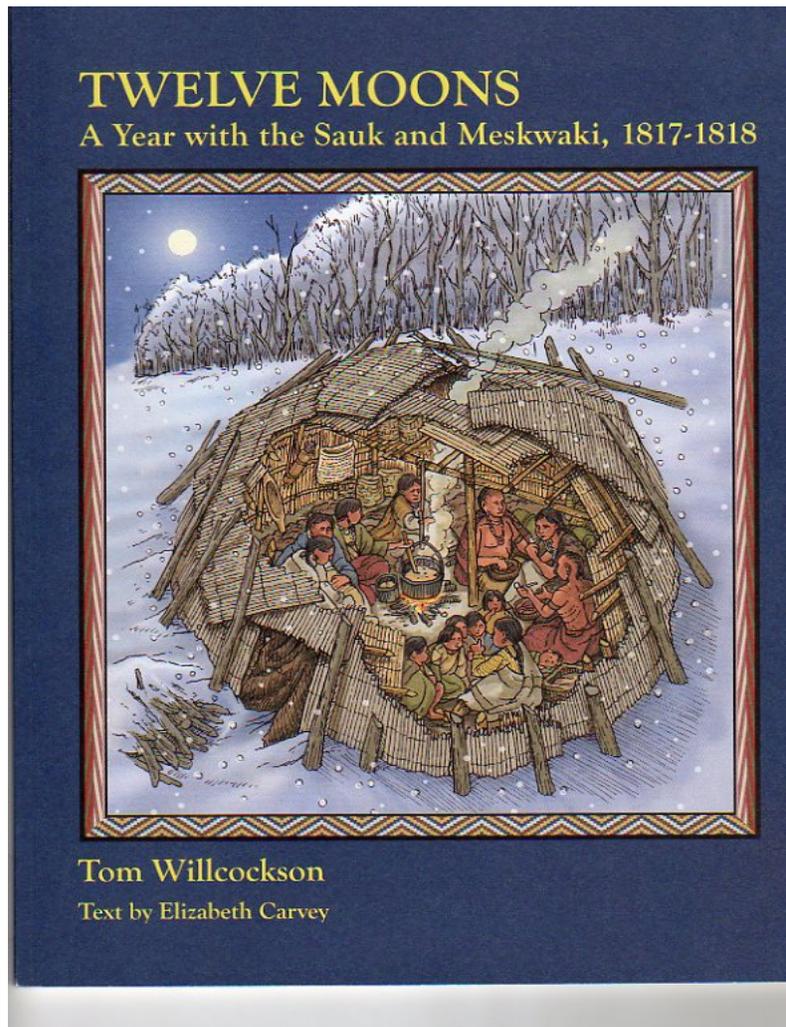


# TWELVE MOONS

*A Year with the Sauk and Meskwaki, 1817-1818*

## Curriculum Guide and Resources



Written by: Kristen Bergren, Terry Bilyeu, Elizabeth Carvey and Marion Lardner

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## Dear Educators and Parents,

The book, *Twelve Moons: A Year with the Sauk and Meskwaki, 1817 - 1818*, allows its readers to travel with the last indigenous two tribes who lived in the Mississippi River Valley as the lunar month dictates the cycle of their lives.

*Twelve Moons* will engage students with its rich text and beautiful illustrations. It is divided into 25 two-page book sections. Each section can be taught individually and in any order. We do suggest you first read the Curriculum Overview and then teach the Introduction before choosing the next book section.

Writing the curriculum for this book is an ongoing project. There will be continuing updates. The book is written at about a 4<sup>th</sup> grade level but the interest level is for grades from kindergarten through high school. The activities are not geared for one specific grade. There are a variety of skill levels for the activities included on each curriculum page.

Tom Willcockson, *Twelve Moons* illustrator, has created many wonderful posters, maps and illustrations to enhance hands-on learning for the book sections. They can be printed on legal size paper.

Please feel free to contact us with questions or share ideas for the curriculum.

We hope you enjoy reading *Twelve Moons* and implementing the curriculum in your classroom or sharing it with your family.

*Twelve Moons* Curriculum Committee,

Kristen Bergren [ishibook@hotmail.com](mailto:ishibook@hotmail.com)

Terry Bilyeu [tnbilyeu@mchsi.com](mailto:tnbilyeu@mchsi.com)

Elizabeth Carvey [haubergmuseum@aol.com](mailto:haubergmuseum@aol.com)

Marion Lardner [marion.lardner@frontier.com](mailto:marion.lardner@frontier.com)



**"The Sauk and Meskwaki had no clocks or calendars.  
They measured time by the phases of the moon."**

**Objective 1:** Describe how the lives and activities of the Sauk and Meskwaki people were dictated by the lunar month.

**Introduction** pp. 4 & 5

**Language Skills**

Concept	Activity	Resources	Enrichment
Each lunar month began with the new moon and ended when that moon had "died."	The Sauk and Meskwaki said the old moon had "died." Use a class or small group discussion to explain what this expression means. Make a moonband to illustrate the concept.	-Book: p. 5 -"Moonband" activity sheet	Explore the web site <a href="http://www.moonconnection.com">www.moonconnection.com</a> . Click on "Moon Phases Calendar" and "Moon Phases" for more information about the phases of the moon.
The Sauk and Meskwaki regulated their activities by the movement of the stars and had names for the major stars and constellations.	1. Read the traditional Meskwaki teaching story about the origin of the Big Dipper: "Why the Oaks and Sumac Redden." 2. Use the "Big Dipper Seasonal Sky Positions" illustration sheet to show how constellations move seasonally through the sky.	-Book: p. 5 1. The story of "Why the Oaks and Sumac Redden" 2. "Big Dipper Seasonal Sky Positions" illustration sheet	1. Research other stories about the origin of the Big Dipper. 2. Create a constellation and a story to go with it. Resource: "Constellation Story" writing sheet
The Sauk and Meskwaki ordered their lives and activities by the never-ending cycle of the seasons.	<i>Twelve Moons</i> is a circle story. Read the first paragraph on page 6 and the last paragraph on page 47. Note that they are the same. Using the "Concept Circle" activity sheet, refer to pages 4 & 5 in the book, listing the different seasonal activities.	-Book: pp. 4 & 5 -"Concept Circle" activity sheet and answer sheet	1. Using the "My Concept Circle" activity sheet, students can record their own circle story. Resource: "My Concept Circle" activity sheet  2. Learn "The Song That Never Ends." <a href="http://www.bussongs.com/songs/this-is-the-song-that-never-ends.php">www.bussongs.com/songs/this-is-the-song-that-never-ends.php</a>



name \_\_\_\_\_ date \_\_\_\_\_

## Moonband

Each lunar month ends on the night when no moon can be seen in the sky. We say this is a new moon, while the Sauk and Meskwaki say the moon has "died". It is a cycle that continually repeats itself like a line that creates a circle. Using the moon phase chart on this page, draw the phases of the moon in the sections on the band. Next cut out the strip. Then glue the last tab under the first tab. You have now made a circle that shows the cycle of the Moon. Wear it as a moonband and explain the phases of the moon to your friends and family!



 new moon								Glue this tab under the first tab.
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## Why the Oaks and Sumacs Redden [A Story of the origin of the Big Dipper]

Once on a time, long ago, when it was winter, so they say, it snowed for the very first time. And while the very first snow lay on the ground, so they say, three men went out early in the morning to hunt for game.

The hunters saw the tracks of a bear in the snow. They saw that the bear had entered into a thick growth of bushes on the side of a hill. One of the hunters followed the bear into the bushes, and the bear began to run away.

The first hunter called out to the others: "He is running to the North," or the direction which is also called "the place where the cold comes from."

The second hunter ran to the North to head off the bear but soon called out to the others: "Now he is running to the West," or the direction which is also called "the place where the sun falls down."

The third hunter ran to the West to head off the bear but soon called out to the others: "Now he is running to the South," or the direction which is also called "the place where the mid-day sun shines."

Around and around ran the bear and the hunters chased him. After a while, one of the hunters, who was coming from behind, looked down. Behold! He saw the Earth below them and that the Earth was green again. For it is really true, so they say, that the bear had led the hunters up into the Sky-land. The hunter who was coming from behind called out to the others: "The bear is leading us into the Sky-land! We must turn back!" But the other hunters did not answer; they just continued to chase the bear around and around the Sky-land.

The hunters finally overtook the bear in the autumn and killed him. After they had killed him, they cut many branches of an oak tree and also many branches from the sumac. They laid the bear on the branches, skinned him and cut up the meat. Then they began to scatter parts of the bear in all directions.

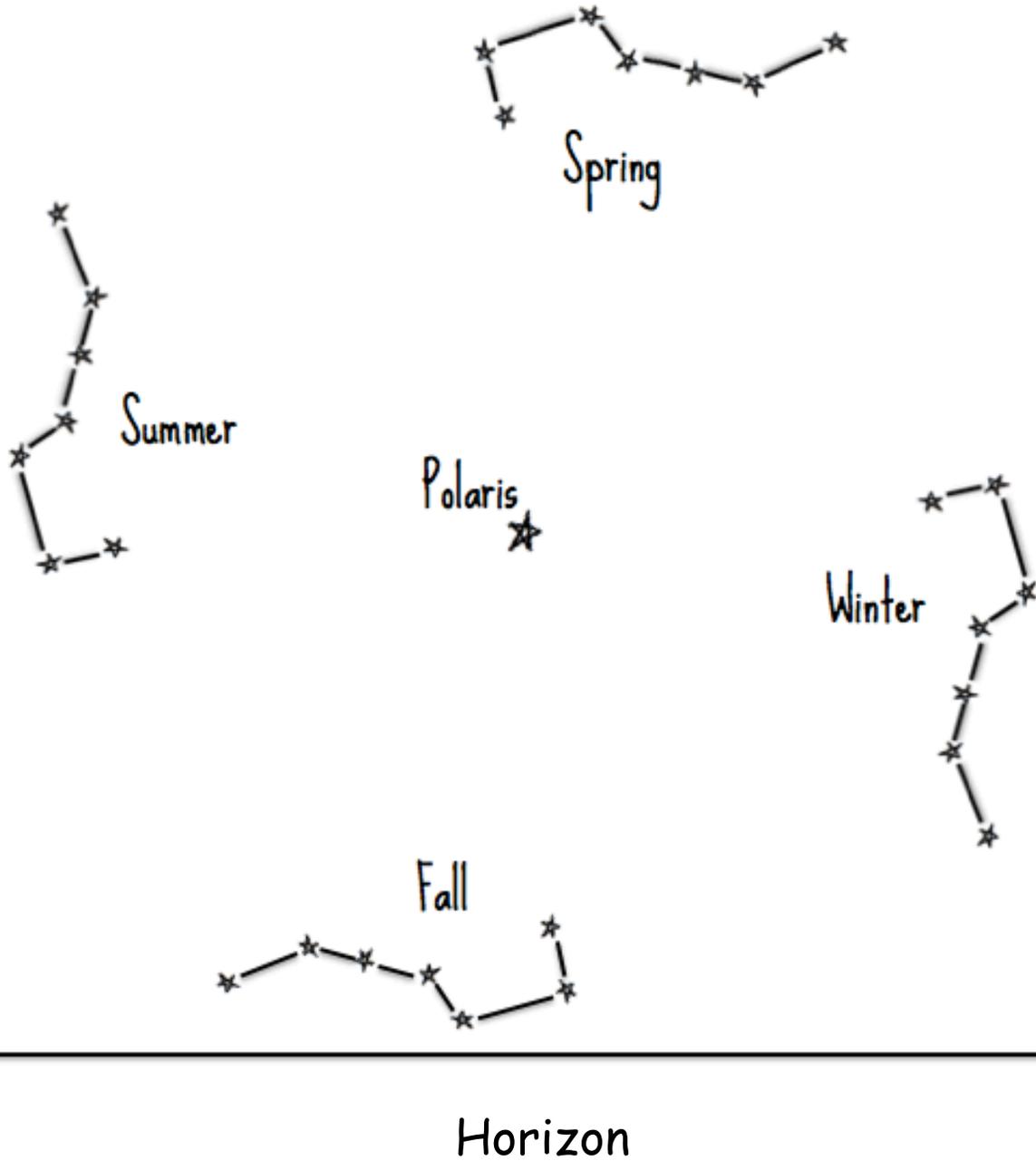
They threw the head and backbone to the East, or the direction which is also called "the place where the dawn comes." In winter, so they say, when dawn is nearly breaking, stars appear in the Eastern sky that are the bear's head and backbone. And behind the bear are three stars that follow him. These are the three hunters, so they say.

And so often as the autumn comes, the leaves of the oaks and sumacs redden because their branches were stained with the blood of the bear.

And that is how that story goes.



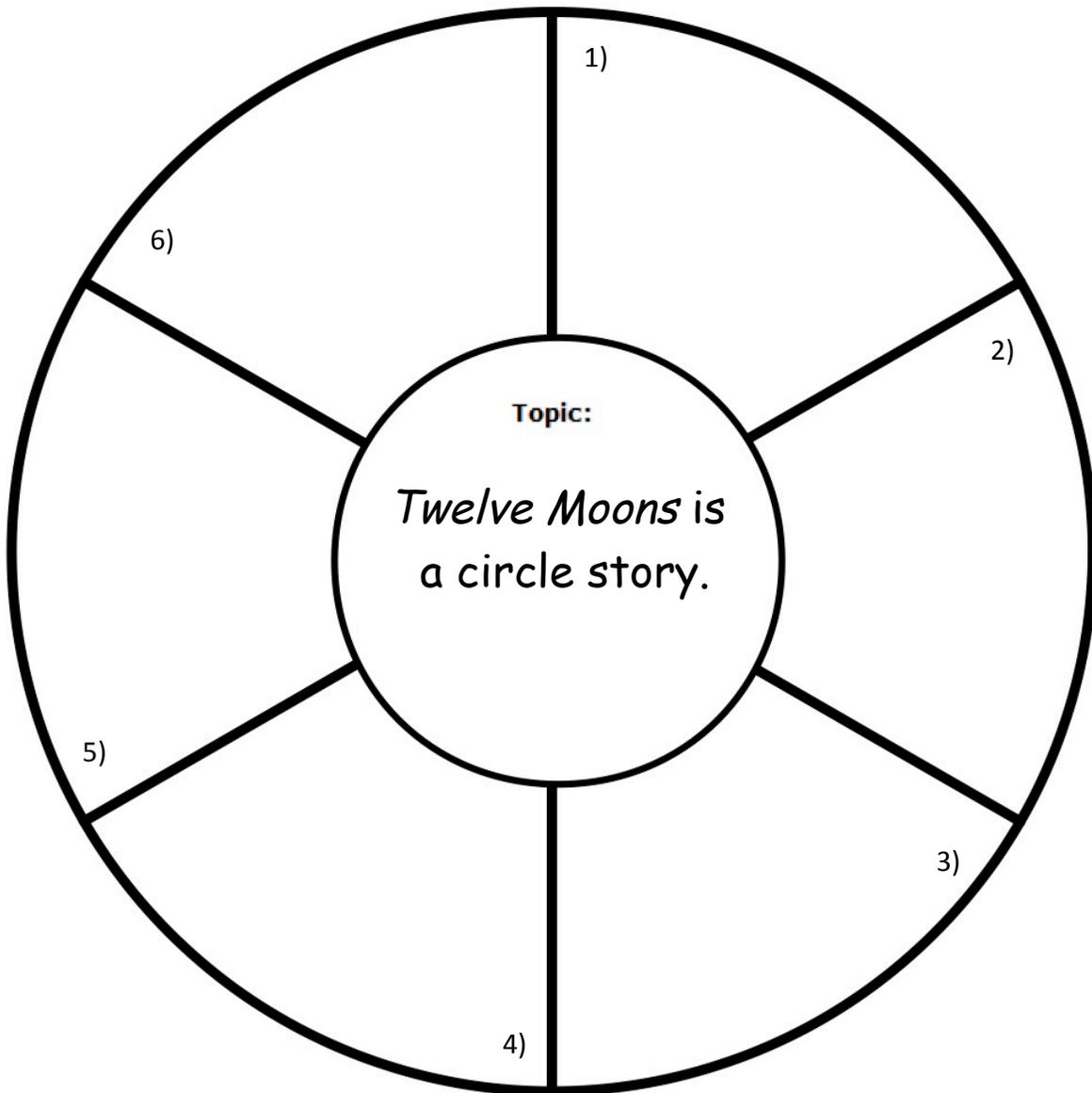
# Big Dipper Seasonal Sky Positions



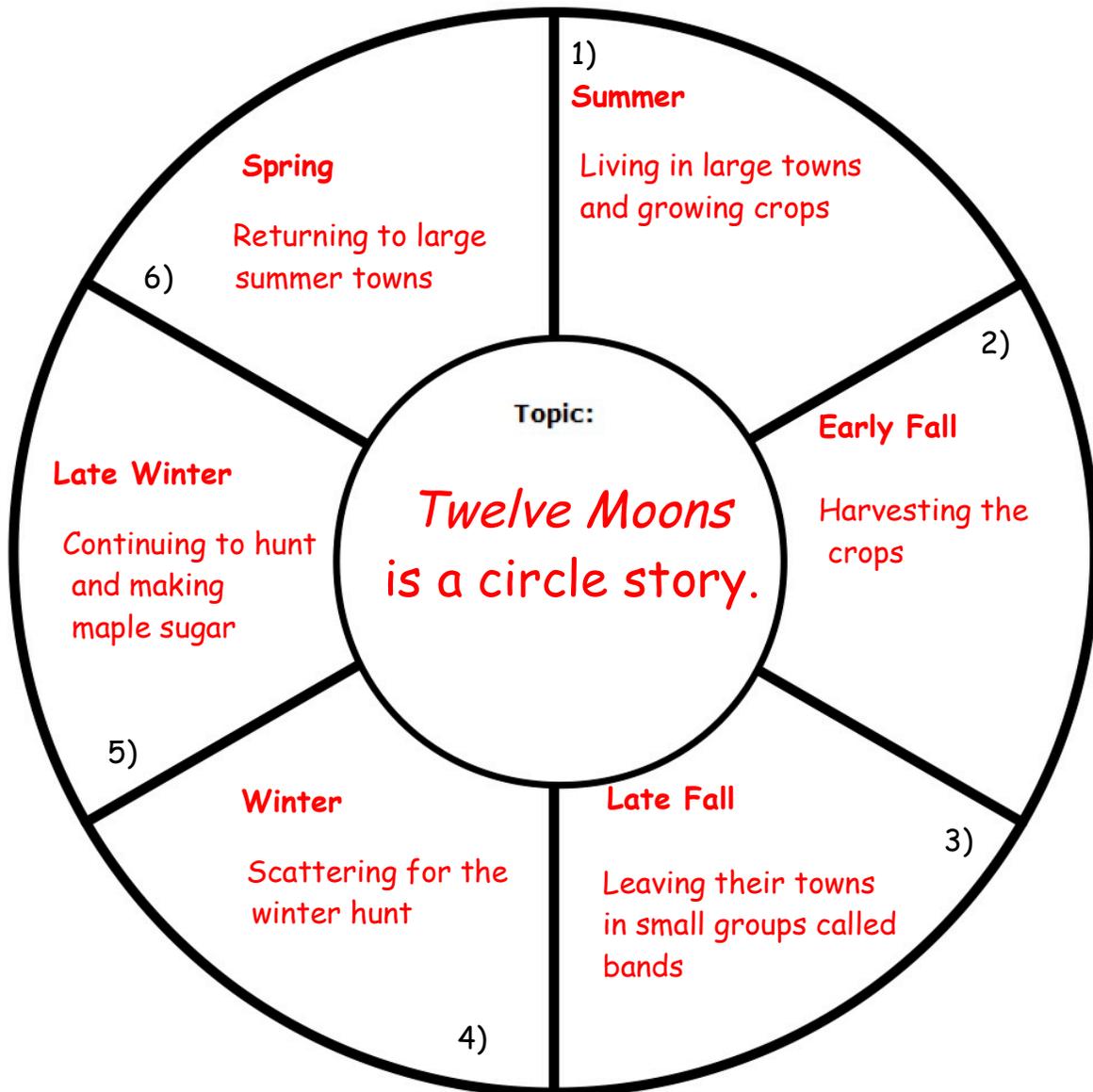


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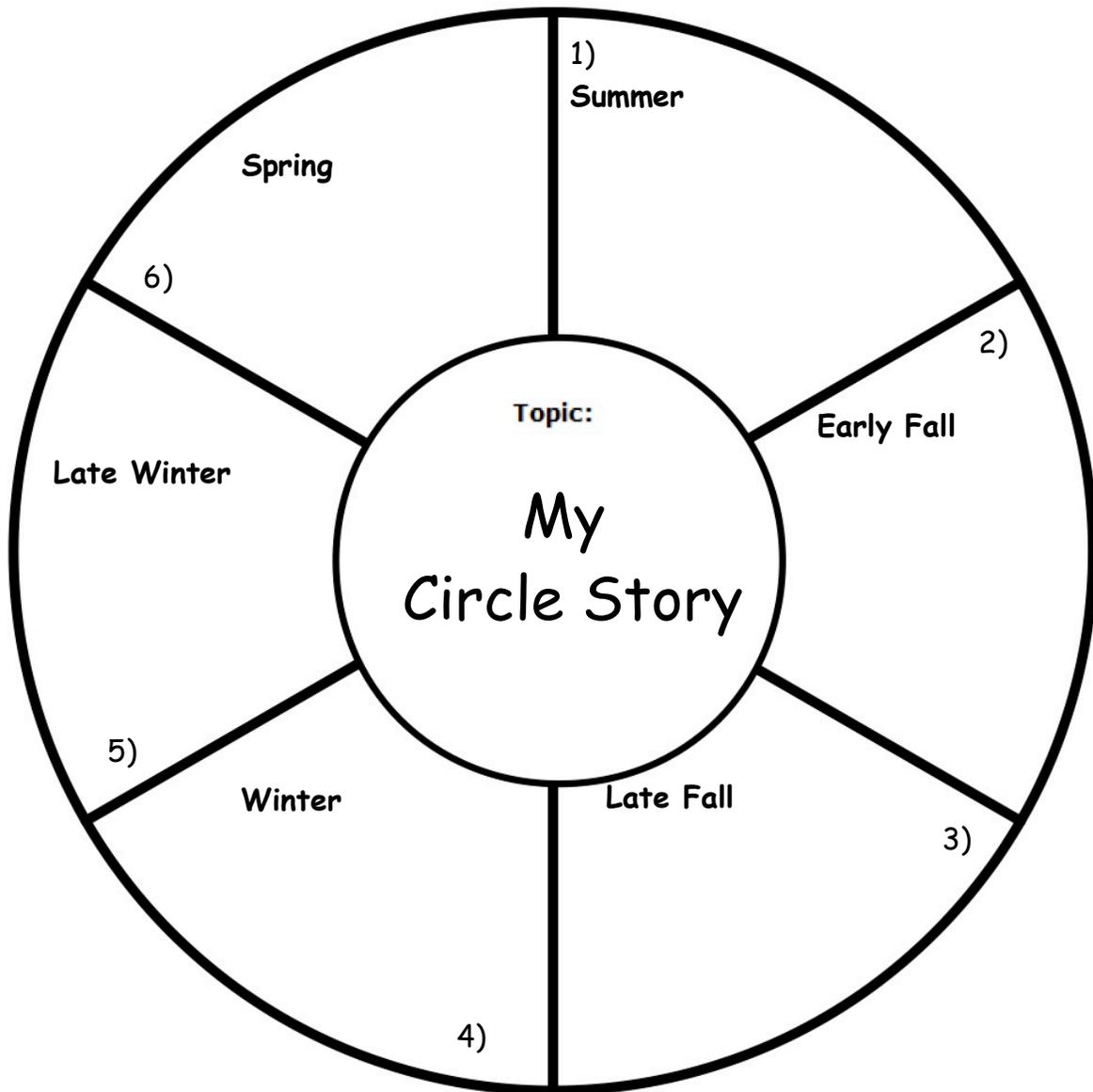
# Concept Circle



# Concept Circle



# My Concept Circle





**“By 1817 the Sauk and Meskwaki had lived in the Mississippi River valley for over 80 years. Did you ever wonder what life was like for the native people who lived here before us?”**

**Objective 2:** Explore the traditional family life and culture of the Sauk and Meskwaki; when possible, compare or contrast it with American family life and culture today.

**Introduction** pp. 4 & 5

**Social Studies**

<b>Concept</b>	<b>Activity</b>	<b>Resources</b>	<b>Enrichment</b>
The Sauk and Meskwaki had no clocks or calendars.	Use the “Measuring Time” activity sheet to compare and contrast methods of measuring time.	-Book: p. 5 -“Measuring Time” activity sheet	1. Research other cultural calendars. (Jewish, Muslim, Chinese, Hindu)  2. Discuss how our lives would be different without clocks and calendars. (birthdays, holidays, school bells) Discuss the advantages of not using clocks and calendars to measure time.



name \_\_\_\_\_ date \_\_\_\_\_

## Measuring Time

Looking at p. 5, list the ways the Sauk and Meskwaki measured time without having clocks and calendars. Then brainstorm other ways they might have measured time and list those. Next, list the ways we measure time in our culture. Then brainstorm other ways we could measure time. Compare the lists and write your observations below. Use the back of the activity sheet if needed to list or write more.

### Sauk and Meskwaki: Measuring Time

### Our Culture: Measuring Time

1)	1)
2)	2)
3)	3)
4)	4)
5)	5)
6)	6)
7)	7)
8)	8)

Introduction/Objective 2/Social Studies

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**"The Sauk and Meskwaki had no clocks or calendars. They measured time by the phases of the moon."**

**Objective 1:** Describe how the lives and activities of the Sauk and Meskwaki people were dictated by the lunar month.

**Introduction, pp. 4 & 5**

**Science**

<b>Concept</b>	<b>Activity</b>	<b>Resources</b>	<b>Enrichment</b>
<p>The Sauk and Meskwaki measured time by the phases of the moon. Each lunar month began with the new moon and ended when that moon had "died."</p>	<ol style="list-style-type: none"> <li>1. Complete the "Phases of the Moon" activity sheet.</li> <li>2. Look at a calendar to count the days between two new moons.</li> </ol>	<ol style="list-style-type: none"> <li>1. "Phases of the Moon" activity sheet</li> <li>2. For a calendar with the moon phases, go to <a href="http://www.moonconnection.com">www.moonconnection.com</a></li> </ol>	<ol style="list-style-type: none"> <li>1. Use Oreo cookies to illustrate the waxing and waning of the Moon. Go to <a href="http://www.sciencebob.com/blog/?p=828">www.sciencebob.com/blog/?p=828</a> for instructions.</li> <li>2. Research the orbits of the Moon around the Earth and the Earth around the Sun and relate that to the phases of the Moon.</li> <li>3. Each phase of the moon has a scientific name. If you were the astronomer naming the phases, what would you call them? Now go to <a href="http://www.moonconnection.com">www.moonconnection.com</a> and click on "Moon Phases Explained" to find the scientific names. On the "Phases of the Moon" activity sheet, write your names and/or the scientific ones.</li> <li>4. Research why the terms "sunrise" and "sunset" are incorrect.</li> <li>5. Are the terms "moonrise" and "moonset" correct? Why or why not?</li> <li>6. Brainstorm moon idioms, ex. "over the moon about you."</li> <li>7. Read <i>Owl Moon</i> by Jane Yolen and other moon-themed books.</li> </ol>



name \_\_\_\_\_ date \_\_\_\_\_

## Phases of the Moon

Using this picture of the moon phases, draw the waxing and waning moon phases in the boxes below.



Waxing

Waning

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Draw on the back of the sheet and/or write the 5 activities the Sauk and Meskwaki planned according to the lunar month and the seasonal positions of the stars found on page 5.

1) \_\_\_\_\_

2) \_\_\_\_\_

3) \_\_\_\_\_

4) \_\_\_\_\_

5) \_\_\_\_\_



**“By 1817 the Sauk and Meskwaki had lived in the Mississippi River valley for over 80 years. Did you ever wonder what life was like for the native people who lived here before us?”**

**Objective 2:** Explore the traditional family life and culture of the Sauk and Meskwaki; when possible, compare or contrast it with American family life and culture today.

**Introduction** pp. 4 & 5

**Math**

<b>Concept</b>	<b>Activity</b>	<b>Resources</b>	<b>Enrichment</b>
The lunar months are the format used for timekeeping in this book.	<p>1. In our culture, we measure the length of the year by the number of days it takes for the Earth to orbit around the Sun. This is called a solar year. The Sauk and Meskwaki measured the length of the year by the lunar months. A lunar year is shorter than a solar year. Using the "Lunar Months and a Solar Year" activity sheet, calculate the difference.</p> <p>2. Use the "Moon Phase Cards" to track the phases of the moon on your classroom calendar. To find the correct moon phase for that day, go to <a href="http://www.moonconnection.com">www.moonconnection.com</a> and click on "Moon Phases Calendar." Have a student shade in the correct moon phase on a card and place it on the classroom calendar.</p>	<p>1. "Lunar Months and a Solar Year" activity sheet</p> <p>2. "Moon Phase Cards"</p>	



name \_\_\_\_\_ date \_\_\_\_\_

## Lunar Months and a Solar Year

The Sauk and Meskwaki measured time by the lunar month, which begins and ends with the new moon. A lunar month is the number of days it takes the Moon to orbit the Earth. In our culture, we measure time by the solar year, which is the number of days it takes for the Earth to orbit the Sun. Using the facts that are listed, answer the question below.

**lunar month = 29.53 days**

**solar year = 365.25 days**

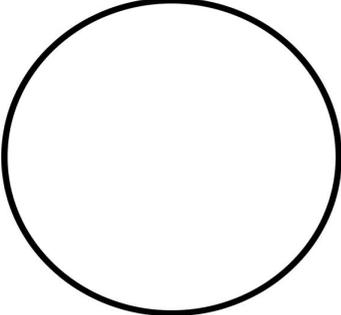
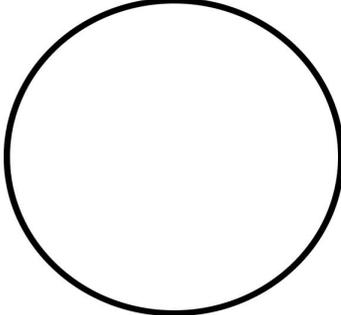
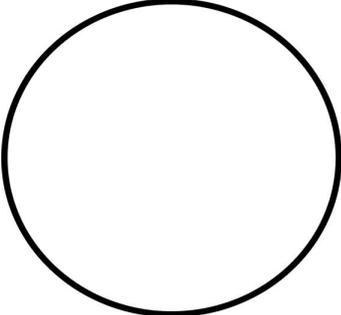
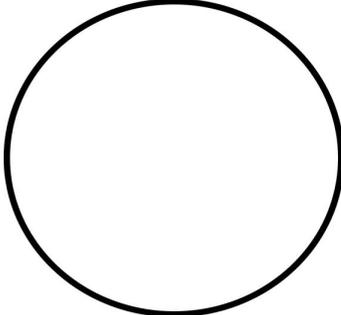
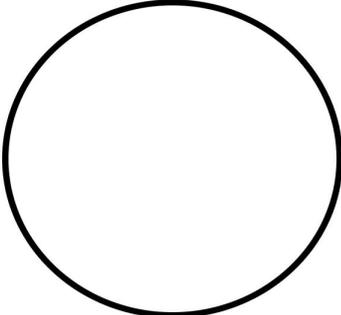
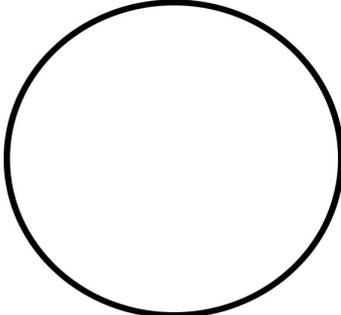
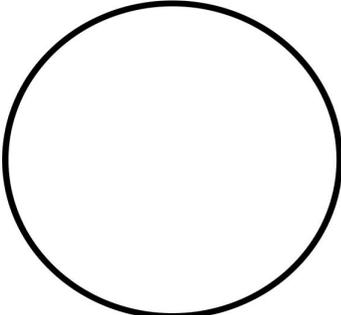
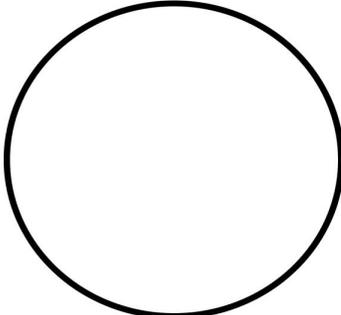
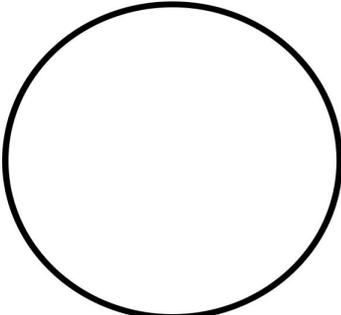
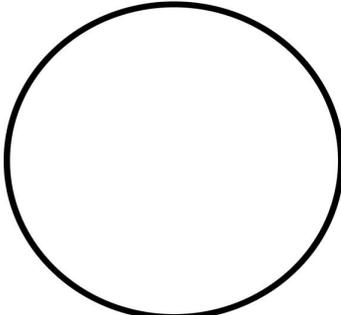
1) Which is longer, a lunar year or a solar year? \_\_\_\_\_

Show your work.

2) Explain the steps you took to solve problem 1.



## Moon Phase Cards



## Introduction pp. 4 & 5 Vocabulary

migrate	<p>To move from one place to another</p> <p>The Sauk and Meskwaki slowly <u>migrated</u> westward.</p>
ally	<p>A person or group that gives help to another person or group</p> <p>The Sauk and Meskwaki became <u>allies</u>.</p>
harvest	<p>The amount of crops that are gathered</p> <p>After the <u>harvest</u> in the fall, the Sauk and Meskwaki left their towns.</p>
cycle	<p>A series of events that occur regularly and lead back to the beginning</p> <p>The different bands returned to their towns to begin the <u>cycle</u> all over again.</p>
regulate	<p>To bring order to activities</p> <p>They also <u>regulated</u> their activities by the movement of the stars.</p>
constellations	<p>The arrangement of certain stars into a pattern</p> <p>The Sauk and Meskwaki had names for the major stars and <u>constellations</u>.</p>
lunar	<p>Of or relating to the Moon</p> <p>The <u>lunar</u> month began with the new moon.</p>
new moon	<p>The phase of the moon when it is not visible</p> <p>Each lunar month began with the <u>new moon</u>.</p>



## Directions For Review Games

### IT TAKES TWO!

*Object: Students will match a sentence with the correct missing words.*

- 1) Print the sheet that has the sentences in **one color**, and the sheet that has two words in a **different color**.
- 2) Cut out all of the cards and give one to each student.
- 3) To pair up, students walk around the classroom with an arm up in the air to high five a friend who has a card of the other color.
- 4) Students stop to greet each other. Ex. Hi Steve! Hi Sue!
- 5) The student holding the card with the sentence reads it aloud to the other student, saying "blank" for the missing words.
- 6) The other student reads aloud the two words on his/her card.
- 7) Students decide together if those are the two missing words from the sentence card.
- 8) If not, they high five again, say good luck and then look for another friend who has a card of the other color.
- 9) If the students agree that the two words complete the sentence, they high five and find a place to sit together until the whole class is finished.
  - hint - Students may sit quietly, looking at *Twelve Moons* or reading until everyone is done.
- 10) When everyone is paired up, students read their *Twelve Moons* fact out loud.

### IT TAKES TWO! CONCENTRATION

*Object: Students will correctly match sentence cards with missing-words cards.*

- 1) Print the sheet that has the sentences in **one color**, and the sheet that has the two words in a **different color**. If possible, use construction paper or cardstock so the words don't show through.
- 2) Cut out the cards on both sheets.
- 3) Several students can play using one set of the game cards.
- 4) Turn all of the cards face down.
- 5) Students take turns turning two cards over and reading them. If they go together, withdraw the cards and take another turn.
- 6) Once all cards are matched, the student with the most cards wins - and will do better on the quiz! 😊

## VOCABULARY CONCENTRATION

**Object:** *Students will match vocabulary-word cards with correct definition cards.*

- 1) Print a set of vocabulary cards on colored paper. If possible, use construction paper or cardstock so the words don't show through.
- 2) Cut out the cards.
- 3) Two or three students can play using one set of cards.
- 4) Turn all the cards face down.
- 5) Students take turns flipping two cards over and reading them. If they go together, withdraw the cards and take another turn.
- 6) Once all cards are matched, the student with the most cards wins! 😊

## VOCABULARY TEACHER-TEACHER-TRADE

**Object:** *Students will take turns quizzing each other about the definitions for the vocabulary words.*

- 1) Print enough vocabulary sheets so you have one card for each student. A word and definition count for one card. It's ok if more than one student has the same word. If possible, print on construction paper or cardstock.
- 2) Cut out the vocabulary word and definition together. It can be left as one long vocabulary card, or it could be folded back and glued together for sturdiness.

Word	Definition
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- 3) Give each student a card.
- 4) To pair up, students walk around the classroom with an arm up in the air to high five a friend.
- 5) Students stop and greet each other. Ex. Hi Steve! Hi Sue!
- 6) Decide ahead of time which student will read first and act as the first teacher. The student who reads first could be the one whose birthday comes first, or it could be whose name comes first alphabetically.
- 7) The first teacher reads the definition. The student guesses the vocabulary word. If the student doesn't know, the teacher can read the sentence below the definition, but leave out the vocabulary word. If the student still doesn't know, the teacher should give the answer.
- 8) Now it is the other student's turn to be teacher! Repeat #7.
- 9) After each student has had a turn being the teacher, they trade cards and pair up with another friend. Repeat!

### **\*Suggestions**

- Write vocabulary words on the board.
- Three Strikes And You're Out! After students have met with 3 friends, which would be 6 words, they can sit down and read *Twelve Moons!*
- This can be adapted for IT TAKES TWO!



# IT TAKES TWO! Introduction

<p>The Sauk and Meskwaki were the last _____ of native people who occupied the 400 miles of the Mississippi River Valley.</p>	<p>The Sauk and Meskwaki moved _____ westward from Canada.</p>
<p>In order to survive, the Sauk and Meskwaki _____.</p>	<p>Together they left their Wisconsin homes and moved to the upper _____ valley.</p>
<p>The Sauk and Meskwaki ordered _____ by the cycle of the seasons.</p>	<p>After _____ in the fall, they left their towns.</p>
<p>In the late winter, the men continued hunting, while the women went to the _____ to make their year's supply of maple sugar.</p>	<p>When the _____ was done, the different bands returned to their towns to begin the cycle over again.</p>
<p>The Sauk and Meskwaki had neither _____ nor _____.</p>	<p>They measured time by the _____ of the _____.</p>
<p>They also regulated their activities by the _____ of the _____ and had names for the major stars and constellations.</p>	<p>The _____ and seasonal positions of the stars told the people when it was time to start their year over again.</p>

two tribes	migrated slowly
became allies	Mississippi River
their lives	the harvest
maple groves	sugaring season
clocks calendars	phases moon
movement stars	lunar month



name \_\_\_\_\_ date \_\_\_\_\_

**Twelve Moons: A Year in the Life of the Sauk and Meskwaki, 1817-1818 Quiz**

**Book Section: Introduction**

**Write 3 facts that you learned about in this section.**

1) \_\_\_\_\_

\_\_\_\_\_

2) \_\_\_\_\_

\_\_\_\_\_

3) \_\_\_\_\_

\_\_\_\_\_

**Illustrate one or more of the facts that you just wrote about. Label 5 important things and/or ideas that are in your picture.**