

BCSCR



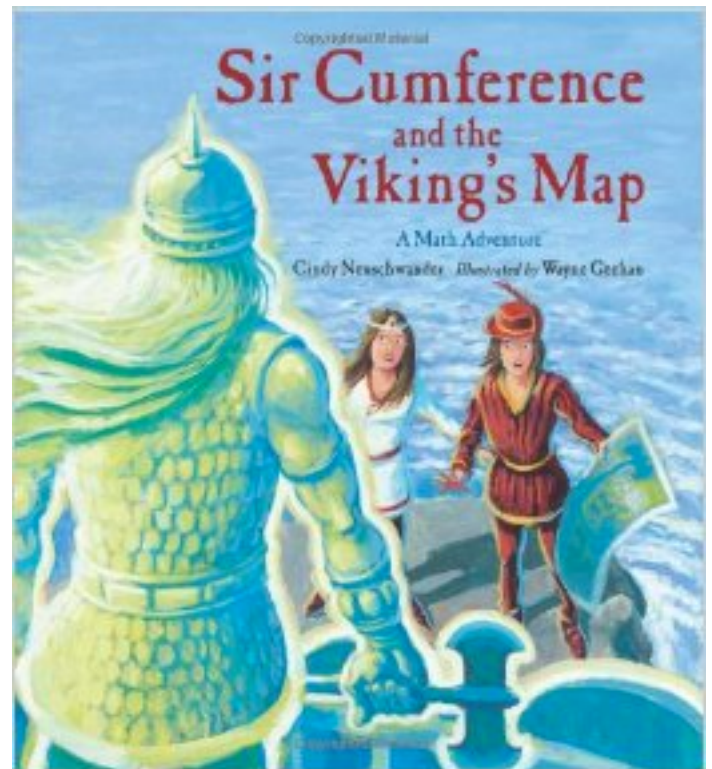
Building Communities that  
Support Children's Reading

Arizona

## Sir Cumference and the Viking's Map

By Cindy Neuschwander

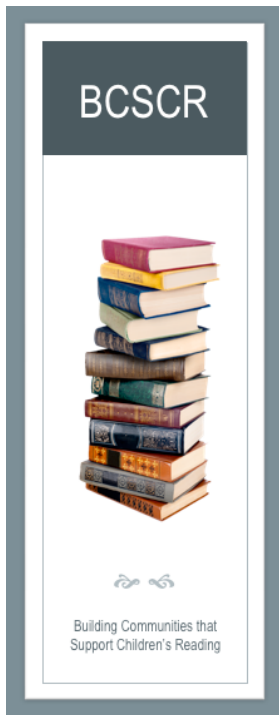
RL 4.1



**6th Grade – Informational Book**

This grant is managed by  
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<http://threeriverseducationfoundation.org>  
505-436-2548

501 Airport Dr., Suite 209  
Farmington, NM 87401



The book sets with the BCSCR program are designed with differentiation in mind. First of all, the fiction and informational books have been paired to compliment each other and chosen for low, average, and high readers that exist in classrooms. Next, the books have been put into two major themes: “Blast into the Past, and Exciting Excursion” to help with thematic units. Finally, the activities are scaffolded and address multiple learning styles and preferences while addressing the standards that each state in the program requires.

Please contact the curriculum specialists that created these units if you have any content questions or comments.

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<b>4th</b>	<b>Blast into the Past - Fiction</b>	<b>Blast into the Past - Informational</b>
3.2	Oh Say, I Can't See	George Washington's Teeth
3.9	The Whipping Boy	Bullies are a Pain in the Brain
5.1	Traitors Gate	Sir Cumference and the Isle of Immetter
<b>5th</b>		
4.5	Number the Stars	Candy Bomber
5.3	Bull Run	You Wouldn't Want to Be a Nurse in the Am. Civil War
5.6	Julie of the Wolves	Alaska
<b>6th</b>		
4.7	Al Capone Does My Shirts	You Wouldn't Want to Be a Chicago Gangster
5.3	Snow Treasure	War Dogs
6.2	Door in the Wall	Castles

<b>4th</b>	<b>Exciting Excursions - Fiction</b>	<b>Exciting Excursions - Informational</b>
3.3	97 Ways to Train a Dragon	Sir Cumference and Great Knight of Angleland
3.9	Because of Winn Dixie	What's for Dinner
4.7	From MUF of Mrs. BEF	Turn of the Century
<b>5th</b>		
4.4	The 13th Floor	Sea Queens
4.9	Jeremy Thatcher, Dragon Hatcher	Sir Cumference and Dragon of Pi
5.3	The Cay	Ouch
<b>6th</b>		
5	Mr. Tuckett	Get the Scoop on Animal Poop
5.3	The True Confessions of CD	26 Women who Changed the World
6.8	The 21 Balloons	Sir Cumference and the Vikings Map



# Contents

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# Synopsis

## Sir Cumference and the Viking's Map

Per and Radius are lost in the medieval countryside when they discover a map decorated with two hand “axes” featuring X and Y coordinates. The map promises to lead them to treasure belonging to Viking Xaxon Yellowbearyd. As Per and Radius follow the map on horseback, they discover additional X and Y coordinate clues left by Xaxon, which readers can help them locate on the large map. Outwitting a gang of bandits, Per and Radius follow the last coordinates to Xaxon’s ghost, who gives them the treasure (in the form of more maps). Neuschwander does an admirable job of injecting humor (namely, some groan-inducing puns) and action (bandits! ghosts!) into this explanation of coordinates and axes, and Geehan’s thickly worked paintings contribute some drama of their own.

## Arizona’s College and Career Ready Standards

These are the main Arizona English Language Arts Standards addressed by the activities in this module.

- 6.RI.1 - Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
- 6.RI.4 - Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings.
- 6.RI.5 - Analyze how a particular sentence, paragraph, chapter, or section fits into the overall structure of a text and contributes to the development of the ideas.
- 6.RI.6 - Determine an author’s point of view or purpose in a text and explain how it is conveyed in the text.
  
- 6.W.1 - Write arguments to support claims with clear reasons and relevant evidence.
- 6.W.2 - Write informative/explanatory texts to examine a topic and convey ideas, concepts, and information through the selection, organization, and analysis of relevant content
- 6.W.3- Write narratives to develop real or imagined experiences or events using effective technique, relevant descriptive details, and well-structured event sequences.
- 6.W.4 - Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
- 6.W.7 - Conduct short research projects to answer a question, drawing on several sources and refocusing the inquiry when appropriate.
- 6.W.9 - Draw evidence from literary or informational texts to support analysis, reflection, and research.

# Vocabulary



## Sir Cumference and the Viking's Map

**Horizontally** - positioned from side to side rather than up and down: parallel to the ground

**Vertically** – positioned up and down rather than from side to side : going straight up

**Musty** - having a bad smell because of wetness, old age, or lack of fresh air

**Knoll** - a small hill

**Legend** - a story from the past that is believed by many people but cannot be proved to be true

**Brambles** - a rough bush or vine that usually has sharp thorns on its branches

**Milestone** - a stone by the side of a road that shows the distance in miles to a specified place; an important point in the progress or development of something: a very important event or advance

**Epilogue**- a final section or speech after the main part of a book, play, or musical composition

**Coordinates** - one of a set of numbers that is used to locate a point on a map, graph, etc.

**Axis** - the imaginary straight line that something (such as the Earth) turns around

**Brigand** - a robber who travels with others in a group

Name: \_\_\_\_\_



# Notepad

## Sir Cumference and the Viking's Map

### Main Ideas

### Details

Characters	
Problems	
Math Concepts	

Epilogue	



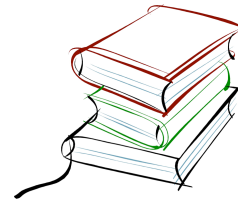
# High Level Questions

## Sir Cumference and the Viking's Map

These questions can be used to differentiate and scaffold instruction as a basis for class discussions, small group work, and/or extended individual writing assignments.

1. What relationships do you see between the characters' names and math terms?
2. Defend your opinion on whether or not there are ghosts such as Xaxon Yellowbearyd.
3. Elaborate on the reason Per said, "And used some sharp thinking to get a handle on our location"?
4. What were Per and Radius's motive for swimming to the island?
5. What were some of the problem solving strategies Radius and Per used when they were lost?
6. Imagine you are one of Barnaby's gang members. Describe what your life is like.
7. What is your favorite illustration and why?
8. Describe a situation when you were lost or have had to use a map?
9. Look at the epilogue. What is one thing you understand, and one thing you haven't learned yet?
10. What emotions do Radius and Per exhibit throughout the book?





# Using Choice Boards

Choice boards give students the opportunity to participate in multiple tasks that allow them to practice skills they've learned in class or to demonstrate and extend their understanding of concepts. From the board, students either choose or are assigned tasks to complete. Individual tasks address the grade level specific Arizona Standards and also learning style modalities.

To scaffold the activities for struggling readers, teachers can modify the tasks using the blank template provided or give more details for performance criteria. Some teachers like to assign point values for the different tasks.

In order to support teachers, the choice boards developed for BSCBR are coded for specific Arizona Reading Standards for Information.



# Choice Board

## Sir Cumference and the Viking's Map

<p>Design and construct a board game using information from the book and play it with others.</p> <p>6.RI.1</p>	<p>Make a poster showing different examples of using coordinate geometry.</p> <p>6.RI.5</p>	<p>Create 10 questions Sir Cumference and Lady Di would ask Per and Radius about their adventure.</p> <p>6.RI.6</p>
<p>Pantomime different scenes inferring Radius and Per's emotions during their adventure.</p> <p>6.RI.1</p>	<p>On a coordinate grid, draw the path that Per and Radius take adding your own details as needed.</p> <p>6.RI.5</p>	<p>Draw your own map similar to the one on page 11, showing your classroom in the middle.</p> <p>6.RI.6</p>
<p>Fill in the "It's All in a Name" table explaining the relationship between characters and mathematics.</p> <p>6.RI.1</p>	<p>Discuss in a paragraph how the Epilogue contributes to the book.</p> <p>6.RI.5</p>	<p>With a partner, create and perform a conversation between Radius and Per.</p> <p>6.RI.6</p>



# It's all in a Name

## Sir Cumference and the Viking's Map

Character	Role in Story	Relationship to Math

# Choice Board

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# Using a RAFT Matrix

A RAFT matrix enhances students' comprehension of novels they're reading and information they're learning. It also provides a fun way to encourage student writing. RAFT is an acronym for *role*, *audience*, *format*, and *topic*:

- **Role.** The role is the person or people the student becomes for this project. Sometimes students take on the role of a book character, historical figure, or contemporary personality, such as Peyton Manning, and at other times, they are themselves.
- **Audience.** The audience is the person or people who will read or view this project. They may include students, teachers, parents, or community members, as well as simulated audiences, such as book characters and historical personalities.
- **Format.** The format is the genre or activity that students create. It might be a letter, brochure, cartoon, journal, poster, essay, newspaper article, speech, or digital scrapbook.
- **Topic.** The topic pertains to the book. It may be an issue related to the book, an essential question, or something of personal interest.

RAFT is an effective way to differentiate instruction by providing tiered activities. The BSCSR RAFT matrices are scaffolded and can be adjusted according to students' achievement levels, English proficiency, and interests.



# RAFT Matrix

## Sir Cumference and the Viking's Map

Role	Audience	Format	Topic
Barnaby	Gang	Instructions	How to be a good robber
You	Your peers	Web page	All about coordinates
Horizontal	Vertical	Song	How we work together
Xanon Yellowbearyd	Per, Radius & Barnaby's band	Bubble conversations to accompany illustrations on page 26-27	The Hidden Story



# RAFT Matrix Rubric

**STUDENT NAME:** \_\_\_\_\_ **NOVEL:** \_\_\_\_\_

**Accuracy** 5 4 3 2 1  
Information is accurate and supported with specific details from the novel.

Comments:

**Role** 5 4 3 2 1  
The writing is credible in the role assigned.

Comments:

**Format** 5 4 3 2 1  
The proper format was used.

Comments:

**Conventions** 5 4 3 2 1  
The writing had no errors in grammar, punctuation, capitalization, or spelling.

Comments:

**Creativity** 5 4 3 2 1  
Writing shows imagination and originality.

Comments:

Assessment Guide  
5 = Above and Beyond  
4 = Meeting Standard  
3 = Working to Standard  
2 = Developing  
1 = Incomplete

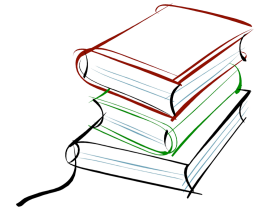


# RAFT Matrix

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Role	Audience	Format	Topic





# College & Career Readiness

## Sir Cumference and the Viking's Map

College and career readiness refers to the content knowledge, skills, and habits that students must possess to be successful in postsecondary education or training that leads to a sustaining career. The extensions and enrichment topics in this section compliment the topic of this book and provides educators choices of technology-based career information and a range of extracurricular and enrichment opportunities to nurture interests and a sense of place in our world.

### **Kid friendly writing rubrics and checklists Grades 3-6**

<http://allwritewithme.com/for-teachers/kid-friendly-writing-rubrics-checklists/>

### **Background on Mathematics**

<http://www.math-exercises-for-kids.com/>

<http://www.coolmath4kids.com/>

### **Careers in Mathematics**

<http://kids.usa.gov/teens/jobs/a-z-list/index.shtml>

<http://www.coolmath.com/careers>

### **Video**

<https://www.youtube.com/watch?v=72sSvz8wTj4>

[https://www.youtube.com/results?search\\_query=video+on+mathematics+for+kids](https://www.youtube.com/results?search_query=video+on+mathematics+for+kids)

[http://www.dailymotion.com/video/xxhuof\\_kid-s-animated-history-with-pipo-the-vikings\\_lifestyle](http://www.dailymotion.com/video/xxhuof_kid-s-animated-history-with-pipo-the-vikings_lifestyle)

# Learn About Mathematicians

## Summary

Quick Facts: Mathematicians	
<a href="#">2012 Median Pay</a>	\$101,360 per year \$48.73 per hour
<a href="#">Entry-Level Education</a>	Master's degree
<a href="#">Work Experience in a Related Occupation</a>	None
<a href="#">On-the-job Training</a>	None
<a href="#">Number of Jobs, 2012</a>	3,500
<a href="#">Job Outlook, 2012-22</a>	23% (Much faster than average)
<a href="#">Employment Change, 2012-22</a>	800

### ***What Mathematicians Do***

Mathematicians use advanced mathematics to develop and understand mathematical principles, analyze data, and solve real-world problems.

### ***Work Environment***

Mathematicians work in the federal government and in private science and engineering research companies. They may work on teams with engineers, scientists, and other professionals.

### ***How to Become a Mathematician***

Mathematicians typically need a master's degree in mathematics. However, there are some positions available for those with a bachelor's degree.

### ***Pay***

The median annual wage for mathematicians was \$101,360 in May 2012.

### ***Job Outlook***

Employment of mathematicians is projected to grow 23 percent from 2012 to 2022, much faster than the average for all occupations. Businesses will need mathematicians to analyze the increasing volume of digital and electronic data.

# What Mathematicians Do

## Duties

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Mathematicians typically do the following:

- Expand knowledge in mathematical areas, such as algebra or geometry, by developing new rules, theories, and concepts
- Use mathematical formulas and models to prove or disprove theories
- Apply mathematical theories and techniques to solve practical problems in business, engineering, the sciences, or other fields
- Develop mathematical or statistical models to analyze data
- Interpret data and report conclusions from their analyses
- Use data analysis to support and improve business decisions
- Read professional journals, talk with other mathematicians, and attend professional conferences to maintain knowledge of current trends

## What Do Engineers Do?

Engineers are creative problem-solvers who aim to improve the world, increase productivity, and help people live better lives. They apply math and science principles to design everything from 3-D televisions to bionic body parts to hybrid cars. Just imagine how many engineers worked to improve airplanes so that they can carry up to 800 people—or how many engineers created the Kingda Ka roller coaster that travels at 128 miles per hour! Engineers not only work on exciting projects, but are also part of a growing field with above-average salaries. Imagine Engineering gives you an overview of some of the common types of engineers and their job duties—but this is just the beginning.

# Where in the World?



# Research Task Rubric

Construct Measured	Score Point 3	Score Point 2	Score Point 1	Score Point 0
<b>Reading Comprehension of Key Ideas and Details</b>	The student response demonstrates <b>full comprehension</b> of ideas stated explicitly and inferentially by providing an <b>accurate</b> analysis and supporting the analysis with <b>effective</b> textual evidence.	The student response demonstrates <b>comprehension</b> of ideas stated explicitly and/or inferentially by providing a <b>mostly accurate</b> analysis and supporting the analysis with <b>adequate</b> textual evidence.	The student response demonstrates <b>limited comprehension</b> of ideas by providing a <b>minimally accurate</b> analysis and supporting the analysis with <b>limited</b> textual evidence.	The student response demonstrates <b>no comprehension</b> of ideas by providing <b>inaccurate or no</b> analysis and <b>little to no</b> textual evidence.
<b>Writing Written Expression</b>	<p>The student response</p> <ul style="list-style-type: none"> <li>addresses the prompt and provides <b>effective</b> development of the topic that is <b>consistently appropriate</b> to the task by using <b>clear</b> reasoning and <b>relevant, text-based</b> evidence;</li> <li>demonstrates <b>effective</b> coherence, clarity, and cohesion appropriate to the task;</li> <li>uses language <b>effectively</b> to clarify ideas, attending to the norms and conventions of the discipline.</li> </ul>	<p>The student response</p> <ul style="list-style-type: none"> <li>addresses the prompt and provides <b>some</b> development of the topic that is <b>generally appropriate</b> to the task by using reasoning and <b>relevant, text-based</b> evidence;</li> <li>demonstrates coherence, clarity, and cohesion appropriate to the task;</li> <li>uses language to clarify ideas, attending to the norms and conventions of the discipline.</li> </ul>	<p>The student response</p> <ul style="list-style-type: none"> <li>addresses the prompt and provides <b>minimal</b> development of the topic that is <b>limited in its appropriateness</b> to the task by using <b>limited</b> reasoning and <b>text-based</b> evidence; or</li> <li>is a developed, text-based response with <b>little or no awareness</b> of the prompt;</li> <li>demonstrates <b>limited</b> coherence, clarity, and/or cohesion appropriate to the task;</li> <li>uses language that demonstrates <b>limited</b> awareness of the norms of the discipline.</li> </ul>	<p>The student response</p> <ul style="list-style-type: none"> <li>is <b>undeveloped</b> and/or <b>inappropriate</b> to the task;</li> <li><b>lacks</b> coherence, clarity, and cohesion;</li> <li>uses language that demonstrates <b>no clear awareness</b> of the norms of the discipline.</li> </ul>
<b>Writing Knowledge of Language and Conventions</b>	The student response to the prompt demonstrates <b>full command</b> of the conventions of standard English at an appropriate level of complexity. There may be a <b>few minor errors</b> in mechanics, grammar, and usage, but <b>meaning is clear</b> .	The student response to the prompt demonstrates <b>some command</b> of the conventions of standard English at an appropriate level of complexity. There <b>may</b> be errors in mechanics, grammar, and usage that <b>occasionally impede understanding</b> , but the <b>meaning is generally clear</b> .	The student response to the prompt demonstrates <b>limited command</b> of the conventions of standard English at an appropriate level of complexity. There <b>may</b> be errors in mechanics, grammar, and usage that <b>often impede understanding</b> .	The student response to the prompt demonstrates <b>no command</b> of the conventions of standard English. <b>Frequent and varied errors</b> in mechanics, grammar, and usage <b>impede understanding</b> .

# Narrative Task Rubric

Construct Measured	Score Point 3	Score Point 2	Score Point 1	Score Point 0
<b>Writing Written Expression</b>	<p>The student response</p> <ul style="list-style-type: none"> <li>• <b>is effectively</b> developed with narrative elements and is <b>consistently appropriate</b> to the task;</li> <li>• demonstrates <b>effective</b> coherence, clarity, and cohesion appropriate to the task;</li> <li>• uses language <b>effectively</b> to clarify ideas, attending to the norms and conventions of the discipline.</li> </ul>	<p>The student response</p> <ul style="list-style-type: none"> <li>• is developed with <b>some</b> narrative elements and is <b>generally appropriate</b> to the task;</li> <li>• demonstrates coherence, clarity, and cohesion appropriate to the task;</li> <li>• uses language to clarify ideas, attending to the norms and conventions of the discipline.</li> </ul>	<p>The student response</p> <ul style="list-style-type: none"> <li>• is <b>minimally</b> developed with <b>few</b> narrative elements and is <b>limited in its appropriateness</b> to the task;</li> <li>• demonstrates <b>limited</b> coherence, clarity, and/or cohesion appropriate to the task;</li> <li>• uses language that demonstrates <b>limited</b> awareness of the norms of the discipline.</li> </ul>	<p>The student response</p> <ul style="list-style-type: none"> <li>• is <b>undeveloped</b> and/or <b>inappropriate</b> to the task;</li> <li>• <b>lacks</b> coherence, clarity, and cohesion;</li> <li>• use of language demonstrates <b>no clear awareness</b> of the norms of the discipline.</li> </ul>
<b>Writing Knowledge of Language and Conventions</b>	<p>The student response to the prompt demonstrates <b>full command</b> of the conventions of standard English at an appropriate level of complexity. There may be a <b>few minor errors</b> in mechanics, grammar, and usage, but <b>meaning is clear</b>.</p>	<p>The student response to the prompt demonstrates <b>some command</b> of the conventions of standard English at an appropriate level of complexity. There <b>may</b> be errors in mechanics, grammar, and usage that <b>occasionally impede understanding</b>, but the <b>meaning is generally clear</b>.</p>	<p>The student response to the prompt demonstrates <b>limited command</b> of the conventions of standard English at an appropriate level of complexity. There <b>may</b> be errors in mechanics, grammar, and usage that <b>often impede understanding</b>.</p>	<p>The student response to the prompt demonstrates <b>no command</b> of the conventions of standard English. <b>Frequent and varied errors</b> in mechanics, grammar, and usage <b>impede understanding</b>.</p>