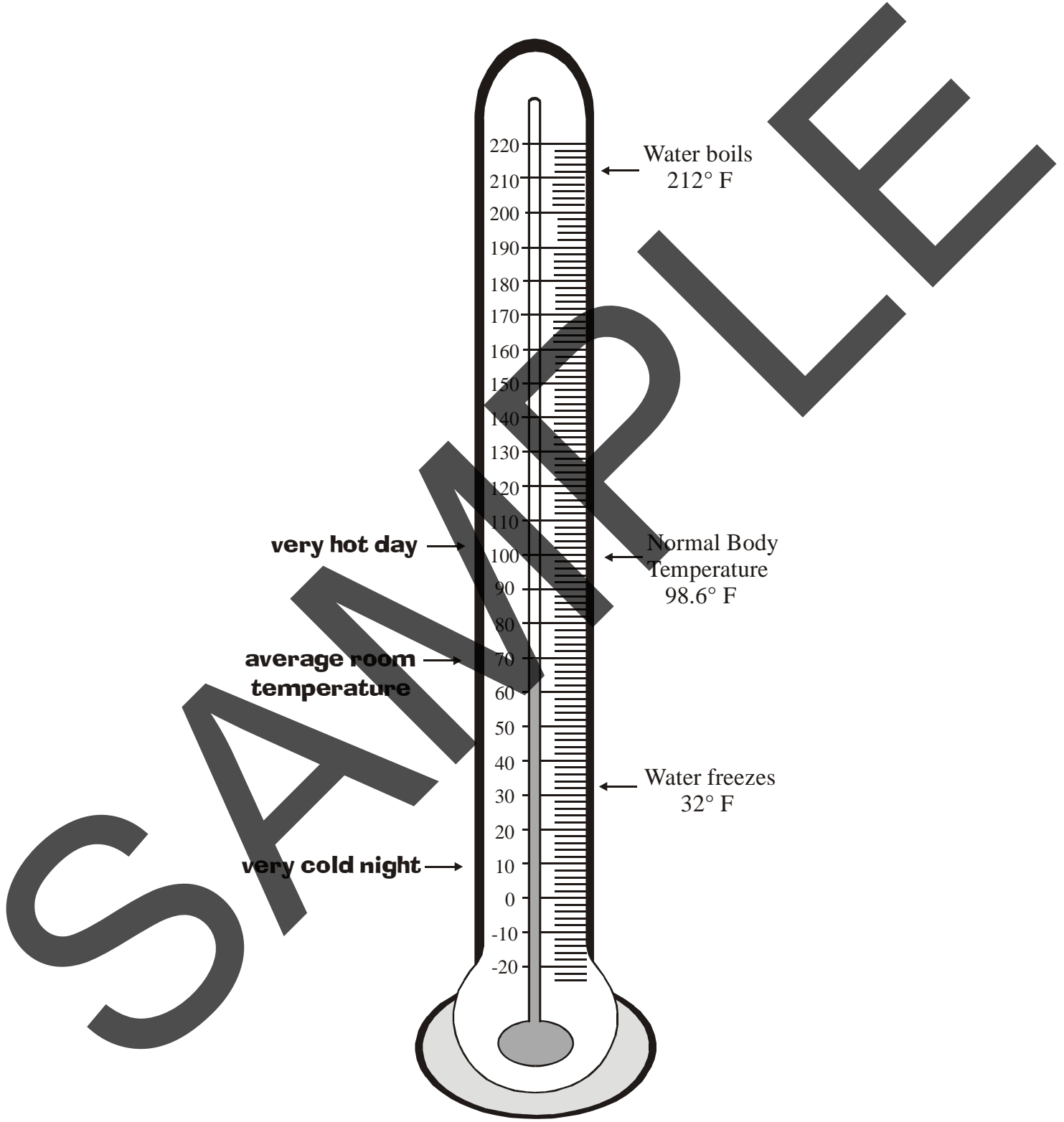


TEMPERATURES ACROSS THE NATION #1



City	H °	L °	P	City	H °	L °	P
Albany	83	69	0.00	Little Rock	86	74	0.02
Albuquerque	93	65	0.00	Los Angeles	89	66	0.00
Amarillo	94	57	0.00	Louisville	91	72	0.63
Anchorage	59	48	0.39	Memphis	83	74	0.93
Asheville	81	58	0.00	Miami	91	77	0.05
Atlanta	89	68	0.00	Milwaukee	79	68	0.15
Atlantic City	82	61	0.01	Minneapolis/St. Paul	77	67	0.25
Baltimore	86	62	0.00	Mobile	92	74	0.00
Billings	93	69	0.00	Nashville	90	74	0.00
Birmingham	92	74	0.00	New Orleans	93	76	0.00
Bismarck	85	57	0.00	New York	85	70	0.00
Boise	93	66	0.00	Norfolk	81	74	0.01
Boston	78	66	0.01	Oklahoma City	95	69	0.92
Brownsville	98	77	0.00	Omaha	78	62	0.00
Buffalo	85	71	0.00	Peoria	79	70	0.00
Burlington, VT	74	66	0.06	Philadelphia	86	66	0.00
Casper	91	51	0.00	Phoenix	107	86	0.00
Charleston, SC	88	72	0.00	Pittsburgh	91	67	0.00
Charleston, WV	91	64	0.00	Portland, ME	79	67	0.03
Charlotte	83	67	0.80	Portland, OR	79	56	0.00
Chicago	78	71	0.21	Providence	85	67	0.00
Cincinnati	90	70	0.17	Raleigh	85	71	0.00
Cleveland	89	72	0.01	Reno	95	63	0.00
Columbus, OH	93	72	0.00	Richmond	90	66	0.00
Concord, NH	77	66	0.20	Sacramento	89	61	0.00
Dallas/Fort Worth	96	71	0.07	St. Louis	83	72	0.46
Denver	88	56	0.00	Salt Lake City	98	67	0.00
Des Moines	76	65	0.00	San Diego	73	66	0.00
Detroit	84	72	0.38	San Francisco	65	56	0.00
Duluth	68	62	0.08	Sault Sainte Marie	73	70	0.05
Fargo	87	55	0.00	Seattle	71	54	0.00
Fort Wayne	83	68	0.04	Sioux Falls	72	58	0.58
Hartford	85	66	0.00	Spokane	83	55	0.00
Honolulu	86	76	0.00	Syracuse	84	69	0.01
Houston	87	76	0.59	Tallahassee	88	72	0.25
Indianapolis	82	70	0.75	Tucson	100	77	0.00
Jackson, MS	92	72	0.59	Washington	88	69	0.00
Jacksonville	88	71	0.14	West Palm Beach	91	78	0.01
Kansas City	77	65	0.00	Wichita	88	69	0.00
Key West	90	81	0.00	Wilkes-Barre	86	60	0.00
Las Vegas	106	85	0.00	Wilmington, DE	84	63	0.00

Fahrenheit Thermometer



Temperature

(Day #1)



Look at Weather Map #1:

A. What temperatures are designated by:

30° - 39° F

40° - 49° F

60° - 69° F

Look at the 'Temperatures Across the Nation #1' chart:

- * The 1st column lists the 'city' names.
- * The 2nd column lists the highest (H) temperature for the previous day.
- * The 3rd column lists the lowest (L) temperature for the previous day.
- * The 4th column lists the precipitation (P), or amount of rain in inches, for the previous day.

B. What is the heading on the column in which you find *Albany*?

Look at the classroom thermometer:

C. What is the temperature in Fahrenheit inside your classroom today?

Look at the thermometer chart (page 4):

D. What is the temperature at which water freezes?

- * A, B, & D
- ** A, B, & D
- *** A, C, & D

Temperature

(Day #2)



Look at Weather Map #1:

A. What temperatures are designated by:

30° - 39° F

10° - 19° F

90° - 99° F

Look at the 'Temperatures Across the Nation #1' chart:

- * The 1st column lists the 'city' names.
- * The 2nd column lists the highest (H) temperature for the previous day.
- * The 3rd column lists the lowest (L) temperature for the previous day.
- * The 4th column lists the precipitation (P), or amount of rain in inches, for the previous day.

B. What is the heading on the column in which you find Cincinnati?

Look at the classroom thermometer:

C. What is the temperature in Fahrenheit inside your classroom today?

Look at the thermometer chart (page 4):

D. What is the temperature at which water boils?

- * A, B, & D
- ** A, C, & D
- *** A, B, & D

Temperature

(Day #3)



Look at Weather Map #1:

A. What temperatures are designated by:



40° - 49° F

70° - 79° F

90° - 99° F

Look at the 'Temperatures Across the Nation #1' chart:

- * The 1st column lists the 'city' names.
- * The 2nd column lists the highest (H) temperature for the previous day.
- * The 3rd column lists the lowest (L) temperature for the previous day.
- * The 4th column lists the precipitation (P), or amount of rain in inches, for the previous day.

B. What is the heading on the column in which you find 0.00?

Look at the classroom thermometer:

C. What is the temperature in Fahrenheit inside your classroom today?

Look at the thermometer chart (page 4):

D. What is considered normal body temperature?

- * A, B, & D
- ** A, B, & D
- *** A, C, & D

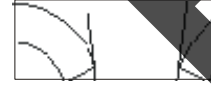
Temperature

(Day #4)



Look at Weather Map #1:

A. What temperatures are designated by:



10° - 19° F

70° - 79° F

100° - 109° F

Look at the 'Temperatures Across the Nation #1' chart:

- * The 1st column lists the 'city' names.
- * The 2nd column lists the highest (H) temperature for the previous day.
- * The 3rd column lists the lowest (L) temperature for the previous day.
- * The 4th column lists the precipitation (P), or amount of rain in inches, for the previous day.

B. What is the heading on the column in which you find 83°?

Look at the classroom thermometer:

C. What is the temperature in Fahrenheit inside your classroom today?

Look at the thermometer chart (page 4):

D. What temperature is considered a very hot day?

- * A, B, & D
- ** A, C, & D
- *** A, B, & D

Temperature

(Day #1)



Look at Weather Map #1:

A. What temperatures are designated by: [REDACTED]

Below 0° F

20° - 29° F

100+° F

Look at the 'Temperatures Across the Nation #1' chart:

- * The 1st column lists the 'city' names.
- * The 2nd column lists the highest (H) temperature for the previous day.
- * The 3rd column lists the lowest (L) temperature for the previous day.
- * The 4th column lists the precipitation (P), or amount of rain in inches, for the previous day.

B. What does the heading 'H' at the top of the second column mean?

Look at the classroom thermometer:

C. What is the temperature in Fahrenheit inside your classroom today?

Look at the thermometer chart (page 4):

D. What temperature is considered a very cold night?

- * A, B, & D
- ** A, B, & D
- *** A, C, & D

Temperature

(Day #2)



Look at Weather Map #1:

A. What temperatures are designated by:



30° - 39° F

10° - 19° F

80° - 89° F

Look at the 'Temperatures Across the Nation #1' chart:

- * The 1st column lists the 'city' names.
- * The 2nd column lists the highest (**H**) temperature for the previous day.
- * The 3rd column lists the lowest (**L**) temperature for the previous day.
- * The 4th column lists the precipitation (**P**), or amount of rain in inches, for the previous day.

B. What does the heading 'L' at the top of the third column mean?

Look at the classroom thermometer:

C. What is the temperature in Fahrenheit inside your classroom today?

Look at the thermometer chart (page 4):

D. What temperature is considered average room temperature?

- * A, B, & D
- ** A, C, & D
- *** A, B, & D

Temperature

(Day #3)



Look at Weather Map #1:

A. What temperatures are designated by:



40° - 49° F

70° - 79° F

90° - 99° F

Look at the 'Temperatures Across the Nation #1' chart:

- * The 1st column lists the 'city' names.
- * The 2nd column lists the highest (H) temperature for the previous day.
- * The 3rd column lists the lowest (L) temperature for the previous day.
- * The 4th column lists the precipitation (P), or amount of rain in inches, for the previous day.

B. What does the heading 'P' at the top of the fourth column mean?

Look at the classroom thermometer:

C. What is the temperature in Fahrenheit inside your classroom today?

Look at the thermometer chart (page 4):

D. Which temperature would be considered a hot day?

70° F

30° F

90° F

- * A, B, & D
- ** A, B, & D
- *** A, C, & D

Temperature

(Day #4)



Look at Weather Map #1:

A. What temperatures are designated by:

50° - 59° F

70° - 79° F

80° - 89° F

Look at the 'Temperatures Across the Nation #1' chart:

- * The 1st column lists the 'city' names.
- * The 2nd column lists the highest (H) temperature for the previous day.
- * The 3rd column lists the lowest (L) temperature for the previous day.
- * The 4th column lists the precipitation (P), or amount of rain in inches, for the previous day.

B. What is the column heading that stands for the highest temperature reached on the previous day?

Look at the classroom thermometer:

C. What is the temperature in Fahrenheit inside your classroom today?

Look at the thermometer chart (page 4):

D. Which temperature would be considered a cool day?

10° F

30° F

60° F

- * A, B, & D
- ** A, C, & D
- *** A, B, & D