



Department of Teacher Education
and Graduate Studies

LOGISTICS

Teacher: Katie Coble

Grade(s) Level(s): 4th

Title of Unit (Theme): Change

Length of Unit: 15 Days

STATEMENT OF PURPOSE AND RATIONALE

Purpose: Students will understand change and the role it plays through multiple subject areas. In English Language Arts students will reflect on how a character has changed throughout a novel. In Math students will understand the relationship between decimals and fractions and change decimals to fractions and a vice versa. In Science students will understand the effects of environmental changes, adaptations and behaviors that enable animals (including humans) to survive in changing habitats. In Social Studies students will summarize changes that have occurred in North Carolina since statehood (population growth, transportation, communication and land use). In Healthful Living, students will understand the changes that occur during puberty and adolescence.

Rationale: Curriculum for gifted students should be differentiated at all levels of design in order to meet the needs of these students academically. One way to provide this differentiation is to use the feature of abstractness. Abstractness requires gifted students to focus on conceptual thinking within and across disciplines. In 4th grade, students begin to experience various changes throughout their lives. Their bodies begin to change, their relationships with their peers begin change, and education begins to change in ways that are more demanding. By expanding this theme of change across all subject areas, students realize that change plays a large role in all areas of our lives as humans.

ESSENTIAL QUESTION(S)

English Language Arts: Choose a character from the novel Hoot. How did this character change throughout the course of the novel?

Math: How are fractions and decimals related? How do you change a fraction to a decimal and vice versa?

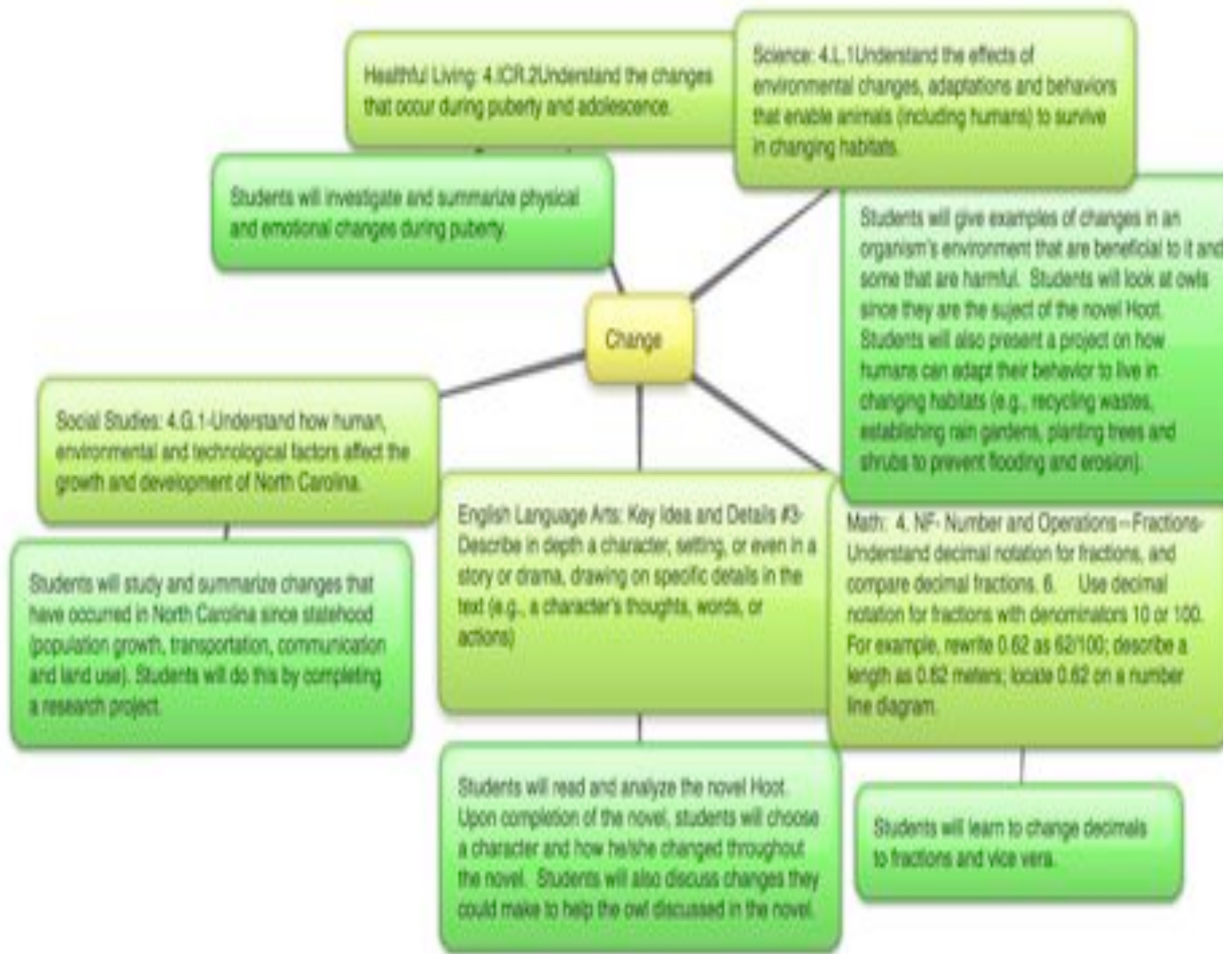
Science: How do animals and humans adapt to survive changing habitats?

Social Studies: How has North Carolina changed since first becoming a state?

Healthful Living: What changes occur during puberty and adolescence?

UNIT OVERVIEW

Plan for unit integration:



Prerequisite teacher content knowledge (may be bullet points; include essential vocabulary)

The teacher will need to have read the novel *Hoot* and identified any tricky vocabulary words that will need to be discussed with students.

The teacher will need a firm understanding of fractions and decimal and their relationship to one another.

The teacher will need to understand ecosystems and animal adaptations. Especially burrowing owls, the owls in *Hoot*. This knowledge will assist the teacher in helping students to complete their study on burrowing owls. The teacher will also need to have knowledge of how humans can adapt their behavior to live in changing habitats.

The teacher will need to have knowledge about the settlement of the Piedmont region of North Carolina and the Old Salem colony. The teacher will also need to have an understanding of the Piedmont today and its economy.

The teacher will need to have an understanding of changes that occur during puberty and be able to explain them to students appropriately and on their grade level.

The teacher will need to know and understand the following Common Core and North Carolina Essential Standards:

ELA: Key Ideas and Details- Describe in depth a character, setting, or event in a story or drama, drawing on specific details in the text (e.g., a character's thoughts, words, or actions).

Math: 4. NF- Number and Operations-Fractions- Understand decimal notation for fractions, and compare decimal fractions. Use decimal notation for fractions with denominators 10 or 100. For example, rewrite 0.62 as 62/100; describe a length as 0.62 meters; locate 0.62 on a number line diagram.

Science: Ecosystems- 4.L.1 Understand the effects of environmental changes, adaptations and behaviors that enable animals (including humans) to survive in changing habitats.

4.L.1.1 Give examples of changes in an organism's environment that are beneficial to it and some that are harmful.

4.L.1.2 Explain how animals meet their needs by using behaviors in response to information received from the environment.

4.L.1.3 Explain how humans can adapt their behavior to live in changing habitats (e.g., recycling wastes, establishing rain gardens, planting trees and shrubs to prevent flooding and erosion).

Social Studies: 4.G.1 Understand how human, environmental and technological factors affect the growth and development of North Carolina.

4.G.1.1 Summarize changes that have occurred in North Carolina since statehood (population growth, transportation, communication and land use).

Healthful Living: 4.ICR.2 Understand the changes that occur during puberty and adolescence.

4.ICR.2.1 Summarize physical and emotional changes during puberty

CONSIDERATIONS ABOUT THE LEARNERS

Prior knowledge

- Pre-Assessment can be used during Healthful living to check students understanding and misconceptions about puberty.
- Students will need to have knowledge of characters and understand that they often experience change in novels. Students will need to have understanding of both fractions and decimals so that they can understand how they are related and understand how to convert fractions to decimals and vice versa. Students will need to understand the vocabulary ecosystem, adaptation, and habitat. Students will need to know what textile and settlement means.

Unique learner characteristics (accommodations and differentiation)

- Allow Different pathways for learning-all students do not process information in the same way as other students, therefore, many methods of problem solving should be accepted.
- Provide choice, interest, and creative product options-some students struggle with rote memorization and sequencing but they can comprehend and process complex information and can complete creative tasks.
- For students with ADHD provide seating close to the teacher, provide behavioral modifications, and develop a plan on how to deal with behaviors.

CONSIDERATIONS ABOUT THE LEARNING ENVIRONMENT

Physical space: A regular sized classroom will be used for this lesson. Students will be sitting in groups of 4 to 5 so that they may collaborate when necessary. There should be plenty of room for students to move about comfortably and there should be a comfortable area for students to sit and read either along or with a partner.

Temporal resources: The unit will last for 15 days. Language Arts lessons will last for 90 minutes. Math lessons will last for 90 minutes. Social Studies lessons will last for 45 minutes. Science lessons will last for 45 minutes. Healthful Living lessons will last for 45 minutes.

Learning materials: A class set of the novel Hoot by Carl Hiaasen will be needed. Appropriate materials to teach about puberty will be required. Appropriate assignments to practice converting fractions to decimals and vice versa will be required. Access to a supply closet for materials to complete projects in Science and Social Studies would be beneficial.

Personnel resources: A Teacher Assistant may be used to help monitor group work and work with small groups.

Technological resources: Access to the Internet will be required along with access to a mobile lab. A document camera and SmartBoard will be utilized in presenting lessons.

CHART OF UNIT TIMELINE

	Objectives	Strategies	Assessments	Other
Day 1	Students will be introduced to the novel <u>Hoot</u> by Carl Hiaasen.	Students will begin by watching a novel trailer on <u>Hoot</u> . Students will then take a pre-assessment on <u>Hoot</u> . After completing the pre-assessment, students will write a journal entry entitled "What I Give a Hoot About"	There will be a Pre-Assessment and a Journal Entry. The Pre-Assessment is simply so students can monitor how their thinking changed from the beginning to the end of the book. The Journal will be graded using a rubric.	Access to the internet will be needed. A Pre-Assessment will be needed. A Rubric for grading a journal entry will be needed.

Day 2	Students will continue to explore fractions.	Students will review what they learned about fractions previously in a whole group. Students will then break into small group to do problem solving. Students will then share their findings during problem solving	Formative assessment will be utilized during this lesson. The teacher will listen to responses during review and when students discuss their findings.	Appropriate leveled math problems to use during problem solving will be necessary. Students will also need room to move about and work in groups.
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Day 3	Students will learn about the Moravians who settled present day Old Salem.	Whole Group Instruction: To hook students interests have them sit with boys on one side of the room and girls on the other side of the room. Explain to them that girls and boys will work together as a team today. Use a PowerPoint to introduce the Moravians and their way of life. Students should then understand why they have been sitting as teams of boys and girls.	Have students write a journal entry about how life for the Moravians differs from their life today.	A rubric will be used to grade journal entry.
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Day 4	Students will learn about adaptations that allow animals to survive.	The lesson will begin with a whole group lesson using a PowerPoint that discusses adaptation, what it means, and gives example of adaptations. Students will then research the Burrowing Owl and give examples of this species adaptation.	Formative assessment will be used in this lesson to see if students understand what adaptation means. The teacher will judge students understanding by looking at the list of adaptations they compose on the burrowing owl.	Students will need access to computers and the internet. A PowerPoint will need to be made that defines adaptations and delivers examples.
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Day 5	Students will continue to discuss puberty and changes that occur during this time of life.	Begin a by having a whole group lesson that describes the pituitary gland and how it is responsible for starting puberty. After completing the whole group instruction, allow students to write down changes that they know happen to their bodies during puberty and have them circle the ones they are confused about or would like to learn more about.	This lesson will be used as a pre-assessment to gauge what students already know and what they need more information on.	Students should be separated into groups of boys and girls so that they feel more comfortable discussing this subject topic.
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Day 6	Students will Continue to read and discuss <i>Hoot</i>.	Students will work in small reading circle groups and have the following roles: Word Wizard, Interpreter, Connector, Literary Critic, and Grand Inquisitor. Students will perform their roles and write their responses in their journal.	Students will be assessed using a rubric that determines how well they fulfilled their role in their group.	A rubric for assessing group participation will be needed.
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Day 7	Students will continue to learn about decimals.	Begin by giving students dollar bills and change. Have someone come up and write the amount of money they have on the board. Have students tell you what they know about change until someone tells you it is part of a whole dollar. Present a SmartBoard presentation on decimals and then allow students to break into groups to problem solve.	Formative assessment will be used during discussion time to see if students understand decimals. The teacher will also monitor students during problem solving to check for understanding.	SmartBoard presentation on decimals will be necessary. Also, decimal problems will be needed for group problem solving.
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Day 8	Students will learn about North Carolina's transition from a colony to a state and battles that took place in the Piedmont.	Whole group instruction: Discuss the Revolutionary War. Students should have some knowledge of the war already from studying the coast. Break students into partners. Have students research Ramsour's Mill, Guilford Courthouse, Archibald Murphey, and the city of Raleigh.	Students will give a presentation on their assigned topic. Students will be asked to complete questions on the topic after all presentations have concluded.	Questions will need to be provided to students. Access to a mobile lab for research will be required.
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Day 9	Students will investigate changes in an organism's environment that are beneficial to it and some that are harmful.	Have students think about the burrowing Owl in the novel <u>Hoot</u> . How are the changes in the novel negatively affecting the animal? Have students choose a partner and work together to think beneficial habitat changes for burrowing owls.	Students' presentations will be graded based on their understanding of changes to an organism's environment that are beneficial and harmful.	Have computers available for students to use if needed for research on changes that can be made to benefit the burrowing owls.
Day 10	Students will investigate emotional changes that may occur during puberty.	Have students watch videos about emotional changes in boys and in girls. Allow students to ask questions or share any of their personal emotional changes.	Formative assessment will be used to check for students understanding during their time to ask questions and share stories.	Videos on emotional changes during puberty will be needed.

Day 11	Students will Continue to read and discuss <i>Hoot</i> .	After completing the novel <u>Hoot</u> have students write an essay on a character of their choosing discussing which character they identified with most or liked the most. Why did they feel this way? How did this character change throughout the novel?	Students will be assessed using a rubric to evaluate their journal entry.	A rubric will be needed to assess journal entries
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Day 12	Students will discover the relationship between fractions and decimals and learn how to change fractions into decimals and vice versa.	Present a SmartBoard presentation on decimals and fractions and how they are related. Next give students cards. Some with decimal numbers and some with fraction numbers. Have students find their match. After students have found their match have them explain how they knew they were a match. After this activity, have students practice changing decimals into fractions and vice versa.	Students will be formatively assessed during the presentation and during the matching game.	Cards with decimal and fraction numbers will be needed. Also, a SmartBoard presentation on decimals and fractions will be required.
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Day 13	Students will learn about Industry in NC after the Civil War.	Whole group instruction: Use a PowerPoint to introduce students to North Carolina and Industry during the 1800' s-1900. Have students break into pairs and learn about important industry leaders in the Piedmont during this time such as: Michael Schenck, James W. Cannon, Cone brothers, Washington Duke and James Buchanan Duke, Thomas Day, RJ Reynolds.	Have students present their person to the group. Use a rubric to grade presentation. Also, have students individually write a report about their person. Use a rubric to grade report.	Access to a mobile lab will be needed for research. Rubrics to grade presentation and report will be needed.
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Day 14	Students will continue to explore changes that occur during puberty.	Have students watch a video that summarizes changes that take place during puberty as a refresher. Have students brainstorm people who they can talk to about these changes and how to handle these changes. Students can then make a brochure for what to expect during puberty.	Students will be formatively assessed during discussion.	A video on puberty will be necessary. Students will need crayons, colored pencils, markers, and white paper to create brochures.
Day 15	Students will continue to explore animal adaptations and their habitat.	Have students create their own animal and habitat. Have them label special adaptations that make it possible for their animal to survive the habitat that they have created.	Students will be graded based on the explanation of the adaptations they give to their animals and how these adaptations help them survive in their habitat.	Students will need crayons, markers, colored pencils, and drawing paper. A Rubric will be needed to grade the animals created.

LESSON PLANS (8 days)

GRADE/CLASS: SUBJECT AREA(S): Language Arts

UNIT TOPIC: Change

DAY: 1

Desired learning outcome(s):

The learner will practice identifying the theme of text through the use of pre-assessment.
The learner will enhance comprehension by exploring text-to-self connections by writing a journal entry.

Essential question(s) from learning objective:

What do you think the theme of the novel Hoot is after watching the book trailer?

In the novel, Hoot, students try to save burrowing owls, how can you relate to this endeavor?
What is something you are passionate about?

Common Core goal and objective(s):

Reading Standards for Literature K–5- Key Ideas and Details- Compare and contrast two or more characters, settings, or events in a story or drama, drawing on specific details in the text (e.g., how characters interact).

Reading Standards for Literature K–5- Range of Reading and Level of Text Complexity- By the end of the year, read and comprehend literature, including stories, dramas, and poetry, at the high end of the grades 4–5 text complexity band independently and proficiently.

Learner prior knowledge/ learner background experiences:

Students may need to brainstorm about environmental issues before writing their journal entry.
Help them create ideas such as recycling, protecting endangered species, clean energy, etc.

Materials and resources needed:

Class set of the novel Hoot by Carl Hiaasen

Youtube videos: <http://www.youtube.com/watch?v=qW2kb2baV-8>
http://www.youtube.com/watch?v=L_tsB_gWgyI

Paper

Pencil

Anticipation Guide

Teaching strategies:

§ Anticipatory Strategies:

Begin the lesson by passing out a copy of the novel Hoot to each student. Allow them to read the back of the book and thumb through the pages. After students have had ample time to

explore the book, show the two book trailers. Upon completion of the trailers, ask students what they think the book is going to be about.

§ Developmental Strategies:

After students have discussed their views on what the novel will be about, pass out the anticipation guide. The Anticipation Guide should be similar to following example:

Directions: Now that you have viewed the book trailers and discussed the novel Hoot, read the following statements and think about whether they are true or false. Put a T or F in the left hand column. As we read the novel, we will return to this anticipation guide to see if and why you have changed your opinions.

Before Reading True or False?	Hoot Anticipation Guide 	After Reading True or False? If your thinking changed include page numbers that guided your thinking and why your thinking changed.
	Construction companies always take the location of wildlife into consideration before they start building.	
	New restaurants and shopping centers are more important to a community than its wildlife.	
	Children might have opinions but they don't have any influence on grown up's decision making.	
	Owls nest in trees so the owls that burrow under the ground in <u>Hoot</u> can't be real.	
	When a state gives an animal the status of a protected species, all building development stops.	
	Wildlife has been sacrificed for the sake of development in communities.	
	Animals' habitats have never been sacrificed for the sake of housing development, roads, and other construction projects	

	in North Carolina.	
	When an author takes a stance on an issue in a novel, the reader can be influenced by the author's opinion.	
	Sometimes an author deliberately tries to persuade the reader to "take action" through his work.	
	Carl Hiassen, the author of <u>Hoot</u> , says "the world can be a nasty place and there's nothing wrong with going after the bad guys in a novel." Do you agree?	

§ Concluding Strategies:

Once students have completed their Anticipation Guide give them a journal assignment. Ask students "What do you give a hoot about?" Help them brainstorm different environmental issues to reflect on. Their journal entry should include their issue, why it is important, and ways that they can help or the problem could be solved.

Assessment:

Formative assessment will be used during class discussions to make sure that students understand the theme and concept of the novel Hoot.

The journal entry will be assessed using the following rubric:

Beginner:

___ Response shows a minimal understanding of the prompt

___ Response shows no critical thinking

___ Errors in spelling, punctuation, and capitalization that interfere with communication

Learner:

___ Response shows a basic understanding of the prompt

___ Response shows some evidence of critical thinking

___ Some errors in spelling, punctuation, and capitalization that do not interfere with communication

Skillful:

___ Response shows an understanding of the prompt

___ Response shows evidence of critical thinking

___ Few errors in spelling, punctuation, and capitalization

Expert:

___ Response shows an in-depth understanding of prompt

___ Response is insightful, well developed, and shows evidence of critical thinking

___ Control of spelling, punctuation, and capitalization.

GRADE/CLASS: SUBJECT AREA(S): Math

UNIT TOPIC: Change

DAY: 2

Desired learning outcome(s):

The learner will explore adding fractions with like denominators.

Essential question(s) from learning objective:

What do you notice about the numerator and denominator when you add fractions with like denominators?

NCSCOS goal and objective(s):

4.NF3 Understand a fraction a/b with $a > 1$ as a sum of fractions $1/b$. a. Understand addition and subtraction of fractions as joining and separating parts referring to the same whole.

Learner prior knowledge/ learner background experiences:

The learner should already have some experience with fractions. They should already understand the term denominator and numerator. The learner should also have experience with adding fractions. The purpose of this lesson to further students understanding that a fraction is part of a whole.

Materials and resources needed:

Picture Pie by Ed Emberley
Construction paper
Scissors
Pencil
Decomposing worksheet

Teaching strategies:

§ Anticipatory Strategies:

Begin by reading the book Picture Pie by Ed Emberley. While reading the book aloud to students pause to draw attention to the fact that all of the pictures are made up of fraction parts. Have students discuss the fractions that they see and recognize.

§ Developmental Strategies:

After completing the book allow students to break into partners and give them the following task:

1. Look closely at the artwork in Picture Pie
2. Create your own picture by tracing around fraction circle pieces or cutting paper circles into halves, fourths and eighths.
3. Calculate the total value of the fractions in your picture. Show your work.

§ Concluding Strategies:

Have students share their artwork and the total value of fractions in their picture. Send students back to their seats to answer the following questions:

1. Use pictures to solve the following:

$$\frac{2}{4} + \frac{1}{4} = \quad \frac{5}{8} + \frac{2}{8} = \quad \frac{1}{3} + \frac{?}{3} = 1 \quad \frac{3}{6} + \frac{2}{6} =$$

2. What do you notice about the numerator and denominator when you add fractions with like denominators?
3. Write a rule in your own words for adding fractions with like denominators

Assessment:

Work completed in this lesson will be used to assess students understanding of adding fractions.

GRADE/CLASS: SUBJECT AREA(S): Social Studies

UNIT TOPIC: Change

DAY: 3

Desired learning outcome(s):

The learner will investigate what life was like for pioneers leaving Pennsylvania to travel to North Carolina.

Essential question(s) from learning objective:

What was life like for Pioneers while traveling to North Carolina in a Conestoga wagon?

NCSCOS goal and objective(s): (above grade level)

4.H.1 Analyze the chronology of key historical events in North Carolina history.

4.H.1.3 Explain how people, events and developments brought about changes to communities in various regions of North Carolina.

Learner prior knowledge/ learner background experiences:

The students will need to have prior knowledge of how the coast of NC was settled and how pioneers traveled to North Carolina.

Materials and resources needed:

SmartBoard slide on Conestoga Wagons

Moravian Diary Entry about traveling to the Piedmont: <http://www.learnnc.org/lp/editions/nchist-colonial/2033>

Prices and weights of items students can pack on their wagon

Teaching strategies:

§ Anticipatory Strategies:

To activate student's schema on Conestoga Wagons, have students the following SmartBoard slide to identify different parts on the Wagon. Conestoga Wagons should be a review to students from third grade.

<http://library.thinkquest.org/6400/wagon.htm>

After students go over the Conestoga Wagon, share with students a diary entry written by a young Moravian coming from Bethlehem, Pennsylvania to Old Salem, located in the Piedmont of North Carolina. Located at the following link:

<http://www.learnnc.org/lp/editions/nchist-colonial/2033>

§ Developmental Strategies:

After students go over the Conestoga Wagon, share with students a diary entry written by a young Moravian coming from Bethlehem, Pennsylvania to Old Salem, located in the Piedmont of North Carolina. Located at the following link:

<http://www.learnnc.org/lp/editions/nchist-colonial/2033>

Share the Nov 2nd entry with students. It discusses how at times members of the wagon party had to carry loads on their backs up hills, how they slept, and various other aspects of having to navigate a wagon on The Great Wagon Road.

§ Concluding Strategies:

Have students break up into partners to investigate what life was like aboard a Conestoga wagon. Have students determine what they will need on the trip. Give students a sheet detailing how much money they have and how much weight they can carry in their wagon; the partners must work together to determine what is important to spend their money on. Give students the following papers:

Traveling to the North Carolina Piedmont

You are pioneers traveling together down The Great Wagon Rd from Pennsylvania to the backcountry of NC. It is important to remember that pioneers traveling by covered wagon had to be very careful about their

wagon's weight. Your wagon can only carry 2,000 pounds. Even a few pounds heavier could mean the trip would be much more difficult for the ox or horses. This is why the men and women would walk beside the wagon instead of riding inside the wagon.

You also have a limited amount of money for your trip. You and the rest of your party have been saving money for a very long time and have \$265.00 for supplies. There are a total of 5 people in your group and you still need supplies for the trip. Your wagon travels 12 miles a day and it is 600 miles to North Carolina, so you will need to be sure to take enough supplies for at least 2 months. There will be places to buy goods along the trail, so you may want to save some money.

This is the amount of food that was recommended for each person traveling in a covered wagon:

- 100 pounds of flour
- 30 pounds of dried meat
- 5 pounds of grain
- 2 pounds of coffee
- 1 pound of tea
- 10 pounds of sugar
- 10 of dried fruit and vegetables
- 5 pounds of salt

Remember the supplies you buy and decide to take will help you on your journey and to start your new life in North Carolina. You are responsible for spending your money wisely and making sure your supplies are not too heavy for your wagon. GOOD LUCK!

Supplies	Weight in Pounds	Cost
Tools		
One extra wheel	110	\$20.00
One gun and ammunition	10	\$6.00
Kitchen Utensils (pots, knives, etc)	20	\$5.00
Household Tools (broom, pail, etc.)	20	\$7.00
Farming tools (shovel, ax, saw, etc)	50	\$12.00
Nails	5	\$8.00
1 Lantern and Kerosene	5	\$3.00
Rope	4	\$3.00
Tools to repair wagon	20	\$6.00
Candles	8	\$2.00
Animal Trap	15	\$5.00
Personal Items		
Bedding (for 1 person)	3	\$3.00
One extra blanket	1	\$2.00
Material and sewing equipment	30	\$5.00
Soap	5	\$2.00

One bed	100	\$2.00
First aid kit	5	\$5.00
Food		
Flour	100	\$15.00
Tea	10	\$8.00
Salt (for seasoning and preserving)	90	\$5.00
Sugar	90	\$19.00
Coffee	10	\$5.00
Dried meat	80	\$22.00
Dried fruit and vegetables	70	\$10.00
Barrel of water	95	\$8.00
Grain (to eat and feed animals)	100	\$12.00
Goods From Your House		
Rug	40	-----
Fiddle	2	-----
Doll	2	-----
Jump rope	1	-----
Marbles	1	-----

Family Bible	2	-----
Books	5	-----
Hunting knife	1	-----
Bag of clothes (for one person)	40	-----
Mirror	40	-----
Butter Churn	40	-----
Table and 4 chairs	200	-----
Piano	900	-----
Organ	2,000	-----
Baby cradle	75	-----
Rocking chair	50	-----
Pitcher and bowl	5	-----
Stool	10	-----
Spinning wheel	80	-----
Clock	1	-----
Set of dishes	40	-----

Assessment:

During the lesson, I will informally assess students' understanding by monitoring their responses to questions asked during the opening discussion. I will also assess understanding by reading student's reflections on what they learned about traveling in a Conestoga wagon on The Great Wagon Road.

The following rubric will be used:

Beginner:

___ Response shows a minimal understanding of the prompt

___ Response shows no critical thinking

___ Errors in spelling, punctuation, and capitalization that interfere with communication

Learner:

___ Response shows a basic understanding of the prompt

___ Response shows some evidence of critical thinking

___ Some errors in spelling, punctuation, and capitalization that do not interfere with communication

Skillful:

___ Response shows an understanding of the prompt

___ Response shows evidence of critical thinking

___ Few errors in spelling, punctuation, and capitalization

Expert:

___ Response shows an in-depth understanding of prompt

___ Response is insightful, well developed, and shows evidence of critical thinking

___ Control of spelling, punctuation, and capitalization.

GRADE/CLASS: SUBJECT AREA(S): Science

UNIT TOPIC: Change

DAY: 4

Desired learning outcome(s):

Students will investigate animal adaptations.

Essential question(s) from learning objective:

How do adaptations help animals survive?

NCSCOS goal and objective(s):

4.L.1 Understand the effects of environmental changes, adaptations and behaviors that enable animals (including humans) to survive in changing habitats.

Learner prior knowledge/ learner background experiences:

This is an introductory lesson, students will not need any prior knowledge to understand concepts presented.

Materials and resources needed:

PowerPoint on Adaptations

Internet Access for research on Burrowing Owls

Teaching Strategies:

§ Anticipatory Strategies:

Begin by presented the following PowerPoint on adaptations:

<http://www.guia.com/files/guia/users/amiew/Animal-Adaptations-PPT>

§ Developmental Strategies:

Pass out laptops and allow students to do research on Burrowing Owls adaptations. They may do research on the following sites:

<http://www.rossparkzoo.com/animals/burrowingowl.htm>

http://shelledv.mesa.k12.co.us/staff/computerlab/ColoradoLifeZones_Semidesert_Shrublands_Adaptations.html#Burrowing_Owl

<http://cdri.org/nature-notes/animals/birds/burrowing-owls/>

<http://www.pc.gc.ca/pn-np/sk/grasslands/edu/edu1/b.aspx>

§ Concluding Strategies:

Once students have completed research they will complete a list of Burrowing Owl's adaptations. Students will also need to list the type of adaptation behavioral or physical.

Assessment

Students list of adaptations will be assessed for understanding of adaptations.

GRADE/CLASS: SUBJECT AREA(S): Healthful Living

UNIT TOPIC: Change

DAY: 5

Desired learning outcome(s):

The learner will examine changes that take place during puberty.

Essential question(s) from learning objective:

What changes will your body go through during puberty?

How will you handle these changes?

NCSCOS goal and objective(s):

4.ICR.2 Understand the changes that occur during puberty and adolescence.

Learner prior knowledge/ learner background experiences:

No prior knowledge will be necessary for this lesson.

Materials and resources needed:

Lesson on how puberty begins

Pencil

Paper

Teaching Strategies:

§ Anticipatory Strategies:

Begin by separating girls and boys and have them move to different rooms for the discussion. Begin by telling students that they may feel embarrassed or comfortable about the information they are about to hear but that it is natural. Explain that it is important to understand what is happening to their body and their emotions so that they know how to handle the changes.

§ Developmental Strategies:

Show the following PowerPoint:

http://www.robbinsville.k12.nj.us/443220821103644857/lib/443220821103644857/_files/PUBERTY!!!!_PowerPoint.pdf

§ Concluding Strategies:

At the completion of the PowerPoint pass out pencils and paper, have students write down information they have learned about puberty and the changes they will experience. Instruct students to circle things that they are still unsure about and would like more information on. Use these papers to help guide instruction during the next lesson.

Assessment

Formative assessment will be utilized during this lesson. Student's questions and concerns will be used to drive instruction.

GRADE/CLASS: SUBJECT AREA(S):

UNIT TOPIC: Change

DAY: 6

Desired learning outcome(s):

The learner will determine the meaning of words as they are used in the text.

The learner will practice summarizing.

The learner will explain the relationship between events and the character's behavior.

The learner will practice making text-to-self connections, text-to-world connections, and text-to-text connections.

The learner will interpret figurative language.

The learner will develop discussion questions.

Essential question(s) from learning objective:

How can you use context clues to determine word meaning?

How could you summarize this chapter?

How did the events in this chapter cause the character to act?

What connections can you make to this text?

What does the author mean when he uses figurative language?

What questions do you have about this chapter?

NCSCOS goal and objective(s): (above grade level)

Reading Standards for Literature K–5

1. Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text.

2. Determine a theme of a story, drama, or poem from details in the text, including how characters in a story or drama respond to challenges or how the speaker in a poem reflects upon a topic; summarize the text.

4. Determine the meaning of words and phrases as they are used in a text, including figurative language such as metaphors and similes.

Learner prior knowledge/ learner background experiences:

Students will need experience working in literature circles. Students will need experience with using context clues. Students will also need to be familiar with figurative language terms.

Materials and resources needed:

Class set of the novel Hoot by Carl Hiaasen

Pencil

Reading journal

Teaching Strategies:

§ Anticipatory Strategies:

Begin the lesson by reviewing what has happened in the novel so far. Students can ask questions or share insights during this time.

§ Developmental Strategies:

Have students break into literature circles to read their chapter. Also assign students their role for today's literature circle and provide them with their job description. Use the following list:

Word Wiz	Summarizer	Interpreter	Connector	Literary Critic	Grand Inquisitor
My task is to look for important words and use context clues to define them. As I read, I'll look for:	My task is to summarize today's reading As I read, I'll:	My task is to interpret what we've read today After I read, I'll:	My task is to find connections As I read, I'll look for connections to:	My task is to evaluate the text After I read, I'll:	My task is to ask questions about the writer's craft After I read, I'll:
Words I know that stand out or are repeated a lot Words that are used in unusual ways Words that are key to the meaning of the text Words that I think I understand but don't make sense to me in this context	Identify or explain the main idea Find key ideas or information Make predictions Draw conclusions Make generalizations Make inferences	Explain the relationship between events and the character's behavior Identify the author's purpose Explain or analyze how the conflict is resolved Identify details that support the main idea or explain their	My own personal life, now or in the past What's happening in the news, locally or other places What's happening at school or where we live Similar events at other times and places	Identify ways in which similar themes, ideas, and concepts are developed in more than one literary work Identify literary devices such as foreshadowing, imagery, and figurative language (similes, metaphors, personification, hyperbole, etc.) Interpret how	Formulate three important questions about the novel that we would like answered by the time we have finished reading the next few chapters or the whole book. For example: What did the author do to make the mean character

		importance	Other people or problems that I've heard about Other writings	meaning is influenced by the author's word choice, style, content, or use of literary elements	believable? How did the setting contribute to the mood of the novel? What techniques did the author use to get us hooked?
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Remind students what is expected in a good discussion:

Empathetic Listening: Give your complete attention to the speakers, showing the students in your group that you value their contributions. Use positive body language. Make eye contact

Responding to Group Members: Expand on other group members' ideas by sharing your thoughts and feelings about what they contributed to the conversations.

Clarifying: Ask questions to understand each other's ideas better. Such as: Tell me more about... What do you mean...? Why do you think...?

Sharing ideas and justifying opinions: Share parts of the book that demonstrate the core content that you are addressing and explain why they are important. Justify your opinions by saying:

I think . . .

This is a good example of a metaphor because. . .

I wonder if the relationship between these two characters would have changed if they had...

I was surprised that the plot changed course because I was expecting . . .

This part reminds me of . . . because . . .

I don't understand why the author keeps on repeating this word . . .

I like this section of writing because . . .

I noticed. . . because . . .

I wish ...because... I

think this story is really about . . . because . . .

§ Concluding Strategies:

Once students have had time to discuss their ideas with their group, send them back to their desks to record their responses in their reading journal. Also have them fill out a rubric on their literature group experience. Have them self reflect. Have students consider what has been done well, and make decisions about what needs to be improved. Set goals for the future

Assessment:

Students will use a rubric to evaluate themselves and their group members. The rubric will be submitted to the teacher. Use the following rubric:

Expert Participant ☐ Brings reading material with passages clearly identified ☐ Brings thoughtful written comments ☐ Contributes significantly to discussion ☐ Keeps the discussion going ☐ Listens and responds thoughtfully ☐ Builds on others' comments ☐ Makes insightful connections to other readings and/or experiences ☐ Discusses author's style/literary elements, when appropriate	Active Participant ☐ Brings reading material with passages identified ☐ Brings written comments ☐ Contributes appropriately to discussions ☐ Listens actively and responds adequately ☐ Makes connections to other readings and/or experiences ☐ Discusses author's style/literary elements (when appropriate)
Willing Learner ☐ Brings reading material ☐ Understands purpose of reading circle ☐ Brings some written notes ☐ Contributes to discussions occasionally or when prompted ☐ Sometimes listens and responds appropriately ☐ Occasionally asks questions ☐ Shares ideas when asked	Reluctant Reader ☐ Not prepared for discussion ☐ Forgets written comments or reading material ☐ Conversation off-task ☐ Seldom listens ☐ Rarely responds to group ☐ Reluctant to ask relevant questions ☐ Unwilling to share ideas

GRADE/CLASS: SUBJECT AREA(S):

UNIT TOPIC: Change

DAY: 8

Desired learning outcome(s):

The learner will explore the process of North Carolina transitioning from a colony to a state.

Essential question(s) from learning objective:

What important Revolutionary War battles took place in the Piedmont? How were these battles important to the nation and to North Carolina?

NCSCOS goal and objective(s):

4.H.1.3 Explain how people, events and developments brought about changes to communities in various regions of North Carolina.

4.H.2.2 Analyze North Carolina's role in major conflicts and wars from the Pre-Colonial period through Reconstruction.

4.G.1.1 Summarize changes that have occurred in North Carolina since statehood (population growth, transportation, communication and land use).

Learner prior knowledge/ learner background experiences:

The students will need to have prior knowledge of how the coast of NC was settled and how pioneers traveled to North Carolina. Students also need previous knowledge about the Revolutionary War (it should have been discussed during lessons on the coast of North Carolina).

Materials and resources needed:

Anchor Chart

Marker

Mobile Lab

Social Studies textbook: *Harcourt Horizons: North Carolina*

Teaching strategies:

§ Anticipatory Strategies:

Read the following statements aloud and have students predict whether the following statements are true or false.

1. North Carolina Patriots fought in several important battles of the American Revolution.

(True)

2. Raleigh was chosen to be North Carolina's capital because it was the largest city in the state.

(False)

3. North Carolina's population grew rapidly in the early 1800's. (False)

4. The construction of the railroad connected cities in the eastern part of the state with the Piedmont. (True)

§ Developmental Strategies:

Have students break into partners. Have students research Ramsour's Mill, Guilford Courthouse, Archibald Murphey, and the city of Raleigh. Students can use their social studies book and the laptop (www.wikipedia.org) for research. They can use their textbook and the internet, particularly Wikipedia.

§ Concluding Strategies:

After students have completed their research they will present their poster to the whole class. Also, reread the statements read at the beginning of the lesson and have student's discuss how their thinking changed. Once students have discussed how their thinking has changed, have them turn in their pre-assessment and answer the following questions:

From a Colony to a State

Vocabulary:

(1) After the American Revolution, North Carolina lawmakers began thinking about moving their _____, or place of government. (Pg. 162)

(2) _____ is the making of goods. (Pg. 163)

(3) _____ are made by laying heavy logs side by side across a trail. (Pg. 164)

(4) A _____ is a road that people must pay a toll, or fee, to use. (Pg. 164)

Review:

- (1) What Battles of the American Revolution took place in the Piedmont? Tell why each one was important. (Pg. 161-162)
- (2) Why did lawmakers decide to move their capital to Raleigh? Where was the capital before they moved it? (Pg. 162-163)
- (3) Who was Archibald Murphey and why was he important? Why do you think they called him the “Father of Education” in North Carolina? (Pg. 164)
- (4) What changes helped cities in North Carolina grow? (Pg. 165)
- (5) When did the University of North Carolina in Chapel Hill open? (Pg. 164)
- (6) What kinds of transportation came into use in North Carolina in the 1800s? (Pg. 164-165)
- (7) Who was the capital city, Raleigh, named after? (Pg. 163)
- (8) What cities did the North Carolina Railroad connect? (Pg. 165)
- (9) Why was it important to build schools? (on your own)

Assessment:

During the lesson, I will informally assess students’ understanding by monitoring their responses to questions asked during the opening discussion. I will also assess understanding of students’ topics by the quality of their presentation and the answers given to questions about the topics presented by other students.

GRADE/CLASS: SUBJECT AREA(S):

UNIT TOPIC: Change

DAY: 14

Desired learning outcome(s):

Students will demonstrate their understanding of adaptations and their importance in surviving changing environments.

Essential question(s) from learning objective:

Why are adaptations important?

How do adaptations help animals survive in a changing climate?

NCSCOS goal and objective(s):

4.L.1 Understand the effects of environmental changes, adaptations and behaviors that enable animals (including humans) to survive in changing habitats.

Learner prior knowledge/ learner background experiences:

Learners will need prior knowledge about adaptations. This lesson should be presented as a form of assessment.

Materials and resources needed:

Drawing paper
Pencils
Colored Pencils
Crayons
Modeling Clay

Teaching strategies:

§ Anticipatory Strategies:

Begin by telling your students the following:

You have completed a lot of research about animals and their adaptations. Your final task is to use what you have learned to create your own creature with specific adaptations of your choice depending on where your creature will live and what it will eat. BE CREATIVE. This is to be an imaginary creature in an imaginary environment.

§ Developmental Strategies:

Tell students that their creature must have at least four different adaptations and that they must write a brief report on their animal detailing what each of their creatures adaptations are and why it needs those adaptations to survive in the environment they have created. Allow students to draw their creature and environment or they may choose to make a diorama or a 3-D creature from clay or other means.

Their paragraph must contain the following:

The name of their creation

its adaptations

Why these adaptations are needed to meet its needs in the environment created

§ Concluding Strategies:

Students will share their creatures and read their report to their students.

Assessment:

The following rubric will be used to grade the assignment:

	Beginning 1	Developing 2	Accomplished 3	Exemplary 4	Score
Paragraph Content	Does not contain the information required.	Contains most of the information required with few supporting details.	Contains the information required with some supporting details.	Contains the information required with supporting details.	
Paragraph Mechanics	Does not use correct grammar, capital letters, and punctuation appropriately.	Uses some grammar, capital letters, and punctuation appropriately.	Uses grammar, capital letters, and punctuation appropriately with very few errors.	Uses grammar, capital letters, and punctuation with no errors.	
Paragraph Appearance	Paper is wrinkled, contains sloppy handwriting, and mistakes are not	Paper is messy, contains sloppy handwriting, mistakes are not erased	Paper is easy to read and mistakes are erased.	Paper is very neat with neat handwriting or typed. All mistakes are corrected.	

	erased.	properly.			
Drawing Adaptations	Does not contain required adaptations.	Contains most of the required adaptations.	Contains the adaptations required with few details.	Contains the adaptations required and the details required.	
Drawing Environment	Does not contain required environment.	Contains most of the required environment.	Contains the environment required with few details.	Contains the environment required with details.	
Drawing Appearance	Paper is wrinkled, contains sloppy handwriting, and mistakes are not erased.	Paper is messy, contains sloppy handwriting, mistakes are not erased properly.	Drawing is fairly neat and paper is generally clean.	Drawing is neat and paper is generally clean.	
Total Points:					

Summative Assessment

Choose one project from each category:

English Language Arts-

1. Choose a character from the novel Hoot and create a comic strip about how the character changed throughout the story. You may draw the comic strip by hand or use the computer program ComicLife.
2. Create a children's book where the main character experiences a type of change.
3. Create a short video about how the book Hoot changed your thinking and inspired you.

Math-

1. Solve the following decimal riddles and then change then change the decimal to a fraction:
I have a 5 in the tenths place
 I have a 7 in the thousandths place
 I have 4 in the ones place
 I have 2 in the hundredths place
 Now, write your own decimal riddle on an index card. Write the answer to your riddle on the back of the card in both decimal and fraction form.
2. Solve the following problem: I baked a chocolate cake and a banana cake for my sister's birthday. Both were the same size. I sliced the chocolate cake into 8 slices and the banana cake into 5 slices. After dinner my family ate 4 slices of the chocolate cake and 3 slices of the banana cake. Which cake had more left? Prove your answer with a picture and a computational method. Also, write your answer as a decimal.
3. Solve the following problem and show all work: Josh bought 18.55 feet of carpet for his bedroom. He used 17.3 feet. What fraction of carpet does he have left over?

Science:

1. Pick 5 animals and create a PowerPoint discussing their adaptations.
2. Write a letter to your mayor encouraging him to start a recycling program in the city, include why it is important and beneficial.
3. Burrowing owls are near the top of the food chain. You will need to create a food chain to show "who eats what" including at least five prey that the burrowing owl consumes. Each prey needs to be traced down to the level of primary producers. You must classify and label everything on your food chain according to the following categories: (1) primary producers (2) herbivores, (3) carnivores, and (4) omnivores. You will also need to identify the way everything

on your food chain catches food according to the following: filtering, digging, chasing, ambush, and scavenging.

Social Studies:

1. Choose a famous North Carolinian and discuss their importance and contributions to the state.
2. Research a North Carolina industry. How important is it to the North Carolina economy?
3. Research how Moravians set up their farms in Old Salem. Draw the farm and house that you would have designed if you were a member of the Salem Community.

Rubric for scoring projects:

4	3	2	1	Score
Project shows an in-depth understanding of prompt.	Project shows an understanding of the concept.	Project shows a basic understanding of the concept.	Project shows a minimal understanding of concept.	
Project is insightful, well developed, and shows evidence of critical thinking.	Project shows evidence of critical thinking.	Project shows some evidence of critical thinking.	Project shows no critical thinking.	
Control of spelling, punctuation, and capitalization.	Few errors in spelling, punctuation, and capitalization	Some errors in spelling, punctuation, and capitalization that do not interfere with communication	Errors in spelling, punctuation, and capitalization that interfere with communication.	
			Final Score:	

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