#### 4<sup>th</sup> Grade Student eLearning Activities Log Day 6

Student Name	Grade	

#### Teacher \_\_\_\_\_

Complete your selected activity per subject and have your parent/guardian sign it. You can use a device for the online activities <u>or</u> complete the hard copy activities. Students must participate in the eLearning activities to be counted as in attendance for the eLearning days. Submit form to your homeroom teacher the day after the eLearning day. Together the activities should take about 5 hours to complete.

#### Day 6

Language Arts	Math	Social Studies	Science	Specials
Engage in Reading activities with RazKids, Lexia accessed via Clever. (www.clever.com/in/maywood89)	Engage in Math activities using Imagine Math via Clever.	Read "Mapping the Woods: Maps and Cartography" on RAZ Kids via Clever and complete the online quiz.	Read "Water's Part in Photosynthesis" and answer the questions.	PE: Exercise along with this video: Iron Man Workout <u>https://www.youtube.com/w</u> <u>atch?v=udK_PRSeVPI&amp;t=26s</u> Practice throwing with Throwing Target Practice
Wonders/ Maravillas activities Read a story. Describe the main	Complete Math handout -	Read "Mapping the Woods: Maps and Cartgraphy" from RAZ Kids and	Read "Water's Part in	Music: Dance and sing along to a favorite song. Art: Chaose an object that is
character using character traits. Draw a picture of the main character.	Standards Practice CC.4.OA.2 and return them to school.	summarize the story in a paragraph.	Photosynthesis" and answer the questions.	Choose an object that is important to you (ex: stuffed animal, trophy/award, toy, etc.) and draw it. Use crayons, markers, or pencils.

#### Registro de actividades de aprendizaje electrónico para estudiantes Día 6: Grado 4

Nomber	Grado

Maestro/a \_\_\_\_\_

Complete su actividad seleccionada por materia y haga que sus padres / tutores la firmen. Puede usar un aparato electronico para las actividades en línea o completar las actividades en papel. Los estudiantes deben participar en las actividades de eLearning para ser contados como presentes durante los días de eLearning. Envíe el formulario a su maestro de aula el día después del día de eLearning. Las actividades deben tomar alrededor de 5 horas para completarse.

#### Dia 6

Language Arts	Math	Social Studies	Science	Specials
Engage in Reading activities with RazKids, Lexia accessed via Clever. (www.clever.com/in/maywood89 )	Engage in Math activities using Imagine Math via Clever.	Read "Mapping the Woods: Maps and Cartography" on RAZ Kids via Clever and complete the online quiz.	Read "Water's Part in Photosynthesis" and answer the questions.	PE: Exercise along with this video: Iron Man Workout <u>https://www.youtube.com/w</u> <u>atch?v=udK_PRSeVPI&amp;t=26s</u> Practice throwing with Throwing Target Practice
Wonders/ Maravillas activities Read a story. Describe the main character using character traits. Draw a picture of the main character.	Complete Math handout - Standards Practice CC.4.OA. 2 and return them to school.	Read "Mapping the Woods: Maps and Cartgraphy" from RAZ Kids and summarize the story in a paragraph.	Read "Water's Part in Photosynthesis" and answer the questions.	Music:         Dance and sing along to a         favorite song.         Art:         Draw a picture of your         neighborhood. Use crayons,         markers, or pencils.

Firma de Padres\_\_\_\_\_

#### Name \_\_\_\_\_

A **root word** is a word in its simplest form. Many longer words include a root word. You can use root words to help you understand the meaning of longer words.

pitiful

The root word is "pity." Pity means "sorrow."

pitiful = sorrowful

## Read each passage below. On the line, write the root word of the word in bold.

- Anansi was a spider who had six children. Each child had his or her own special ability.
- "I found this wonderful globe of light, Nyame. Will you hold it for me while I decide which child to give it to?" Anansi asked.
- **3.** And Nyame reached down to take the globe gently and **carefully**.
- 4. Nyame watched from above as the argument went on and on.

#### Name \_\_\_\_\_

A **root word** is a word in its simplest form. Many longer words include a root word. You can use root words to help you understand the meaning of longer words.

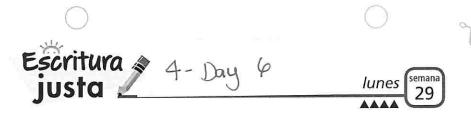
pitiful

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- 4. Nyame watched from above as the argument went on and on.



1. ¿Cuál de los verbos es el correcto en la siguiente oración?

A mi abuela le \_\_\_\_\_ darme un regalo al final del año escolar.

a) gustando b) gusta c)gustar

- Escribe la contracción de las palabras a y el en el espacio provisto.
   Siempre vamos \_\_\_\_\_ parque después de la escuela.
- 3. Encierra en un círculo la palabra con sufijo. Escribe el sufijo e indica su función.

Visito a mi abuelita todos los veranos.

 Encierra en un círculo las palabras que estén mal escritas y corrígelas.

El Junio pasado, ella me regalo un libros y un CD de cantos de pájaros.

5. Corrige la oración. Usa el diccionario como ayuda. Estoi emoxionado por saber qué me compro este anio.



- ¿Cuál de los verbos es el correcto en la siguiente oración?
   A mi abuela le \_\_\_\_\_\_ darme un regalo al final del año escolar.
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**5. Corrige la oración. Usa el diccionario como ayuda.** Estoi emoxionado por saber qué me compro este anio.

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#### Nombre \_\_\_\_\_

Dobla la hoja por la línea punte Escribe las pa en los espacie blanco a med se leen en vo Cuando termi abre la hoja y la lista que es a la derecha p corregir los e ortográficos.

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a la hoja por	1	1. hablaré
ea punteada. ibe las palabras	2	2. heptagonal
os espacios en	3	3. hablaríamos
co a medida que en en voz alta.	4	4. hallado
ndo termines,	5	5. enmohecer
la hoja y usa ita que está	6	6. hematológico
derecha para	7	7. inhábil
egir los errores gráficos.	8	8. heliograma
grancos.	9	9. hectolitro
	10	10. heptasílabo
	11	11. hemiciclo
	12	12. hermoso
	13	<b>13.</b> híbrido
	14	<b>14.</b> hipo
	15	15. hidrofobia
	16	<b>16.</b> humo
	17	17. habitábamos
	18	18. heterogéneo
	19	19. hemisférico
	20	20. malhechor
Palabras de repaso	21	21. benéfico
	22	22. borroso
	23	23. bienaventurado
Palabras difíciles	24	24. desahogar
	25	25. heliosismología

enmohecer	hablaré	heliograma	hemisférico	heterogéneo	
habitábamos	hallado	hematológico	heptagonal	inhábil	
hablaríamos	hectolitro	hemiciclo	heptasílabo	malhechor	

## A. En los grupos de palabras hay una mal escrita. Subráyala y escribe su forma correcta en el espacio dado.

1.	allado	habilidad	habitar	
2.	hipérbole	hipertensión	ablaré	
3.	huella	huésped	ematológico	·
4.	eterogéneo	heliógrafo	helicóptero	
5.	hojas	ablaríamos	hojalata	
6.	eptagonal	hexágono	hospital	
7.	higo	hilo	enmoecer	
8.	hebilla	malechor	helado	
9.	hospital	emisférico	hostil	
10	ectolitro	hechizo	helio	
11.	hipo	hiato	inábil	
12	. huérfana	huevo	emiciclo	
13	. abitábamos	hueste	historiador	
14	hueco	eptasílabo	moho	,
15	herencia	heliograma	búho	

## B. Escribe estas palabras en orden alfabético: hectolitro, heptasílabo, hemiciclo, malhechor, hablaríamos.

16	18	20
17	19	

enmohecer	hablaré	heliograma	hemisférico	heterogéneo
habitábamos	hallado	hematológico	heptagonal	inhábil
hablaríamos	hectolitro	hemiciclo	heptasílabo	malhechor

A. Clasifica las palabras según sean sustantivos, adjetivos o verbos:

Verbos

#### Sustantivos

1		12
2.		13
3		14
4.		15
Adje	tivos	
5.		
6		
7.		e
8		
9.		
10.		
11.		٠
B. E	Escribe una oració	n con dos de las palabras de ortografía.

enmohecer hablaré heliograma hemisférico heterogéneo habitábamos hallado hematológico heptagonal inhábil hablaríamos hectolitro hemiciclo heptasílabo malhechor

#### A. Escribe la palabra correspondiente a cada significado.

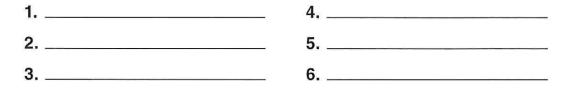
- 1. desigual
- 2. relacionado con la sangre \_\_\_\_\_
- 3. que tiene siete lados \_\_\_\_\_
- 4. vivíamos \_\_\_\_\_
- 5. que tiene siete sílabas \_\_\_\_\_

#### B. Completa las oraciones con las palabras de la lista.

- 6. \_\_\_\_\_\_ significa cubrir algo de moho.
- Cien litros hacen un \_\_\_\_\_.
- 8. Lo llamaré y \_\_\_\_\_ con él por teléfono.
- 9. El lunes es un día \_\_\_\_\_ porque es feriado.
- 10. No sabía que \_\_\_\_\_\_ tanto de nuestro pasado.
- **11.** Un fósil de dinosaurio fue \_\_\_\_\_\_ en Arizona.
- 12. La conservación de los bosques en un asunto \_\_\_\_\_\_.
- 13. El Senado llevó a cabo la sesión en el \_\_\_\_\_.
- 14. Un \_\_\_\_\_\_ es un mensaje transmitido mediante un heliógrafo.
- 15. La policía persiguió y capturó al \_\_\_\_\_.

#### A. En el siguiente párrafo hay seis palabras con errores de ortografía. Subráyalas y escribe su forma correcta en los espacios dados.

Ayer hablé con mi amigo David acerca de la nueva novela policíaca. Nos gustó mucho porque la historia ocurre en Aleprusia, una ciudad en la que él y yo abitábamos hace mucho tiempo. La trama del relato gira en torno al robo de un doblón con forma eptagonal. El doblón fue allado en la mina abandonada donde se escondía el malechor que la había tomado. La novela es muy interesante. No sabía que ablaríamos tanto de ella. Mañana ablaré de ella frente a la clase.



#### Actividad de escritura

B. Escribe acerca de un relato que te haya gustado. Incluye al menos cuatro palabras de ortografía.

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Lee con atención los grupos de palabras. Solo una de las palabras de cada grupo está bien escrita. Marca el círculo de la respuesta correcta. Antes de empezar, observa el ejemplo A. Luego, haz el ejemplo B. Cuando hayas comprendido lo que debes hacer, continúa con los demás ejercicios.

Ejemplo A: (A) istorieta (B) hiztorieta (C) historieta (D) istoriéta		Ejemplo B: © ebreo © hevreo © evreo H hebreo
<ol> <li>A ermoso</li> <li>B ermozo</li> <li>C hermoso</li> <li>D hermozo</li> </ol>	<ul> <li>6. (E) hablaré</li> <li>(F) ablare</li> <li>(G) háblare</li> <li>(H) ávlaré</li> </ul>	<ul> <li>11. A hematológico</li> <li>B ematológico</li> <li>C hematólogico</li> <li>D ematólogico</li> <li>H emicíclo</li> <li>B emicíclo</li> </ul>
<ul> <li>2. (E) híbrido</li> <li>(E) hibrido</li> <li>(G) ibrido</li> <li>(H) hivrido</li> </ul>	<ul> <li>7. A eptágonal</li> <li>B eptagonal</li> <li>C heptagonal</li> <li>D hetagonal</li> </ul>	12. (E) umo17. (A) habitabamos(E) humo(B) habitábamos(G) úmo(C) abitábamos(P) húmo(D) abitabámos
<ul> <li><b>3.</b> (A) ipo</li> <li>(B) hipo</li> <li>(C) hípo</li> <li>(D) ípo</li> </ul>	<ul> <li>8. (E) hablaríamos</li> <li>(E) hablariamos</li> <li>(G) ablaríamos</li> <li>(H) habrariamos</li> </ul>	<ul> <li>13. A eliográma</li> <li>B heliógrama</li> <li>C heliograma</li> <li>D eliograma</li> </ul> <ul> <li>18. E heterogeneo</li> <li>F eterogéneo</li> <li>G heterogéneo</li> <li>H eterogeneo</li> </ul>
<ul> <li>4. (E) hidrofobia</li> <li>(E) idrofobia</li> <li>(G) hidrofovia</li> <li>(H) idrofovia</li> </ul>	<ul> <li>9. A hayado</li> <li>B ayado</li> <li>C allado</li> <li>D hallado</li> </ul>	14. (E) hectolitro19. (A) hémisferico(E) ectolitro(B) hemisferico(G) hectólitro(C) emisférico(H) éctolitro(D) hemisférico
<ul> <li><b>5.</b> (A) inábil</li> <li>(B) inhábil</li> <li>(C) inabil</li> <li>(D) inahbil</li> </ul>	10. © enmoehcer © enmohecer © enmoecer ⊕ enmohécer	<ul> <li>15. A heptasílabo</li> <li>B eptasílabo</li> <li>C ectasílabo</li> <li>D hectasílabo</li> <li>20. E malecor</li> <li>E malechor</li> <li>G malhechor</li> <li>H malhecor</li> </ul>

**CC.4.OA.2** Multiply or divide to solve word problems involving multiplicative comparison, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem, distinguishing multiplicative comparison from additive comparison.

- At the school carnival, tickets can be exchanged for prizes. Mason wants a comic book that costs 176 tickets. He needs 8 times as many tickets as he has now. How many tickets does Mason have now?
  - A 20 tickets
  - B 22 tickets
  - c 168 tickets
  - D 178 tickets
- 2. On the first day of her fishing trip, Jan caught 4 fish. On the second day, she caught 7 times as many fish as the first day. How many fish did Jan catch on the second day?
  - A 11 fish
  - **B** 14 fish
  - **c** 28 fish
  - **D** 32 fish
- **3.** Mark has 36 drawings of horses and 4 drawings of spaceships.

Write and solve an equation to find how many times as many drawings of horses he has as spaceships.

- 4. Carl ran 27 miles last week. This is 3 times farther than Anna ran. Which equation can be used to find how many miles Anna ran?
  - **A** 3 × **■** = 27
  - **B** 3 × 27 = ■
  - **c** 3 + **=** 27.
  - **D** 3 + 27 = 🔳
- 5. Marta delivers newspapers. In the first week, she delivers 80 papers. In the second week, she delivers 320 papers. Which equation can Marta use to find how many times as many papers she delivered the second week as the first week?
  - a 320 × 80 = ■
  - **B** 80 + **■** = 320
  - **c** 320 🔳 = 80
  - **D** 320 ÷ 80 = Ⅲ
- Caleb is saving money for a new skateboard. So far he has saved \$18. The cost of the skateboard is 6 times as great as the amount he has saved.

Write and solve an equation to find the cost of the skateboard.

- Jeff and Molly sell tamales at the school food fair. Jeff sold 51 tamales. Molly sold 17 tamales. Which equation can be used to find how many times as many tamales Jeff sold as Molly?
  - ▲ 17 × 51 = 🔳

Name \_

- в 17 + 51 = 🔳
- **c** 17 + **m** = 51
- **D** 17 × **■** = 51
- a. Angela reads some pages of a 140-page novel this weekend. After the weekend, she needs to read 5 times as many pages to finish the novel.

Write and solve an equation to find how many pages Angela read on the weekend. 10. Elizabeth and Megan are filling baskets of party favors. Megan fills 4 times as many baskets as Elizabeth. Elizabeth fills 4 baskets. Which equation can be used to find how many baskets Megan fills?

- **D** 4 + 4 = 🔳
- Priscilla bought 2 boxes of tissues for her class. She bought 6 times as many boxes the week before.

Write and solve an equation to find how many boxes of tissue she bought the week before.

- 9. For two days, Leo counted the number of Canadian geese in the park. He counted 3 times as many geese on the first day as he did on the second day. He counted 45 geese the second day. How many Canadian geese did he count the first day?
  - A 135 geese
  - **B** 125 geese
  - c 48 geese
  - D 42 geese

- **12.** A baseball coach hands out 72 bottles of water to the team on the first day of play. He hands out 36 bottles on the second day. How many times as many bottles did he hand out the first day as the second day?
  - **A** 46
  - **B** 36
  - **c** 3
  - **d** 2

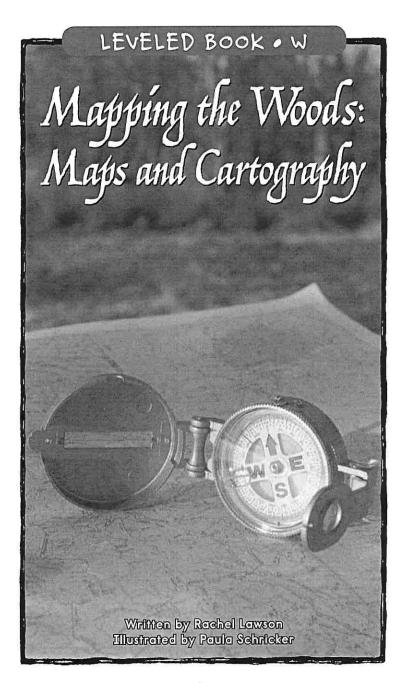
## Mapping the Woods: Maps and Cartography

A Reading A–Z Level W Leveled Book Word Count: 2,069





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Mapping the Woods: Maps and Cartography



Written by Rachel Lawson Illustrated by Paula Schricker

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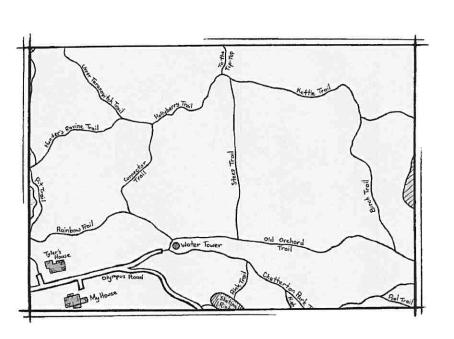
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#### Correlation LEVEL W Fountas & Pinnell S Reading Recovery 40 DRA 40

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Bon Voyage!
Try This!
Glossary
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### Maps and What They Do

This is a map I drew of the woods that are by my house. The map shows the trails, roads, and buildings near my house. Be sure you have a copy of my map to follow along as you read this book.

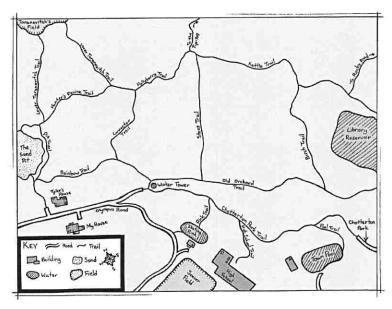
A map is a drawing of an area. It shows where things are in relation to each other. Most maps show an area from above, as though you were looking down from an airplane. In fact, that's how most maps are drawn today. Someone takes a photograph from an airplane or satellite, and then a mapmaker, or **cartographer** (car-TOG-ra-fer), uses that photograph to draw a map.

Before there were planes or spaceships, people drew maps by carefully remembering where things were, how far away they were from each other, and which direction they were from each other. Maps were also made by **surveying**, or taking mathematical measurements of how far and in which direction things were from each other. Many small maps are still made by surveying. Surveying creates an accurate map, though it takes a long time to survey a large area.

I drew my map by remembering and guessing where everything was—it was very hard to do. Some things still might be the wrong size. But if you were lost on the trails by my house, you could use this map to find your way out.



This surveyor is using his equipment to take measurements.



What Is on a Map?

#### The Key

Most maps aren't an exact drawing of the way an area looks. For instance, I didn't draw the trees, grass, or buildings as they would look in a photo or painting. Cartographers use symbols so that their maps are easy to draw and read. Most maps have a box in the corner, called the **key**, that tells you what each symbol means.

The key on my map tells you the symbols I used to draw the woods and my neighborhood. The double lines are roads where cars drive. The single lines are walking trails. The boxes are buildings, and the slanted lines show water areas. A four-pointed star called the **compass rose** inside the key tells you where north, south, east, and west are on the map. Most maps put north at the top, south at the bottom, east on the right, and west on the left. As you can ass rose, my map is drawn he top. I did this because my

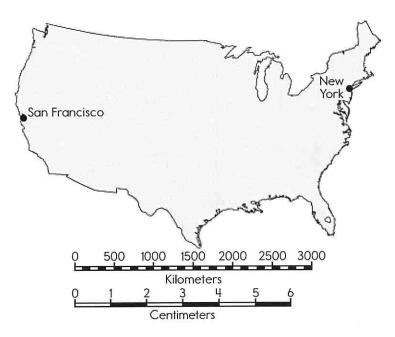
see from my compass rose, my map is drawn with northeast at the top. I did this because my house faces northeast, so that is how I think of my neighborhood.

Most maps show the names of cities, roads, trails, and other geographical features such as rivers and oceans so that you can quickly tell where things are. I put the name of each trail, road, and building on my map. Look at my map

and see if you can find the Hunter's Ravine Trail and the high school.

Some planes have GPS tracking devices in them so you can see where you are during the flight.





#### Scale

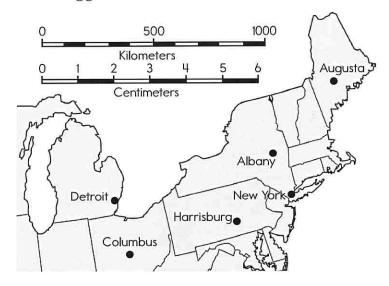
The **scale** of a map tells you how big the map is compared to the actual area. Most maps show the scale by comparing two units.

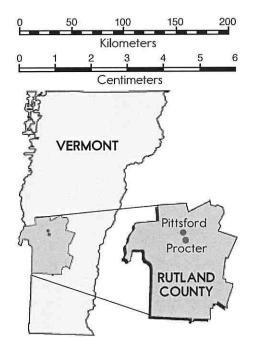
On this map of the United States, the scale units are shown on a bar with marks and numbers on it. The top scale tells you the distance in the actual area. The bottom scale shows the distance on the map; this map is measured in centimeters. For example, on this map one centimeter is equal to almost 500 kilometers of actual distance.

8

Can you imagine if a map of the entire United States were drawn in the scale of my map of the woods? The map would have to show every single building in the United States, plus all of the spaces in between. It would be hundreds of kilometers wide-certainly too big to fold up and put in your pocket. If a cartographer draws a big area, he or she makes the map in a smaller scale. This map of the United States is in a very small scale.

If a map zooms in on a smaller area, the scale gets bigger and bigger. This map shows the northeastern part of the United States, where my woods are. The area is about four times smaller than the United States, so the scale is four times bigger.





This is the state of Vermont, And here is a map of the county, or part of the state, where I live. Notice how the top numbers on the scale get smaller and smaller as the area shown on the map gets smaller and smaller.

#### **Distance and Area**



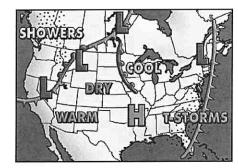
- O How many kilometers does each centimeter represent? Multiply your measurement by that number.
- How far is it from New York to San Francisco?
- Measure the length of the state of Vermont in centimeters on this page. Using the scale on the map, figure out how many kilometers Vermont is long.
- Measure the width of the state. Since the width changes from
   top to bottom, measure in the middle to get an average width. Use the scale to figure out how wide Vermont is.
- Multiply the length times the width. About how big is Vermont in square kilometers?

#### **Types of Maps**

#### Landmarks and Symbols

Maps often show where important objects or things are. A **landmark** is an object that is special, important, or helps people find their way. It can also be something you might want to find if you were using the map. One landmark on my map is the water tower. When I see the water tower, I know I am close to my road. On many city maps, landmarks are important buildings, such as schools, hospitals, and courthouses.

Most important objects are shown using symbols. For instance, my water tower is drawn as a circle with slanted lines across it. On a city map, a hospital might be a blue or red cross. Symbols can also show important areas, events, or things that you can't see. On a historical map, a drawing of an explosion or gun might show where a battle took place. On a weather map, a blue line with triangles represents colder weather moving in. Use the key to help you understand



		100
Н	high pressure	V
L	low pressure	N
1	cold front	B
and a	warm front	
	precipitation	Y

the symbols and

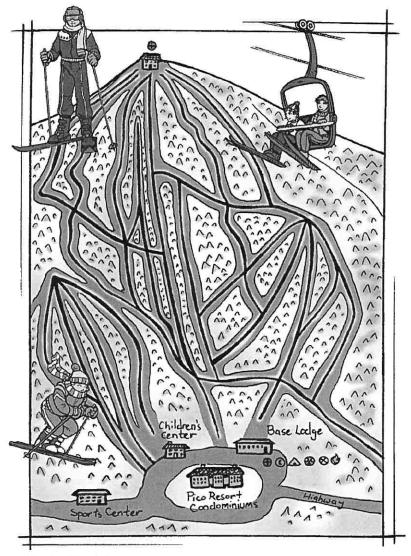
identify the objects.

The information on a map depends on what the map is used for. If you are using a map on a boat trip, then the map needs to show rivers, lakes, and oceans, but it doesn't need to show things on land. If you are using a map on a car trip, then the map needs to show roads, towns, and cities, but it doesn't need to show farms, forests, or hiking trails.

There are three basic kinds of maps: physical, political, and data. Physical maps show natural things, such as rivers, mountains, plants, and weather. Political maps have to do with people. They show roads, cities, buildings, countries, and other human-made things. Some maps show a mix of the two. For example, the **pictorial map**, or map made with pictures instead of symbols, on the next page shows a ski area at the top of a small mountain. The map shows buildings, such as ski lodges, and areas of woods where it is not safe to ski. Both kinds of information, political and physical, are important to skiers.

The third kind of map, a data map, is used for showing information, especially information given in numbers, which is called statistics.

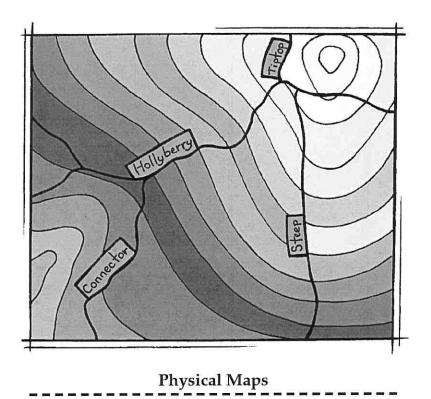
On the next few pages, I will use my map to show you different kinds of maps and how to use them.



Killington/Pico Ski map



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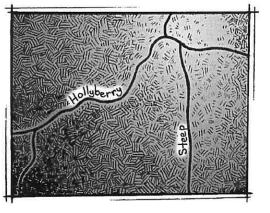
#### Topographic Map

One common physical map is a **topographic map**. It shows **elevation**, or how high or low the land is. Each line is one unit, such as one meter, higher or lower than the one next to it. When the lines are close together, the land is rising or falling steeply. When they are far apart, the land is flat. I turned part of my map into a topographic map that shows you where the land rises and falls, giving you a sense of the shape of the small mountain where my woods are. Topographic maps are good for going out into the wilderness, where there are no roads or signs. Let's say you got lost in the woods near Hunter's Ravine Trail. Using my map, how could you find your way back to Pit Trail? Without a compass or compass rose to tell which way was north, it would be very hard to know where to go with just a trail map. But with a topographic map, you could match the shape of the land to the shape on the map, to get an idea of where you are depending on the direction you are walking.

#### **Relief Map**

Other kinds of maps show elevation. **Relief maps** use colors to show how high or low things are. They usually use light colors to show high areas and dark colors to show low areas. Here, I shaded part of my map to make it a relief map. You probably have seen a relief map of the world

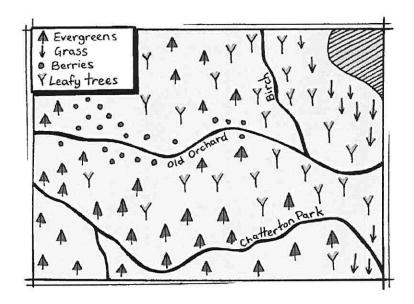
that shows major mountain chains. Other relief maps show imaginary shadows made by mountains and valley walls.

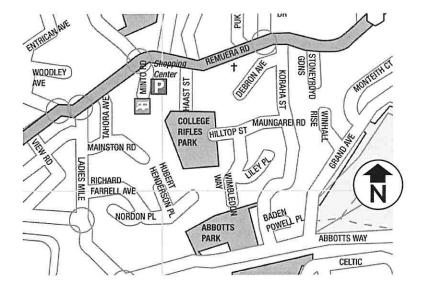


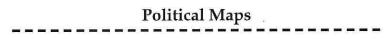
#### Vegetation Map

A vegetation map shows what kinds of plants grow where. It uses different colors or patterns to represent different kinds of plants. I colored my map so that it shows you where there are grass, shrubs and bushes, evergreen trees, blackberries, or trees that lose their leaves, such as maples and birches. You can use the key to tell which pattern is which. Can you use the map below to find the spots along Old Orchard Trail where there are berries?

Other vegetation maps show where crops grow, such as corn or apples. What kind of trees line both sides of Birch Trail?



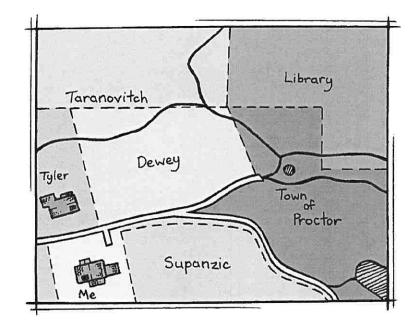




#### Road Map

A road map shows roads and where they go, and it is best for finding your way from one place to another. Here is a road map of part of the city of Auckland, New Zealand. How might you walk from the College Rifles Park to the Abbotts Park? How many times would you turn, and in which direction? You could use this map to help you find your way around if you ever went to Auckland.

My map of the woods is a kind of road map. It shows paths where you can go from one place to another. Use my map to figure out how to get from the water tower to Mr. Taranovitch's field.



#### **Boundary** Map

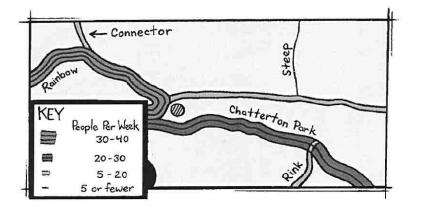
A boundary map shows who controls the land or whom it belongs to. A boundary map of the world shows the countries. A boundary map of the United States shows the individual states or counties. On this page, I made my map into a boundary map. Now it shows who owns the land.

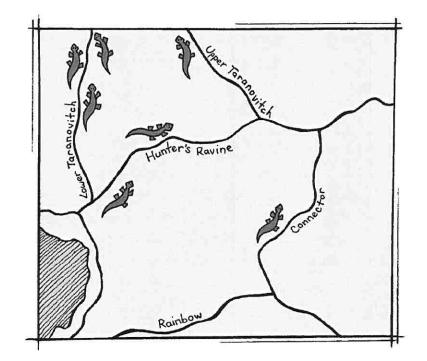
A boundary map helps people know how they can use the land and who might be there. Parts of the woods belong to Mr. Taranovitch, who doesn't like people to go hunting on his land. Hunters could use this boundary map to know where they are not allowed to hunt.

#### Data Maps

A data map is any kind of map that shows information in the form of numbers. You may have seen a data map on the news that showed how people voted in different areas. You may also have seen a data map on the weather report that showed how many centimeters of rain fell in different areas. Data maps can show natural or human information.

On this version of my map, I changed the way I drew the trails to show how many people use each path. Four lines mark trails where 30 to 40 people go each week. One line marks trails where 5 or fewer people go each week. Use the key to see how the other trails are drawn. You could use this data map to estimate which trails have the most erosion, or to plan a walking trip on which you wouldn't run into many other people.





On this version of the map, I used a drawing of a newt to show how many red newts I see in different areas. Each drawing represents five red newts. You could use this map to see if the population of red newts is rising or falling. You could also use it to pick walking trails where you could see many red newts.

Data maps can represent almost any kind of information. Look in newspapers, magazines, and on the Internet to find different kinds of data maps. Remember to look at the key to see what each color or symbol means.

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This backpacker uses a map to find his way around.

### Bon Voyage!

Maps can tell you many things about a place without your ever having to visit it. Some maps help you find your way around, while others tell you what you might see. There are as many kinds of maps as there are places on Earth and things to see. Check out some maps around you. You can plan a wonderful journey, whether it is a real trip or just an adventure in your mind.



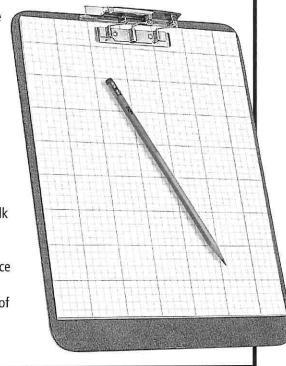
### Make a Map

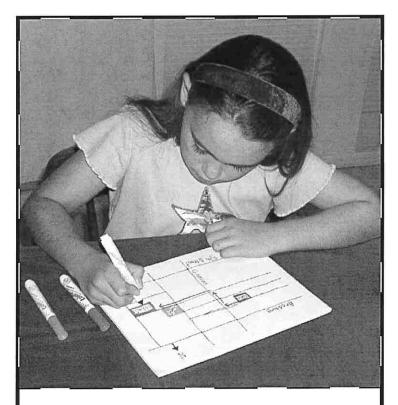
Try to draw a map that shows the route you take from your home to an important place, such as your school, the snack bar, or a friend's home.

What you need: graph paper, a pencil with an eraser, and something to write on.

- O Draw your home. Use a symbol, such as a square, or a picture of your home.
- Begin walking toward your important place. Draw a line away from the picture of your home, going in the same direction you walk.

O Try to estimate distance by counting how many steps or minutes it takes to go down the first street. If it takes twice as many steps or minutes to walk down another street, draw a line that is twice as long. Use another piece of paper if you need to.





- Onvice the kinds of corners you turn. Draw a line that makes the same kind of corner in the same direction.
- Write the name of each street on your line as you walk down it. Draw landmarks, such as a church, a special tree, or a familiar store.
- <sup>(6)</sup> Draw your important place when you reach it.
- Use markers and crayons to color your map and add more details.

Try giving your map to a friend or a family member. Challenge that person to find his or her way to your important place.

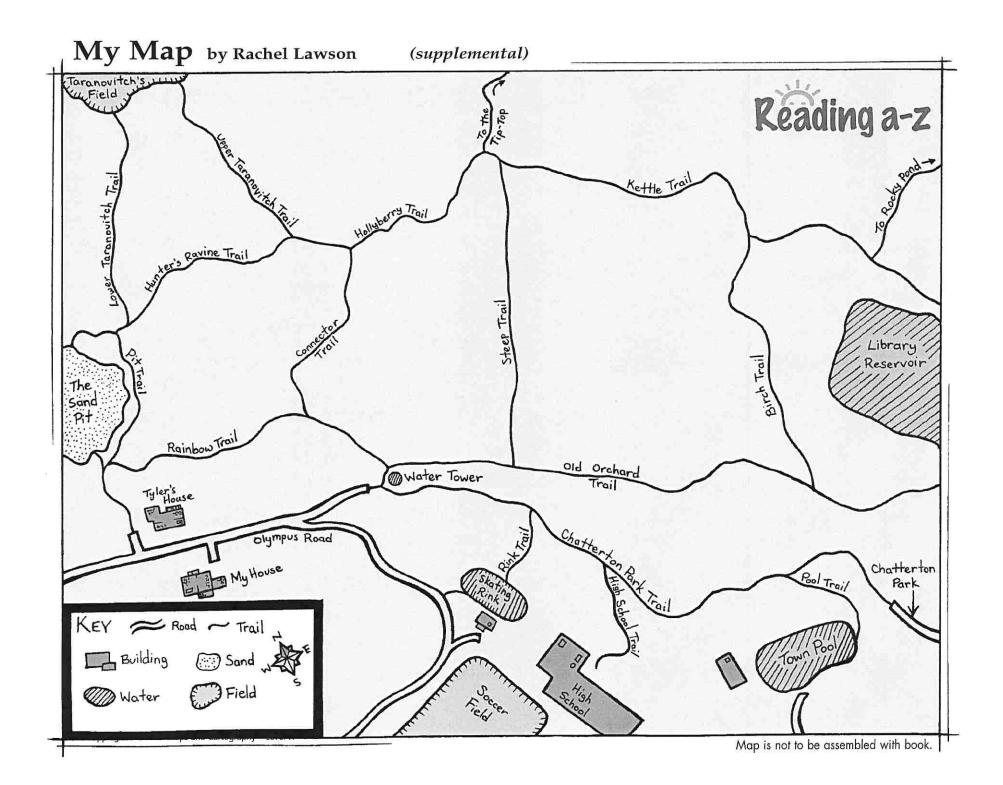
### Glossary

cartographer	a mapmaker (p. 4)
compass rose	a pointed symbol that shows where the directions are on a map (p. 7)
elevation	height of the land (p. 14)
key	the part of the map that explains what the symbols and colors mean (p. 6)
landmark	an object that help you find your way (p. 11)
pictorial map	map with pictures rather than symbols (p. 12)
relief maps	maps that use colors or shades to show elevation (p. 15)
scale	the size of one thing compared to the size of another; on a map, how big the area is compared to the map (p. 8)
surveying	mathematically measuring the distance and angle between objects (p. 5)
topographic map	a map that uses lines to show elevation (p. 14)

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## Water's Part in Photosynthesis

**Photosynthesis** is the process in which plants use water, sunlight, and carbon dioxide  $(CO_2)$  to make food for themselves. Plants, algae, and certain bacteria contain a compound called **chlorophyll**—it is the pigment

that gives plants their green color. This compound is located in the **chloroplast** of plant cells. Chlorophyll absorbs sunlight and uses its energy to make food carbohydrates from  $CO_2$  and water. This food is called **glucose**. In the process of making food, plants give off or release oxygen ( $O_2$ ) to the atmosphere.

#### The equation for the process of photosynthesis is:

#### Sunlight + $6CO_2$ + $12H_2O - > C_6H_{12}O_6 + 6O_2 + 6H_2O$

Humans breathe out  $CO_2$  during respiration, and plants use this in the process of making food for themselves. In turn, plants give off  $O_2$  during this process, and the  $O_2$  is breathed in by humans.

#### Water's Involvement

Water ( $H_2O$ ) enters the plant through its roots via a special plant tissue called **xylem**. The xylem carries the water up to the leaves. The leaves have specialized structures called **stomata** that allow  $CO_2$  to pass into the leaf. A pair of **guard cells** surrounds the stoma (the singular term for stomata). The guard cells control the opening and closing of the stoma. The stomata also allow  $O_2$  to pass out. While these gases are moving in and out of the leaf, a great deal of water is also lost. This loss of water is called transpiration.

**Transpiration** is the process in which water travels from the roots of the plant, through the plant, and to the leaves. Water is lost through the stomata of the leaves. The guard cells contract and expand depending on the circumstances of the plant.

During the night, the stomata close because without the sun, there's no demand for CO<sub>2</sub> for photosynthesis. Transpiration rates vary depending on weather conditions. The more humid it is, the less a plant will transpire. The drier the atmosphere, the greater the transpiration rate will be. It's easier for water to evaporate into drier air than into humid air. Warmer air holds less moisture so the transpiration rate will increase in higher temperatures. When stomata are open, transpiration rates increase; when they are closed, transpiration rates decrease.

Since animals and humans obtain their food by eating plants, photosynthesis is also the source of our lives.

#### Questions

1. Draw a picture on the back of this paper of photosynthesis and label the parts: plant, sunlight,  $CO_2$ ,  $O_2$ , transpiration, xylem, stomata, and guard cell. Use arrows to indicate whether a gas and/or water vapor is entering or leaving the plant leaf.





2,	What are	the ingr	edients u	used to	make g	glucose	for p	lants?
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3. What is the name of the pigment that absorbs sunlight in plant cells?

4. What is the function of xylem?

5. What causes stomata to open?

6. What causes the rate of transpiration to increase in a plant?

7. Fill in the definitions for these vocabulary words.

Vocabulary			
photosynthesis			
chloroplast			
chlorophyll			
glucose			
xylem			
stomata			
guard cells			
transpiration			

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# Overhand Throw Directions: Hang the target on a wall. Throw a ball at the target 10 times, count how many times you hit the target, record your score. Try to beat your score each round. If you don't have a ball, roll up a pair of socks. **ROUND 1** ROUND 3 ROUND 4 **ROUND 2** Underhand Throw

