BCSCR

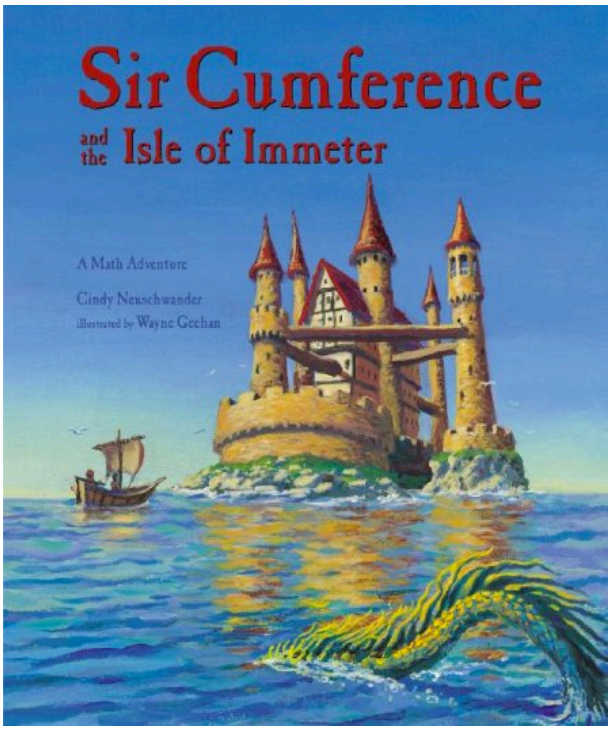
Building Communities that Support Children's Reading

Texas

Sir Cumference and the Isle of Immeter

By Cindy Neuschwander

RL 4.4



4th Grade – Informational Book

This grant is managed by
The Three Rivers Education Foundation
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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4th	Blast into the Past - Fiction	Blast into the Past - Informational
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
5th		
4.5	Number the Stars	Candy Bomber
5.3	Bull Run	You Wouldn't Want to Be a Nurse in the ……
5.6	Julie of the Wolves	Alaska
6th		
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

4th	Exciting Excursions - Fiction	Exciting Excursions - Informational
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
5th		
4.4	The 13th Floor	Sea Queens
4.9	Jeremy Thatcher, Dragon Hatcher	Sir Cumference and Dragon of Pi
5.3	The Cay	Ouch
6th		
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

Synopsis

Sir Cumference and the Isle of Immeter

When young Per visits her uncle Sir Cumference and his family, she learns how to play the game, "Inners and Edges." After she finds a clue linking the game to the mysterious castle on the island of Immeter, she must figure out how to find the perimeter and area of a circle to unlock the island's secret.

Math skills taught include finding the area and perimeter of a rectangle and a circle. Introduces an underlying concept of calculus -- using straight lines to measure curves.

Vocabulary

Sir Cumference and the Isle of Immeter

Pealed - to strip (something) of its skin, rind, bark, etc.

Myth - an idea or story that is believed by many people but that is not true; a story that was told in an ancient culture to explain a practice, belief, or natural occurrence

Rumbled - to make a low, heavy, continuous sound or series of sounds; to move along with a low, heavy, continuous sound

Gazing - to look at someone or something in a steady way and usually for a long time

Reside - to live in a particular place; to exist or be present

Curtsied - a formal way of greeting an important person (such as a king or queen) in which a woman shows respect by placing one foot slightly behind the other and bending her knees

Rearrange - to change the position or order of (things)

Segment - one of the parts into which something can be divided; a part of a circle formed by drawing a straight line between two points on the circle

Circumference - the length of a line that goes around something or that makes a circle or other round shape; the outer edge of a shape or area

Radius - a straight line from the center of a circle or sphere to any point on the outer edge

Erupted - to send out rocks, ash, lava, etc., in a sudden explosion

Name:_____

Notepad

Sir Cumference and the Isle of Immeter

Main Ideas	Details
Characters	
Problems	

Math Concepts	
Endnote	

High Level Questions

Sir Cumference and the Isle of Immeter

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. What motive does Per have for exploring the Isle of Immeter?

3. Why do you think myths about sea serpents scared people in the Middle Ages?

4. The inner and the outers are the same. What other characteristic can you conclude about the entrance door on the Isle of Immeter?

5. What were some of the problem solving strategies Per and Radius used in the round room?

6. Imagine you were Per. If someone asked you how you became owner of the island, what would you say?

7. What is your favorite illustration and why?

8. What questions would you ask Per if you met her?

9. What games have you played that are challenging? What makes a game challenging?

10. Look at the endnote. What is one thing you understand, and one thing you haven't learned yet?

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 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.

Choice Board

Sir Cumference and the Isle of Immeter

Create an 8 panel storyboard of major events in the book	Draw and label a diagram of the characters in the book and their relationships	Create and label 3 models of area and perimeter using graph paper.
Write a newspaper article about Per's accomplishments in the book	Fill in the "It's All in a Name" table explaining the relationship between characters and mathematics.	Go on a math hunt and take pictures of objects in your environment that you could use to show area and perimeter
With others, pantomime a scene from the book and see if others can guess what it is	With a partner, make a short movie explaining the concept of Area and perimeter for another 4^{th} grader	Draw a poster showing how Per and Radius found the area of a circle

It's all in a Name

Sir Cumference and the Isle of Immeter

Character	Role in Story	Relationship to Math

Choice Board

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 Isle of Immeter

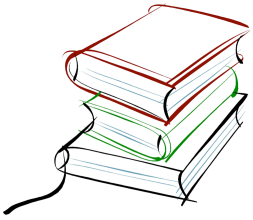
Role	Audience	Format	Topic
Yourself	Book's Author	3 more rhyming couplets	Continue the couplet on page 5
Countess Areana	Per	Another locket note	Why she left the Isle of Immeter
The Jester	People in the castle	Jokes	Math
Palimpsest, the sea serpent	Countess Areana	Conversation	How I will protect your island

RAFT Matrix Rubric

STUDENT NAME:_____ **NOVEL:**_____

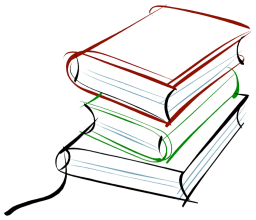
Accuracy Information is accurate and supported with specific details from the novel. Comments:	5	4	3	2	1
Role The writing is credible in the role assigned. Comments:	5	4	3	2	1
Format The proper format was used. Comments:	5	4	3	2	1
Conventions The writing had no errors in grammar, punctuation, capitalization, or spelling. Comments:	5	4	3	2	1
Creativity Writing shows imagination and originality. Comments:	5	4	3	2	1

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



RAFT Matrix

Role	Audience	Format	Topic



College & Career Readiness

Sir Cumference and the Isle of Immeter

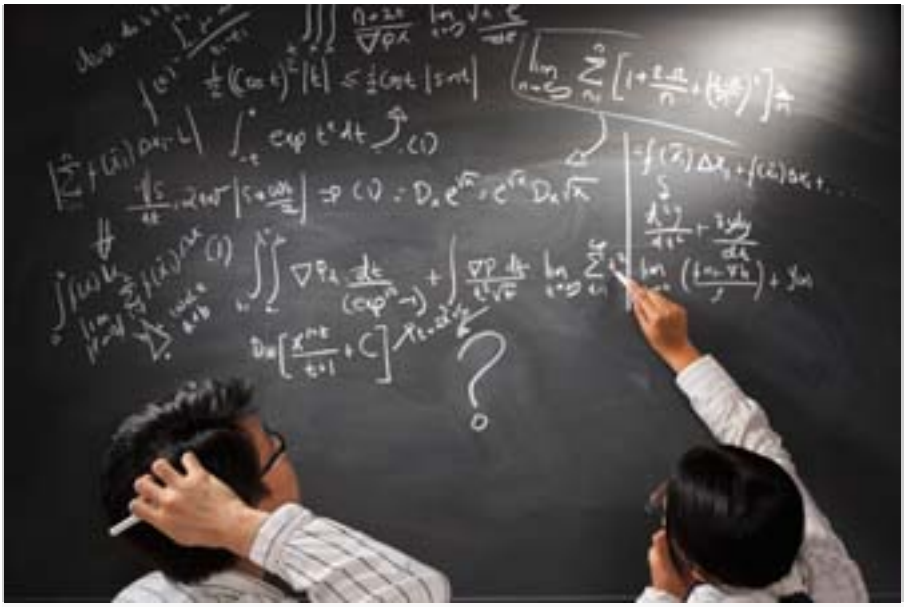
College and career readiness refers to the content knowledge, skills, and habits that students must possess to be successful in postsecondary education or training that leads to a sustaining career. The extensions and enrichment topics in this section compliment the topic of this book and provides educators 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.studentscholarships.org/salary/484/mathematicians.php
http://www.education.com/reference/article/how-children-learn-mathematics/
https://www.careerkids.com/pages/?p=49349131-be39-4867-8c67-bd996428760e

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

Mathematicians



Mathematicians create models to solve practical problems in fields such as business, government, engineering, and the sciences.

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

Similar Occupations

Compare the job duties, education, job growth, and pay of mathematicians with similar occupations.

What Mathematicians Do

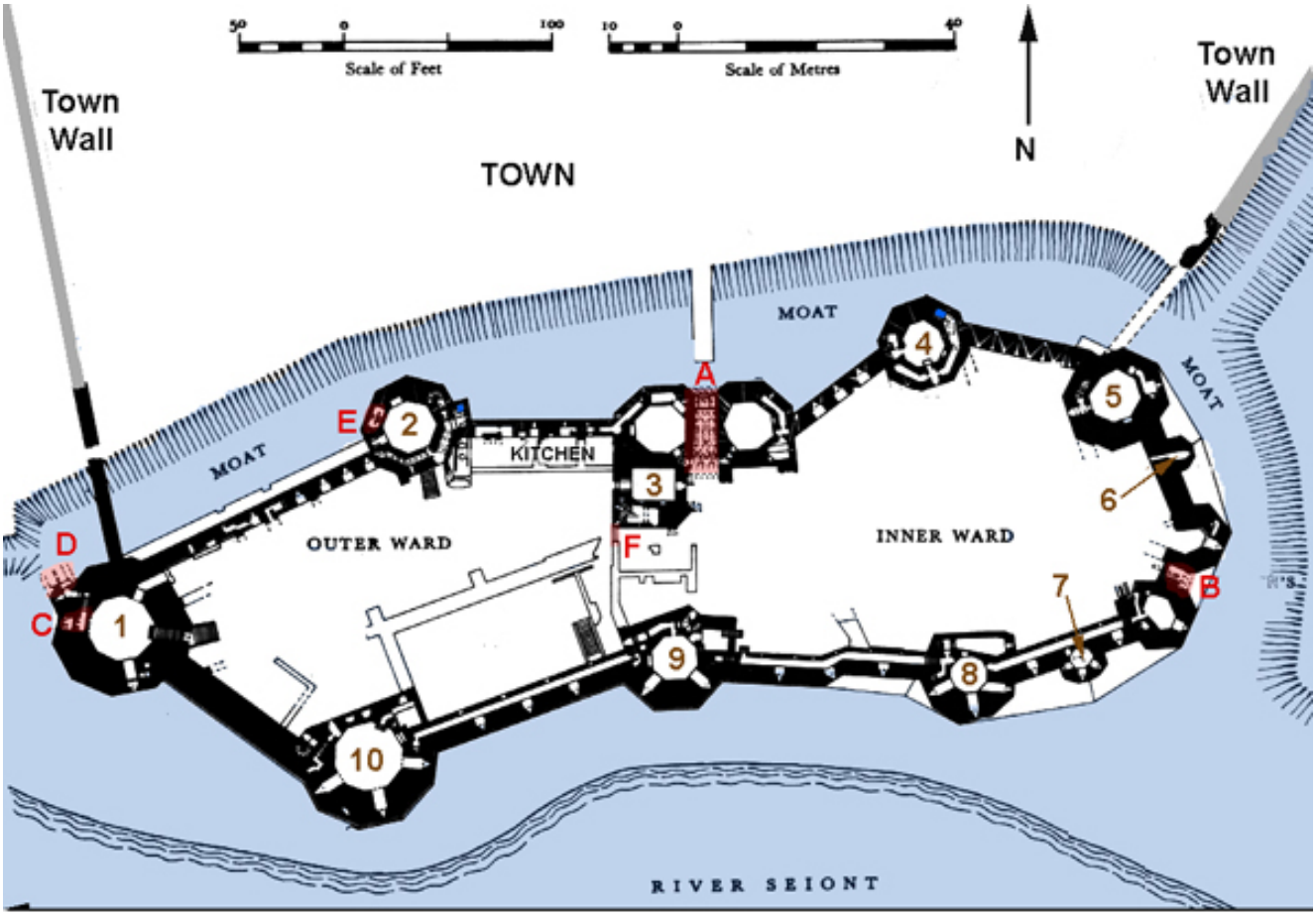
Mathematicians use advanced mathematics to develop and understand mathematical principles, analyze data, and solve real-world problems.

Duties

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

Where In the World?

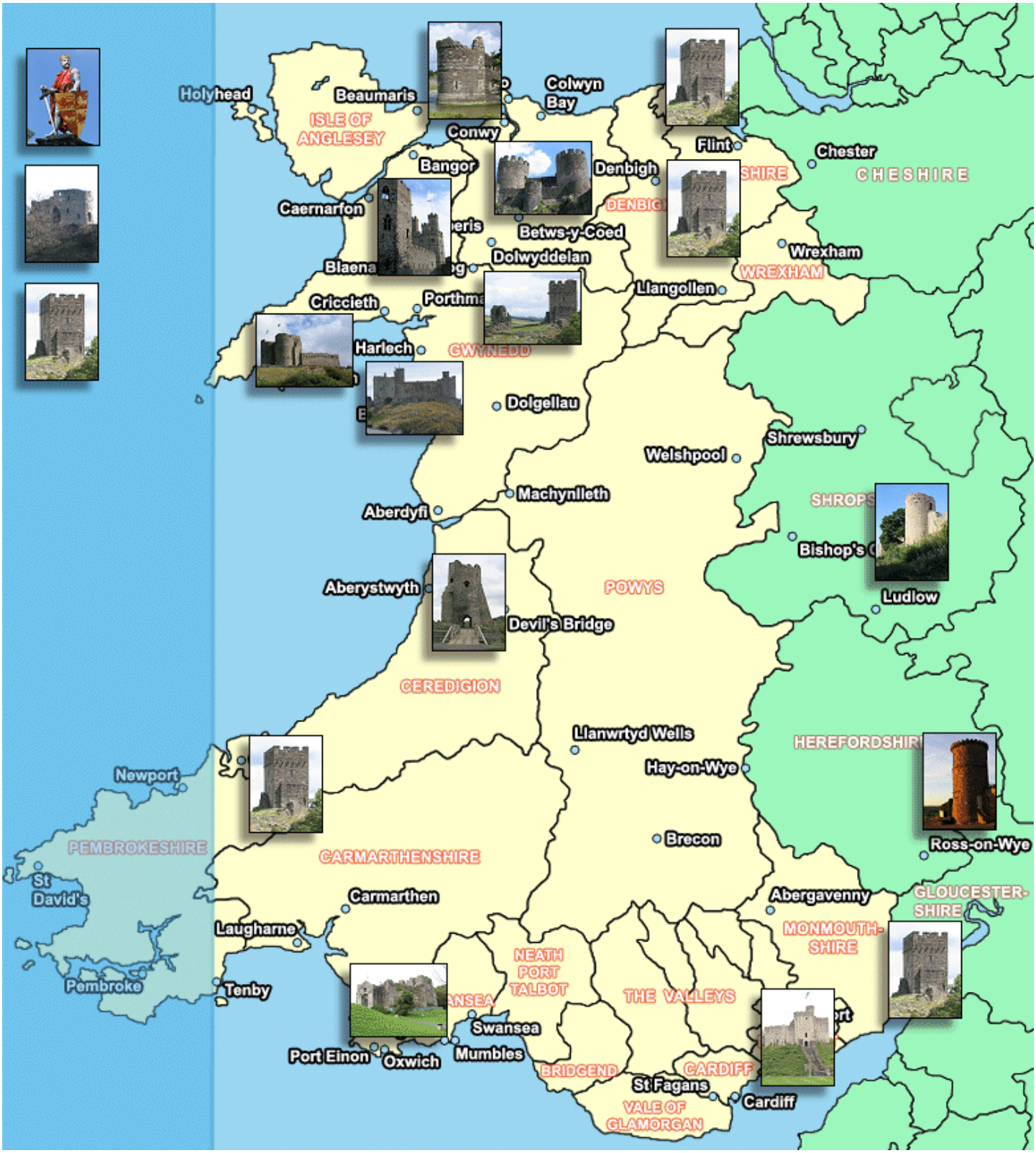


TOWERS
1. Eagle
2. Well
3. Prison
4. Granary
5. North East
6. Watchtower
7. Cistern Tower
8. Black
9. Chamberlain
10. Queen's

GATES
A. King's
B. Queen's
C. Postern
D. Site of Watergate (never built)
E. Postern
F. Site of Drawbridge (never built)

WELL

Floor Plan of an English Castle



Major castles in England

Research Task Rubric

Construct Measured	Score Point 3	Score Point 2	Score Point 1	Score Point 0
Reading **Comprehension of Key Ideas and Details**	The student response demonstrates **full comprehension** of ideas stated explicitly and inferentially by providing an **accurate** analysis and supporting the analysis with **effective** textual evidence.	The student response demonstrates **comprehension** of ideas stated explicitly and/or inferentially by providing a **mostly accurate** analysis and supporting the analysis with **adequate** textual evidence.	The student response demonstrates **limited comprehension** of ideas by providing a **minimally accurate** analysis and supporting the analysis with **limited** textual evidence.	The student response demonstrates **no comprehension** of ideas by providing **inaccurate or no** analysis and **little to no** textual evidence.
Writing **Written Expression**	The student response • addresses the prompt and provides **effective** development of the topic that is **consistently appropriate** to the task by using **clear** reasoning and **relevant, text-based** evidence; • demonstrates **effective** coherence, clarity, and cohesion appropriate to the task; • uses language **effectively** to clarify ideas, attending to the norms and conventions of the discipline.	The student response • addresses the prompt and provides **some** development of the topic that is **generally appropriate** to the task by using reasoning and **relevant, text-based** evidence; • demonstrates coherence, clarity, and cohesion appropriate to the task; • uses language to clarify ideas, attending to the norms and conventions of the discipline.	The student response • addresses the prompt and provides **minimal** development of the topic that is **limited in its appropriateness** to the task by using **limited** reasoning and **text-based** evidence; *or* • is a developed, text-based response with **little or no awareness** of the prompt; • demonstrates **limited** coherence, clarity, and/or cohesion appropriate to the task; • uses language that demonstrates **limited** awareness of the norms of the discipline.	The student response • is **undeveloped** and/or **inappropriate** to the task; • **lacks** coherence, clarity, and cohesion; • uses language that demonstrates **no clear awareness** of the norms of the discipline.
Writing **Knowledge of Language and Conventions**	The student response to the prompt demonstrates **full command** of the conventions of standard English at an appropriate level of complexity. There may be a **few minor errors** in mechanics, grammar, and usage, but **meaning is clea**r.	The student response to the prompt demonstrates **some command** of the conventions of standard English at an appropriate level of complexity. There **may** be errors in mechanics, grammar, and usage that **occasionally impede understanding**, but the **meaning is generally clear**.	The student response to the prompt demonstrates **limited command** of the conventions of standard English at an appropriate level of complexity. There **may** be errors in mechanics, grammar, and usage that **often impede understanding.**	The student response to the prompt demonstrates **no command** of the conventions of standard English. **Frequent and varied errors** in mechanics, grammar, and usage **impede understanding**.

Narrative Task Rubric

Construct Measured	Score Point 3	Score Point 2	Score Point 1	Score Point 0
Writing **Written Expression**	The student response • **is effectively** developed with narrative elements and is **consistently appropriate** to the task; • demonstrates **effective** coherence, clarity, and cohesion appropriate to the task; • uses language **effectively** to clarify ideas, attending to the norms and conventions of the discipline.	The student response • is developed with **some** narrative elements and is **generally appropriate** to the task; • demonstrates coherence, clarity, and cohesion appropriate to the task; • uses language to clarify ideas, attending to the norms and conventions of the discipline.	The student response • is **minimally** developed with **few** narrative elements and is **limited in its appropriateness** to the task; • demonstrates **limited** coherence, clarity, and/or cohesion appropriate to the task; • uses language that demonstrates **limited** awareness of the norms of the discipline.	The student response • is **undeveloped** and/or **inappropriate** to the task; • **lacks** coherence, clarity, and cohesion; • use of language demonstrates **no clear awareness** of the norms of the discipline.
Writing **Knowledge of Language and Conventions**	The student response to the prompt demonstrates **full command** of the conventions of standard English at an appropriate level of complexity. There may be a **few minor errors** in mechanics, grammar, and usage, but **meaning is clea**r.	The student response to the prompt demonstrates **some command** of the conventions of standard English at an appropriate level of complexity. There **may** be errors in mechanics, grammar, and usage that **occasionally impede understanding**, but the **meaning is generally clear**.	The student response to the prompt demonstrates **limited command** of the conventions of standard English at an appropriate level of complexity. There **may** be errors in mechanics, grammar, and usage that **often impede understanding.**	The student response to the prompt demonstrates **no command** of the conventions of standard English. **Frequent and varied errors** in mechanics, grammar, and usage **impede understanding**.