Kentucky Department of Education

GIFTED AND TALENTED SAMPLE ACTIVITIES

Contents

ELA Materials

K-3- The Tale of Peter Rabbit: Extensions for Gifted Students

LESSON PLAN Ref:	The Tale of Peter Rabbit: Extensions for Gifted Students		
KCAS Standard: **ELA.RL.K-3.2**: Students will retell stories, including key details, and demonstrate understanding of their central message or lesson. **ELA.RI.K-3.9:** Students will identify basic similarities in and differences between two texts on the same topic. **ELA.W.K-3.2:** Students will write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure. **ELA.W.K-3.5:** Students will write with guidance and support from adults, respond to questions and suggestions from peers and add details to strengthen writing as needed. **ELA.W.K-3.3:** Students will write a narrative in which they recount two or more appropriate sequence of events, including some details regarding what happened, use temporal words to signal event order, and provide some sense of closure. **ELA.W.K-3.10:** Students will write routinely and over extended time periods and shorter time periods for a range of discipline-specific tasks, purposes, and audiences. **K-3.MD.01:** Measure the length of an object by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes. **K-3.MD.10:** Draw a picture graph and a bar graph (with single-unit scale) to represent a data set with up to four categories. Solve simple put together, take-apart, and compare problems2 using information presented in a bar graph. **K-3.ESS.3.1:** Use a model to represent the relationship between the needs of different plants or animals (including humans) and the places they live. **SS.EP.4.4.2:** Students will describe how the physical environment can both promote and restrict human activities. **SS.EP.3.1.1:** Students will define basic economic terms related to scarcity (e.g., opportunity cost, wants and needs, limited productive resources-natural, human, capital) and explain that scarcity requires people to make economic choices and incur opportunity costs. **AH.EP.4.4.2:** Students will choose media to create artworks with a basic understanding of how to use the media. **AH.EP.4.1.5:** Students will sing alone and with others a varied repertoire of music. **AH.EP.4.3.1:** Students will perform in dramatic situations that incorporate Literary, Technical and Performance elements. **AH.EP.4.2.1:** With a partner or in a small group, students will perform dances using the elements of dance and various movements.			
NAGC Standard: **3.4**.: Students with gifts and talents become independent investigators.			
Subject/Course:	English/Language Arts/ Writing Across the Curriculums		
Best Practies:	Learning Center Activities, Real-World Situations, Digital Differentiation		
Lesson Title:	The Tale of Peter Rabbit		
Grade Level:	K-3	**Lesson Duration:**	1-3 days

Description of the Lesson:

Students will complete a KWL graphic organizer describing their familiarity with the book, *The Tale of Peter Rabbit* and authoress, Beatrix Potter. The class will discuss prior knowledge and then listen as the teacher reads the book aloud. Students will retell the story using masks and a story board. The lesson will culminate with the viewing of the *Tale of Peter Rabbit* and/or *Miss Potter*. Students will compare and contrast the film with information learned during the unit.

Extensions for Gifted Students:

General Intellectual Ability
- Students will create a PowerPoint presentation on the life of Beatrix Potter. (**ELA.W.K-3.2**)
- Students will read *The Tale of Benjamin Bunny* and complete a comparison chart of characters in this story in relation to *The Tale of Peter Rabbit* using a Venn diagram. (**ELA.RI.K-3.9**)

Specific Academic Ability
English/Language Arts**:**
- Students will use effective questioning and create a new ending to the story. (*What would have happened if Peter had been caught by Mr. McGregor?, What if Peter's father had not really been put in a pie by Mrs. McGregor, but had been hiding the entire time in the garden shed? etc.)* (**ELA.W.K-3.5**)
- Students will create a journal entry from the point-of-view of Peter from their favorite part of the story. (**ELA.W.K-3.3**)

Math**:**
- Students will measure the distance a rabbit can jump using an activity sheet and ruler. (K-**3.MD.01**)
- Students will graph (bar or picture) the number of carrots a rabbit can eat using a math manipulative activity. (**K-3.MD.10**)

Science**:**
- Students will create a poster presentation about the life of a rabbit; e.g.: needs for survival, fun facts, etc. (**K-3.ESS.3.1**)
- Students will research the Life Cycle of a Carrot and create a PowerPoint slide for each phase, from a seed and germination to harvest. (**K-3.ESS.3.1**)

Social Studies**:**
- Students will discuss the reasons for Beatrix Potter's farmland purchases and participate in a mock auction for the farmland purchased by Beatrix Potter (*See references)*. (SS.EP.4.4.2)
- Students will write their own story with illustrations, and with assistance from an adult research what it would cost to have their book published. (**SS-EP.3.1.1**)

Creativity
- Students will use effective questioning to create a plan for Peter to get his coat and shoes from Mr. McGregor's scarecrow without being caught. (*What tools will he need if he encounters the cat? Etc.)* (**ELA.W.K-3.10**)

- Students will plan a Peter Rabbit video game. The written game plan must include specific information on adventures and conflicts Peter will encounter. Students will share their idea with a neighbor. (**ELA.W.K-3.10**)

Leadership
- Students will write a journal entry about the courage required in standing up for what one believes in, when it is not the popular decision. *(Beatrix Potter purchased working farms to preserve their beauty from industrial progress. See references.)* (**ELA.W.K-3.10**)
- Students will watch a clip from the movie *Miss Potter* and write a journal entry answering why it was not a normal occurrence back then for a lady, such as Beatrix Potter to be an author and illustrator. (**ELA.W.K-3.10**)

Visual and Performing Arts
Art:
- Students will design a new coat for Peter and discuss its role in the story. (*Peter's coat shrinks on the scarecrow frame after being out in the rain*). (**AH.EP.4.4.2**)
- Students will create a picture of Peter Rabbit using scraps of fabric and other forms of mixed media. (**AH.EP.4.4.2**)

Music:
- Students will sing *Peter's Stomachache* to the tune of *Ten Little Indians.* (**AH.EP.4.1.5**)
- *Students will sing Oh No, Here Comes Mr. McGregor* to the tune of *Boom, Boom, Ain't It Great to Be Crazy*. (**AH.EP.4.1.5**)

Drama:
- Students will act out the story of *The Tale of Peter Rabbit*. (**AH.EP.4.3.1**)
- Students will create a skit from the point-of-view of Flopsy, Mopsy, and Cotton-tail and act it out. (**AH.EP.4.3.1**)

Dance:
- Students will pretend they are sneaky rabbits trying to escape from Mr. McGregor's garden. Students will use various creative movements to express feelings (*jumping, crouching, crawling*, *frozen position*, etc.) as the teacher plays escape-themed music. (**AH.EP.4.2.1**)
- Students will dance in a conga line to the song *The Bunny Hop* by Ray Anthony. (**AH.EP.4.2.1**)

Materials/Equipment:
Activity sheets (*See references*)
Computers
Projector

References:
Making Learning Fun Website (Activity Sheets and Songs)
www.makinglearningfun.com
Official Peter Rabbit Website (Biography information for Beatrix Potter and Hilltop Farm)
www.peterrabbit.com
Read Write Think Website (KWL Graphic Organizer)
http://www.readwritethink.org/classroom-resources/printouts/chart-a-30226.html
Read Write Think Website (Venn Diagram Graphic Organizer)
http://www.readwritethink.org/classroom-resources/printouts/venn-diagram-circles-c-30196.html
Science Kids Website (Information on the life of a rabbit)
www.sciencekids.co.nz/sciencefacts/animals/rabbit.html
The Bunny Hop by Ray Anthony
http://grooveshark.com/#!/search?q=The+Bunny+Hop
The Life Cycle of a Carrot
http://www.schooltube.com/video/21732922282a47718473/Life%20Cycle%20of%20a%20Carrot

LESSON PLAN Ref:	Integrated Math/English Language Arts (ELA) Learning Centers Unit		
KCAS Standard: **ELA.RI 1.5**: Know and use various text features (e.g. headings, table of contents, glossaries, electronic menus, icons) to locate key facts or information in a text. **ELA.RI 1.6**: Distinguish between information provided by pictures or other illustrations and information provided by the words in a text. **Math.1.NBT.2**: Understand that two digits of a two digit number represent amounts of tens and ones. **Math.1.NBT.4**: Add within 100, including adding a two-digit number and a one-digit number and a multiple of 10, using concrete models or drawings and strategies based on place value, properties of operation, and/or the relationship between addition and subtraction….. **ELA. W.1.2**: Write informative/explanatory text in which they name a topic, supplies some facts about the topic, and provides some sense of closure.			
NAGC Standard: **3.1**: Curriculum Planning. Students with gifts and talents demonstrate growth commensurate with aptitude during the school year. **3.3:** Talent Development. Students with gifts and talents develop their abilities in their domain of talent and/or area of interest.			
Subject/Course:	ELA/Math Centers		
Best Practices:	Learning Centers, Acceleration		
Lesson Title:	Math Learning Center Creation		
Grade Level:	1st	**Lesson Duration:**	Lesson may take up to five-seven days during center time
Description of the Lesson: In a primary heterogeneous class, the teacher is working on a combined unit of place value, basic addition, and subtraction. The teacher is also working on the informational reading standards for first grade specifically in the areas of using various text features (headings, table of contents, glossaries, etc.). Students will participate in a variety of learning centers based on their pre-assessments and informal identification (ex: Primary Talent Pool) to practice and/or extend their understanding of the skills. One of the learning centers is to create a class reference book that showcases the student's basic understanding of the informational text (title and table of contents) and at least one of the math concepts (i.e. operations or place value). This center will allow students to show their integrated understanding of the ELA text features and one of the math standards. Below you will find differentiated ideas for the different categories of gifted to extend the learning for the Primary Talent Pool students.			

Extensions for Gifted Students:

General Intellectual Ability:
- Students are required to demonstrate their understanding of both math standards in this book and provide at least three examples to show their fluency with understanding basic operations and the relationship with place value. (**1.NBT.2)**
- Students must use appropriate math vocabulary when writing this informative text. The math vocabulary will have to be defined "in their kid friendly words" in the student glossary. (**W.1.2)**

Specific Academic Ability:
- Students who show an understanding of the math concept of place value and basic operation of addition and subtraction may have the option of selecting numbers larger than 100 to extend their understanding of place value. (**2.NBT.1**)
- Student will be encouraged to use the mathematical practices of modeling with mathematics by creating visual models (ex: manipulatives, pictures of coins, etc.) that justify their mathematical equations. They will also have to be able to become a mathematician by verbalizing and defending their understanding of the math examples through the mathematical practice of constructing viable arguments.

Creativity:
- Students have choice on how to create their reference material. They may use a digital version ([Bit Strips](#) or [Comic Life](#), etc.) or they may create a paper/pencil book, or PowerPoint presentation.
- Students develop creative titles and captions to capture the audience's attention by using idioms and creative phrases. (Example: "Let Me Add My Ten Cents")

Leadership:
- Presentation: Students will present their reference material to their classmates as an additional reference to use in the class when working on math. They will try to persuade classmates during their presentation to use this beneficial tool when they need to see specific examples on specific math concepts. (**SL.1.2**)
- Students will become an expert on a specific topic and guide other classmates to use the reference materials for examples and support during station time.

Visual and Performing Arts:
- Music: Create a song that explains how to use place value in addition and subtraction. The chorus would be the rule that has to be followed every time.
- Art: Students select or create visual models that best represent their mathematical equations within their book.
- Drama: Students can work on a simple skit that explains what happens when you have to regroup and use place value in addition and subtraction.
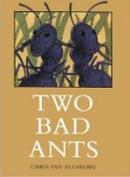
Materials/Equipment:

- Pre-made books or iPad/laptop with the specific application downloaded.

References:
- http://www.bitstrips.com/
- http://plasq.com/products/comiclife3/win
- lexile.com

LESSON PLAN Ref:	Leadership		
KCAS Standard: **ELA.RL.2.2**: Recount stories, including fables and folktales from diverse cultures, and determine their central message, lesson, or moral.			
NAGC Standard: **3.3**: Talent Development. Students with gifts and talents develop their abilities in their domain of talent and/or area of interest. **4.3**: Leadership. Students with gifts and talents demonstrate personal and social responsibility and leadership skills.			
Subject/Course:	ELA		
Best Practice:			
Lesson Title:	Two Bad Ants: A Tale of Leadership		
Grade Level:	2nd Grade	**Lesson Duration:**	1-2 Days

Description of the Lesson:

 Students orally discuss leader and leadership. Teacher reads aloud book *Two Bad Ants* by Chris Van Allsburg. Students discuss positive and negative characteristics of kinds of leaders using a T-Chart. Students discuss the theme "Good leaders should be followed for your own safety."

Extensions for Gifted Students:

General Intellectual Ability:
- Students will create riddles that describe, from an ant's point of view, at least ten items in a house. Students will put the riddles into a TV game show format and play with some of their classmates. (**ELA.W.2.3**)

Specific Academic Ability:
English Language Arts
- Students will compare the two bad ants' journey with a journey in another story of their choice. Students will make a Venn diagram to share with the class. (**ELA.RL.2.5**)
- Students will create haiku about ants and their behaviors. (**ELA.W.2.3**)

Math
- Using the book *Great Estimations* as a guide, students will create estimation pictures using ants and teach others how to estimate whole numbers to the nearest 10 or 100. (**3.NBT.1**)
- Using the book *Adding with Ants*, students will solve the given math problems. (**2.OA.1**)

Science
- Students will put together an aerial view (looking down from above) diorama using sand, dirt, and bits of plants to show the outdoor part of the route the marching ants travel to reach the crystals. (**2-LS4-1**)
- Students will discover the role of queens, workers, and males in an ant colony. Students will write job descriptions. (**2-LS4-1**)

Social Studies
- The two bad ants learn that life's real treasures are their home and making the queen happy. Students will decide what life's real treasure is for them. Students will video at least two anecdotes that explains the chosen treasure. (**SS-EP-2.1.1**)

Creativity:
- Using the given collection of ant-themed mazes, puzzles, and drawing instructions, students will create a bulletin board to place final center products (paper and pictures) within. (**AH-P-PCA-S-VA1**)

Leadership:
- Students will use GoAnimate to illustrate a time they were a good leader or a good follower. (**ELA.SL.4.5**)

Visual and Performing Arts:
- Music: Students will watch the video of the *Ants Go Marching*. Students will practice singing the song. Students will use Voicethread to record your song. (**AH-P-PA-S-Mu1**)
- Visual Art: Students will draw ants using the instructions from *How to Draw Ants* and *How to Draw Ant Faces* documents. Students will create finger puppets or stick puppets. (**AH-P-PA-S-VA1**)
- Drama: With the help of a friend, students will put on a skit with dialogue to dramatize what happens to the two bad ants after they decide to stay in the land of the crystals. (AH-P-PA-S-DT1)
- Dance: Students will listen to the song *The Ants Go Marching*. Students will create choreographed movements to go with each verse, rehearse movements, and videotape performance. (AH-P-PA-S-Da1)

Materials/Equipment:
- *Two Bad Ants* book
- T-Chart
- Center Materials (books, handouts)
- Drawing Paper
- Pencils
- Art Supplies
- Flip Cameras, iPads, Web Cam, or other recording devices

References:
- *Two Bad Ants* Porta Center 2003 Engine-Uity
- *Two Bad Ants* Read Aloud: https://www.youtube.com/watch?v=DdiPMkH16z8
- *Two Bad Ants* Teacher's Guide:
  http://www.houghtonmifflinbooks.com/features/thepolarexpress/tg/twobadants.shtml
- The Ants Go Marching Song: https://www.youtube.com/watch?v=xozQnsGkHJ4
- Lexile: 780L https://www.lexile.com/book/details/9780395486689/

LESSON PLAN Ref:	Informational Text/Cause and Effect		
KCAS Standard: **ELA.RI.3.7:** Use information gained from illustrations (e.g., maps, photographs) and the words in the text to demonstrate understanding of the text (e.g., where, when, why, and how key events occur. **ELA.R.I.3.8:** Describe the logical connection between particular sentences and paragraphs in a text (e.g., comparison, cause/effect, first/second/third in a sequence). **W.3.1:** Write opinion pieces on topics or texts, supporting a point of view with reasons.			
NAGC Standard: **1.7. Cognitive and Affective Growth:** Students with gifts and talents recognize their preferred approaches to learning and expand their repertoire. **3.7. Instructional Strategies:** Students with gifts and talents become independent investigators. **4.1. Personal Competence:** Students with gifts and talents demonstrate growth in personal competence and dispositions for exceptional academic and creative productivity. These include self-awareness, self-advocacy, self-efficacy, confidence, motivation, resilience, independence, curiosity, and risk taking.			
Subject/Course:	Reading/Language Arts		
Best Practices:	Choice, Independent Study, Digital Differentiation		
Lesson Title:	Ocean Life		
Grade Level:	3rd Grade	**Lesson Duration:**	60-90 minutes
Description of the Lesson: This lesson encourages students to read informational text (*Oceans: A True Book)* and apply their understanding to form opinions. Students will complete three performance tasks from a Think-Tac-Toe. The performance tasks require students to support a point of view/opinion, include cause and effect and/or reference informational text. The Think-Tac-Toe board incorporates essential questions with modifications. (*e.g., a multiple choice question may now be open-ended question requiring the student to identify cause and effect relationships directly or indirectly*). All students will be required to complete the middle space performance task. Then students choose any two activities that create three-in-a-row. Some activities require students to demonstrate understanding of text information, while other activities require students to use the text information to expand their own understanding and creative thought (*e.g., creating a deep sea creature that would have special features that animals living in the deep water would need*). The Think-Tac-Toe offers student choice with differentiated performance tasks that address gifted learners.			

Extensions for Gifted Students:

General Intellectual Ability:
- See attached Think-Tac-Toe

Specific Academic Ability:
- English Language Arts**:** See attached Think-Tac-Toe
- Scienc**e:** See attached Think-Tac-Toe

Creativity:
- See attached Think-Tac-Toe

Leadership:
- Present your position on the importance of protecting the ocean water. *(**SL.3.4, SL.3.6, W.3.7, W.4.9***)*
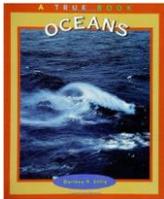
Visual and Performing Arts:
- Music**:** Write a song (Modify a Think-Tac-Toe Performance Task) *(**SL.3.5, W.3.1***)*
- Visual Arts**:** See attached Think-Tac-Toe

Materials/Equipment:

- **Book:** *Oceans: A True Book* by Darlene R. Stille
- Computer/Internet
- Art Materials
- Paper/Pencil

References:
Book:

 Oceans: A True Book by Darlene R. Stille

- **Lexile:** https://www.lexile.com/
- **Graphic Organizers:** T-Chart, Venn Diagram, Think-Tac-Toe
- **Think-Tac-Toe:** Differentiated Performance Tasks
- **Digital Differentiation:** Dare to Differentiate (Choice Boards/Menus) http://daretodifferentiate.wikispaces.com/Choice+Boards
- Tennessee Aquarium http://tennesseeaquarium.org/Home.aspx
- Discovery Kids http://discoverykids.com/explore/

LESSON PLAN Ref:	Informational Text Feature Analysis
KCAS Standard: **ELA**.**RI.4.7:** Integration of Knowledge and Ideas Interpret information presented visually, orally, or quantitatively (e.g., in charts , graphs, diagrams, time lines, animations, or interactive elements on Web pages) and explain how the information contributes to an understanding of the text in which it appears	
NAGC Standard: **3.1.2:** Educators design and use a comprehensive and continuous scope and sequence to develop differentiated plans for PK-12 students with gifts and talents. **3.1.3:** Educators adapt, modify, or replace the core or standard curriculum to meet the needs of students with gifts and talents and those with special needs such as twice-exceptional, highly gifted, and English language learners. **3.1.4:** Educators design differentiated curricula that incorporate advanced, conceptually challenging, in-depth, distinctive, and complex content for students with gifts and talents. **3.1.7:** Educators use information and technologies, including assistive technologies, to individualize for students with gifts and talents, including those who are twice-exceptional.	

Subject/Course:	English Language Arts	
Best Practice:		
Lesson Title:	What text features are best?	
Grade Level:	4	**Lesson Duration:** 1-3 days

Description of the Lesson: Students will identify specific text features that contribute to understanding the meaning to text. Students will explain how specific text features help readers understand the text. - Students work in pairs to add appropriate text features to a feature article with text features that have been removed. - Create a whole group rubric on the expectations of proficiently completing the project. - Students are expected to add 5 text features they believe will best add to the overall understanding of the text. - Students write about the text features they added justifying how they contribute to the overall understanding of the text. - Students present their feature articles and justifications to the class. Assessment: Prompt: identify 3 text features that would be best to use in publishing this information in a magazine. Explain why you choose each text feature. Allow class to collaboratively create success standards for this prompt.

Extensions for Gifted Students:

General Intellectual Ability:
- Compare and evaluate what text features would be most helpful for specific types of informational texts on the same topics. (Ex: professional journal vs. interest based journal.

Specific Academic Ability:
- Science: Student identifies and evaluates text features that are most common in scientific text. Assessment: Student is able to write about the 3 most effective text features in scientific text.
- Math: Student identifies and evaluates text features that are most common in mathematical text. Assessment: student is able to write about the 3 most effective text features in mathematical text.
- Social Studies: Student identifies and evaluates text features that are most common in Social Studies text. Assessment: student is able to write about the 3 most effective text features in Social Studies text.

Creativity:
- Provide opportunity for student to use graphic design technology in order to design multiple text features to be included in a published article.

Leadership:
- Alternative assignment -Student selects one or more text features and is able to support how it contributes to the meaning of information when applied to a variety of product such as an article, webpage or brochure.

Visual and Performing Art:
- Visual: Student has time to create an artistic representation of the text in the medium of their choice.
- Dance: Student creates a dance that enhances the meaning of text (moving text feature)

Materials/Equipment:
- Examples of a variety of text features
- Informational text with no text features or text features have been removed.
- IPad or computer access for viewing and comparing a variety of informational text.

References:
- Informational texts: www.readwork.org or www.kyvl.org

    Websites:
- Teacher vision: https://www.teachervision.com/intelligence/resource/4933.html
- Dare to Differentiate: https://www.daretodifferentiate.wikispaces.com/Choice+Boards

LESSON PLAN Ref:	Literature Unit for 4th

KCAS Standard:
ELA.RL.4.2 – Determine a theme of a story, drama, or poem from details in the text; summarize the text.

NAGC Standard:
3.1. – Curriculum Planning – Students with gifts and talents demonstrate growth commensurate with aptitude during the school year.

3.3. – Students with gifts and talents develop their abilities in their domain of talent and/or area of interest.

Subject/Course:	Reading/Language Arts		
Best Practices:	Learning Centers, Digital Differentiation		
Lesson Title:	Reading an Abridged Version of Beowulf		
Grade Level:	4th	**Lesson Duration:**	45 minutes - 1 hour approximately

Description of the Lesson: The teacher will have students partner read an abridged narrative version of the epic poem, "Beowulf." (The teacher could use the book, *Stories of Beowulf Told to Children* by H.E. Marshall.) Students will determine the theme of the story by providing evidence based on details from the text. In addition, students will summarize the text with supporting ideas and details focusing on how Beowulf responded to the challenges of dealing with Grendel. After individual summaries have been written, students will read four different peer summarizations. After each peer reading of a summarization, the students will have time to re-write their summaries and add details. The teacher will follow-up with a class discussion of the overall theme(s) and summarization of the text.

Extensions for Gifted Students:
General Intellectual Ability:
- Higher level questioning strategies should be given to students who are identified for general intellectual. After analyzing the theme of the story, the student can compare/contrast the treatment of similar themes and topics and patterns of events in other stories that he/she has read. For example, if students have read Macbeth, they may compare/contrast Macbeth & McDuff with Beowulf & Grendel. Students can do this through a Venn Diagram or comparative "T" chart. (ELA.RL.4.9) (ELA.RL.4.2)

Specific Academic Ability:
- **Language Arts & Creativity** – Thinking about the characters in the story, students can construct a creative story from a different point of view. For example, students may write a first person narration of the story through Grendel's mother's point of view. Or, students can imagine what it would be like to have been one of Beowulf's soldiers. Students could write a narrative of the events that addresses the thoughts and feelings from the soldier's perspective. (ELA.RL.4.6) (ELA.W.4.3b) (ELA.RL.4.2)
- **Language Arts & Drama** – Students can create a play script from the narrative story. Students can set the play script in a different time period, such as modern day, 1950's,

etc… Students' scripts should reflect the elements of drama and have a clear beginning, middle, and end to their story. (ELA.W.4.3a) (ELA.RL.4.5) (ELA.RL.4.2)
- **Science** – Students can generate ideas and brainstorm multiple solutions on how Beowulf could capture Grendel in some type of machine/contraption. Students can engineer a prototype of the contraption using various materials or design a blueprint of the machine. Then, students will collaborate with peers about possible constraints or problems with their prototype and record possible solutions to having an effective machine to capture the monster. (ETS1.B)
- **Social Studies** – Students can research the origin of the Beowulf poem and discuss events that were happening in the century in which the first manuscript was found. Students can create a digital timeline through a free site, such as Dipity, of the events that were happening during that time period and discuss how these events could have influenced the origin of the poem "Beowulf." (SS.7.5.11)

Creativity:
- See lesson above listed as "Language Arts & Creativity"
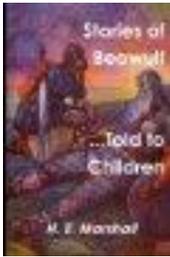
Leadership:
- Students can analyze the characteristics of heroes, from reading "Beowulf" and a modern day Super hero from a comic book. Then, students will define or research the qualities of a good leader. Students may use the book *Psychology for Kids Vol. I or II* to complete a survey about different types of leadership qualities. Students will justify the qualities that they think a good leader should have and will compare those qualities to that of Beowulf and their chosen Super Hero. (ELA.RL.4.9)

Visual and Performing Arts:
- **Music** – Students can use orff or a variety of instruments or their voice to create a dramatic song that would be played during the climax of the story. Students must first analyze the part of the story in which he/she feels is the most intense part of the story. (AH-04.-4.1.1)
- **Visual Art** - Students can create a depiction of the imagined character of Grendel. Students will use the descriptive text to determine the features of the character. Then, the student will illustrate a vivid or favorite scene from the text. Students may use any type of media available. He/she may build a mask of paper mache or a face from a milk jug and paint, etc… When depicting their favorite scene, they can build an from cans, etc… Students can even use nothing but recyclable materials to create their character. (AH-04-4.4.1)
- **Drama** – Students will take the characters from the narrative and will create an impromptu play skit from a scene in the text. Students can work with the visual art students to create backdrops, props, masks/costumes, etc… for their skit. (AH-04-4.3.2)
- **Dance –** Students will create an interpretive dance of the climax a *Beowulf* tale. Students can collaborate with the music students and determine the most intense part of the story. Students will create patterns of movement incorporating the elements of dance. (AH-04-4.2.1)

Materials/Equipment:
- Narrative Form of Beowulf as your primary source for the original lesson. The teacher could use *Stories of Beowulf Told to Children* by: H.E. Marshall.
- Variety of materials or even recyclable materials to engineer a prototype of a monster-catching machine.
- Comic book, representing a super hero is needed for the leadership extension
- Survey regarding different styles of leadership and leadership qualities are needed for the leadership extension. The teacher could use *Psychology for Kids Vol. I or II* to find a survey.
- Orff instruments or a variety of instruments would be needed for the music extension.
- A variety of materials, such as newspaper, glue, flour, water for paper mache, or milk jugs and paint could be examples of what to use for the visual art extension.

References:
Books:

 Stories of Beowulf Told to Children by: H.E. Marshall for the original lesson
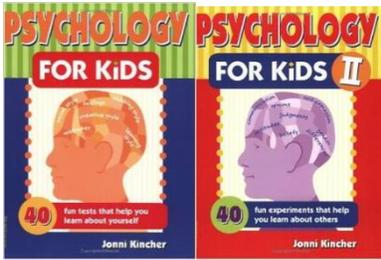
 Psychology for Kids I and II by: Jonni Kincher, Free Spirit Publishing as possible sources for the Leadership extension

Websites:
- Some background information on "Beowulf" for students:
http://www.earlybritishkingdoms.com/kids/beowulf_poem.html

- Online Timeline Generators for the Social Studies extension:
http://www.dipity.com/
http://www.softschools.com/teacher_resources/timeline_maker/
http://www.readwritethink.org/files/resources/interactives/timeline_2/

LESSON PLAN Ref:	Mythology
KCAS Standard: **ELA.RL.4.3:** 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). **ELA.RL.4.9:** Compare and contrast the treatment of similar themes and topics (e.g. opposition of good and evil) and patterns of events (e.g. the quest) in stories, myths, and traditional literature from different cultures. **ELA.W.4.3:** Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences. **ELA.W.4.7:** Conduct short research topics that build knowledge through investigation of different aspects of a topic. **ELA.SL.4.4:** Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 4 reading and content, choosing flexibility from a range of strategies.	
NAGC Standard: **3.3 Talent Development:** Students with gifts and talents develop their abilities in their domain of talent and/or area of interest. **4.5 Communication Competence:** Students with gifts and talents develop competence in interpersonal and technical communication skills. They demonstrate advanced oral and written skills, balanced biliteracy or multiliteracy, and creative expression. They display fluency with technologies that support effective communication.	

Subject/Course:	ELA		
Best Practice:			
Topic:	Mythology		
Lesson Title:	Hybrid Creatures		
Grade Level:	4	**Lesson Duration:**	Varies

Description of the Lesson: During a unit on Mythology, students research, compare and contrast the various hybrid creatures that exist in Greek and Roman myths (ex. Hydra, Centaur, Harpy, Minotaur, etc.)
Extensions for Gifted Students: **General Intellectual Ability** • Students explore other types of hybrids that exist today (crops, cars, animals) and explain the benefits of hybrid characteristics **Specific Academic Ability** • Science: Students choose a hybrid creature and describe how that creature's physical features help that creature survive in its environment. • Language Arts: Students choose a hybrid creature and write a persuasive piece about why that creature's traits are better than another creature's traits. **Creativity**

- Students create a new hybrid creature (choosing a combination of human/animal characteristics) and complete a creative writing piece to go along with it (may choose from multiple genres).
- Students create a new hybrid creature and complete a visual representation of that creature (mixed media, illustration, painting, or sculpture, etc.)

Leadership
- Students research a hybrid creature that takes on a leadership role in a Greek or Roman myth (such as Triton) and uses evidence from the text to describe that character's leadership traits
- Students can debate which of two hybrid creatures would make a more effective leader

Visual and Performing Arts
- Drama: Students dramatize a specific hybrid creature, coming to class in costume and speaking from that character's point of view
- Drama, Dance, Visual Art, Music: Students create a short video trailer for a specific myth

Materials/Equipment:
==Research materials (books/internet):==
Video recording device
Art and Writing Materials

References/Resources:
- www.mythical-creatures-and-beasts.com/hybrids.html
- www.mythicalarchive.com
- www.mythography.com
- www.brainpop.com (mythology)

LESSON PLAN Ref:	ELA Memoir and Nonfiction Texts with curricular connections to Practical Living Career Studies (PLCS) and Science (Weather and Climate/ History of Earth)

KCAS Standard:

ELA.SL.6.1 Engage effectively in a range of collaborative discussions, with diverse partners on Grade 6 topics, texts, and issues, building on others' ideas and expressing their own clearly.
ELA.RI.6.3 Explain the relationships or interactions between two or more individuals, events, ideas, or concepts in a historical, scientific, or technical text based on specific information in the text.
ELA.RL.6.4 Determine the meaning of symbols, key terms, and other domain specific words and phrases as they are used in a specific scientific or technical context relevant to grades 6–8 texts and topics.
ELA.W.6.9 Draw evidence from informational texts to support analysis, reflection, and research.
MS.ESS.2.3 Analyze and interpret data on the distribution of fossils and rocks, continental shapes, and seafloor structures to provide evidence of the past plate motions.
MS.ESS2.D Weather and climate are influenced by interactions involving sunlight, the ocean, the atmosphere, ice, landforms, and living things. These interactions vary with latitude, altitude, and local and regional geography, all of which can affect oceanic and atmospheric flow patterns. **(MS.ESS2.6)**
PLVS.4.4 Students demonstrate the ability to accept the rights and responsibility for self and others.

NAGC Standard:

3.1 Curriculum Planning. Students with gifts and talents demonstrate growth commensurate with aptitude during the school year.
3.4 Instructional Strategies. Students with gifts and talents become independent investigators.

Subject/Course:	ELA with Science and PLCS Connections
Best Practices:	Digital Differentiation, Questioning Techniques, Seminars, Independent Study, and Student Choice
Lesson Title:	Teenage Trail Blazers
Grade Level:	6	Lesson Duration:	1 week

Description of the Lesson:

The text found in this lesson is found in Unit 5 of the *Junior Great Book Thinkit* nonfiction reading program. However the selected text, *Big Mistakes on Aconcagua* was taken from the book, *Within Reach: My Everest Story* by Mark Pfetzer and Jack Galvin, so if needed students could read this book. After students read the text, they will write interpretive high level questions about their reactions to the text, and then define any unknown vocabulary. Students then progress through reading, writing, and discussion activities which are a part of the "critical thinking puzzle" with the first piece being *Read and Understand*, the next *Examine*, and finally *Create*. Student reflection rubrics and teacher rubrics are provided in the *JGB*

Thinkit unit. Teachers can use this lesson to teach the genre of memoir and the PLCS character themes of responsibility, cooperation, independence, or learning from mistakes. Cross curricular connections to science can be made as you study *Weather and Climate and History of the Earth*.

Extensions for Gifted Students:

General Intellectual Ability:
- Research other teenage trailblazers such as Ming Kipa Sherpa, John Tyler Hammons, Hou Yifan, or your personal choice. Compare and Contrast their achievements in a Venn diagram. (**ELA.W.6.7**)
- Propose an independent study for your teacher's approval for you to read and analyze 3 other memoirs or biographies about teens who have made heroic contributions to society or have achieved record setting goals. (**ELA.RI.6.9**)

Specific Academic Ability:
- English Language Arts**:** Write an argument on your choice of the following topics: My Success Hinges on taking Personal Responsibility or *Learning from My Past Mistakes has made Me a Better Person,* and have your article published in your school newspaper**. (ELA.W.6.1)**
- Math: Mountain Climbing is a central theme of the story. Plan a weekend hiking trip for your family to a Kentucky state park. Calculate expenses for the weekend including food, mileage and gasoline, hiking supplies, camping fees, etc. Calculate the percentages for each expense category and show your planned budget results on a graph.(**6.RP.3d**)
- Science**:** In a class debate, support the scientific theory of plate tectonics. (**MS.ESS2.3**)
- Social Studies**:** Create a topographical map of mountain ranges from 2 or more different continents; analyze their physical characteristics and populations. Compare the relationship between the characteristics, geographic location on the continent, and the influences on human settlement and employment. (**Social Studies. Big Idea Geography. Academic Expectation 2.19**)

Creativity:
- Using the technology of choice, design a tourism pamphlet to showcase the natural features of an imaginary mountain range you would invite others to climb. (**Technology. Big Idea Information, Communication, and Productivity. Academic Expectation 2.37**) (**ELA.SL.6.5**)

Leadership:
- Help your school plan a seminar entitled *Helping Middle School Students Set Academic and Personal Goals*. Plan the time, location, and guest speaker. (**PLVS. 2.37**)

Visual and Performing Arts:
- Music**:** Perform original song lyrics to describe at least 5 scientific terms necessary for understanding or surviving in a specific extreme environment on earth. (**Big Idea Purposes for Creating the Arts. Academic Expectation 1.14**)

- Research Latin American musical instruments; design a poster to be used as a classroom resource that organizes the instruments by classification of family, folk, or orchestral. **(Big Idea Structure in the Arts. Academic Expectation 1.14)**

- Art**:** Using technology of choice. Make a collage of photos or drawings of extreme environments from around the world. **(Big Idea Purposes for Creating the Arts. Academic Expectation 1.13)**
- Drama**:** With a class partner, research a teen trailblazer. Write the script for an interview with this teen. Take turns role playing the interview characters. **(Big Idea Processes in the Arts. Academic Expectation 2.22)**
- Dance**:** Create and perform a dance that uses the elements of space, level, time, and force to depict the struggle and success of Mark Pfetzer's mountain climbing achievements. **(Big Idea Process in the Arts. Academic Expectation 1.15)**
- Research the history of a popular Latin American dance to discover the purpose for its creation, ceremonial, recreational, or artistic expression. Invite a local dance instructor to teach it to you and your classmates. **(Big Idea Humanity in the Arts. Academic Expectation 2.24)**

Materials/Equipment:
- *Junior Great Books Thinkit Unit 5, Bad Mistakes on Aconcagua* by Mark Pfetzer and Jack Galvin or *Within Reach: My Everest Story* by Mark Pfetzer and Jack Galvin from which *Bad Mistakes on Aconcagua* is taken
- *The Young Adventurer's Guide to Everest* by Jonathan Chester

- Technology of Choice: PowerPoint, Prezi.com, Microsoft Publisher, Dictionary.com, etc.

References:
- Junior Great Books Foundation: *Thinkit*: *Critical Thinking Through Nonfiction Reading*
  Assessing Differentiated Student Products by Julia L. Roberts and Tracy F. Inman
- www.**greatbooks**.org/
- https://www.lexile.com/
- https://www.lexile.com/analyzer/
- http://www.education.noaa.gov/Special_Topics/Photos_and_Multimedia.html
- www.**curriculumproject**.com

Math Materials

Kindergarten- Measurement

LESSON PLAN Ref:	Mind Your Measurement

KCAS Standard: **K.MD.1** – Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object.   **K.MD.2** – Directly compare two objects with a measurable attribute in common, to see which object has "more of" / "less of" the attribute, and describe the difference. *For example, directly compare the heights of two children and describe one child as taller/shorter.*
NAGC Standard: **3.4 <u>Instructional Strategies.</u>** – Students with gifts and talents become independent investigators.   **4.5 <u>Communication Competence.</u>** – Students with gifts and talents develop competence in interpersonal and technical communication skills. They demonstrate advanced oral and written skills, balanced biliteracy or multiliteracy and creative expression. They display fluency with technologies that support effective communication.

Subject/Course:	MATH – Kindergarten		
Best Practices:	Digital Differentiation, Choice, Acceleration		
Lesson Title:	A Dot That Takes a Walk		
Grade Level:	Kindergarten	**Lesson Duration:**	1-3 days

Description of the Lesson: Students will discuss the definition of a line- a dot that takes a walk and listen to the book *The Line* by Paula Bossio. Students will review kinds of lines (straight/curved, thick/thin, short/tall).   Students will measure three lines drawn on a laminated sheet using a paperclip and record the lengths. Using three different objects for measurement (paperclip, domino, ruler), students will predict how many of each of the measurement objects it will take to measure three different objects in the room that represent 3D lines (ie. chair leg, table width, chalk tray).
Extensions for Gifted Students: **<u>General Intellectual Ability</u>**   • Students will solve problems that require deductive reasoning, logical elimination, and math skills called "Nutty Squirrels" from *Math Perplexors*.   **<u>Specific Academic Ability</u>**   • **English Language Arts**: After reading or listening to the book *Measuring Penny* in which a little girl measures different parts of her dog, students will create their own story "Measuring (insert pet's name)" using Bitstrips on iPads.   • **Science**: Using the book *A Tree is a Plant*, students will understand that trees have features to help them live in different environments. Students will create Venn diagrams about 2 trees of their choice and must include measurements in the list of features.   **<u>Creativity</u>**

- Using the book *Harold and the Purple Crayon* in which a boy has the power to create a world of his own by simply drawing it, students will understand theme of a story and how creativity is important to life. Students will create their own "Crayon" story that demonstrates lines and colors using paper, pencils, and crayons.

Leadership
- Students will nonverbally sort each other in a line by height. Students will reflect on the experience and discuss both the positive and negative characteristics of what makes a good leader (i.e. nice, no shoving, takes charge).

Visual and Performing Arts
- **Music**: Students will listen to the musical score created for *Harold and the Purple Crayon.* Students will predict what instruments are being played based on a laminated sheet of photos of different musical instruments. Students will sort pictures by size.
- **Visual Art**: Students will make tree paintings. Students will use a straw to drop paint on a horizontal line. Students will blow paint lines with the straw to make a tree painting and blot the paint dry. Students will add oil pastel colors to fill in organic shapes created from paint lines surrounding the tree branches. Students will trace then entire tree with black. Students will measure and label tree trunk and three tree branches.
- **Dance**: Students will identify, describe, and measure various lines. Students will create their own "A Dot That Takes a Walk" [iMovie](#) demonstrating locomotor movements using iPads or flip cameras.

Materials/Equipment:
Math Perplexors from MindWare
The Line by Paula Bossio
Harold and the Purple Crayon by Crockett Johnson
Measuring Penny by Loreen Leedy
A Tree is a Plant by Clyde Robert Bulla
Max Mueller's musical score to *Harold and the Purple Crayon*-
https://www.youtube.com/watch?v=gXlExbwlzac&list=PLMsRgheOTa0a0LQqGQCSpjg3__PTl5Oj_&feature=mh_lolz
Art Supplies: paper, black paint, clear drinking straws, oil pastels, paper towels
Tech Tools: iPads, flip cameras

References:
"Math Centers and Agendas," Janet Lynne Tassell. *Differentiation Instruction with Centers in the Gifted Classroom for Grades K-8*
The Line:
Paula Bossio website: http://paulabossio.com/about/
Harold and the Purple Crayon:
Read aloud video:
https://www.youtube.com/watch?v=ZVaOOgWyvJM&list=PLMsRgheOTa0a0LQqGQCSpjg3__PTl5Oj_&index=3

Video: https://www.youtube.com/watch?v=ZQFh8AtH28k
TeacherTube: http://www.teachertube.com/viewVideo.php?video_id=147571
Website: http://www.k-state.edu/english/nelp/purple/books/harold.html
Lexile: 490L https://www.lexile.com/fab/results/?keyword=harold+and+the+purple+crayon
Quantile: https://www.quantiles.com/tools/quantile-teacher-assistant/knowledge-cluster/?statestandard=31891

LESSON PLAN Ref:	Rainbow Math with Gifted Extensions: Operations and Algebraic Thinking

KCAS Standard:
1.OA.1: Students will use addition and subtraction within 20 to solve word problems involving situations of adding to, taking from, putting together, taking apart, and comparing with unknowns in all positions, e.g., by using objects, drawings, and equations with a symbol for the unknown number to represent the problem.   **1.OA.4:** Students will understand subtraction as an unknown-addend problem *(i.e.: subtract 10-8 by finding the number that make 10 when added to 8).*   **1.OA.5**: Students will relate counting to addition and subtraction *(e.g.:, by counting on 2 to add 2).*   **ELA.W.1.5:** Students will write with guidance and support from adults, focus on a topic, respond to questions and suggestions from peers, and add details to strengthen writing as needed.   **ELA.W.1.8:** Students will write with guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question.   **ELA.W.1.2:** Students will write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure.   **ELA.SL.1.5:** Students will add drawings or other visual displays to descriptions when appropriate to clarify ideas, thoughts, and feelings.   **K.LS.1.1:** Students will use observations to describe patterns of what plants and animals need to survive.   **K.ESS.2.1:** Students will use and share observations of local weather conditions to describe patterns over time.   **SS.EP.4.4.1:** Students will describe ways people adapt to/modify the physical environment to meet their basic needs.   **SS.EP.5.1.1:** Students will use a variety of primary and secondary sources to interpret data.   **AH.EP.4.4.2:** Students will choose media to create artworks with a basic understanding of how to use the media.   **AH.EP.4.1.4:** Students will sing and play alone simple rhythmic or tonal patterns by reading simple music notation.   **AH.EP.4.1.5:** Students will sing and play alone and with others a varied repertoire of music.   **AH.EP.4.3.1:** Students will perform in dramatic situations that incorporate Literary, Technical, and Performance elements.

NAGC Standard:
3.2.: Students with gifts and talents become more competent in multiple talent areas and across dimensions of learning.   **3.3.:** Students with gifts and talents develop their abilities in their domain of talent and/or area of interest.   **3.4.:** Students with gifts and talents become independent investigators.

Subject/Course:	Mathematics/Operations and Algebraic Thinking		
Best Practices:	Choice, Effective Questioning, Digital Differentiation, Real-World Connections		
Lesson Title:	Rainbow Math		
Grade Level:	1	**Lesson Duration:**	1 day

Description of the Lesson:
As a whole class, students are each given math manipulatives of 10 Skittles or a small box of Fruit Loops, and a teacher-created chart organized in columns of 1s, 2s, 5s, and 10s. Students will count by 1s, 2s, 5s, and 10s, listing numbers in the specified columns. *(i.e.: A student with 10 Skittles will separate Skittles in groups of two and count verbally 2, 4, 6, 8, 10 and write those numbers in the 2s column).*

Next, students will count the number of each color of Skittle or Fruit Loops *(results will vary),* and create a bar graph of data.

Then, students will then create flash cards with missing addends using Skittles/Fruit Loops as counters (8+_=10). Each number will be written on a separate line in a different color.

Finally, students will be given a blank fish activity sheet, where they will place Skittles/Fruit Loops as imaginary scales. Students will listen as Ernest Borgnine reads, *Rainbow Fish* by Marcus Pfister from Storyline Online. Each time Rainbow Fish gives a shiny scale away, students will take a Skittle/Fruit Loop away and write a subtraction problem, such as 10-1=9. Students will lead an open discussion about their subtraction problems and why it made Rainbow Fish happy to give away his beautiful scales. While Gifted students work on extension activities, students will review their handmade addition and subtraction cards, and quiz a partner.

The activity will end with the entire class relocating to the gym or playground to play a math game with the handmade flash cards. One student will be the shark, while the other students are numbered and pretend to be fish. Students will ripple the parachute to imitate waves. The teacher will call out a math question, such as, *"Ten minus what number equals three?"* Students who represent the numbers ten, three, and seven must quickly run under the parachute before the shark tags them. If a child is tagged, they become the shark for the next round.

Extensions for Gifted Students:
General Intellectual Ability:
- Students will pretend they are Rainbow Fish. In the story, Rainbow Fish gives his shiny scales to his friends, subtracting his shiny scales one at a time. What other life forms have objects that they can give away or subtract? Students will write their responses in a journal. (ELA.W.1.5)
- Students will work with a partner, using effective questioning to answer the question, *"What would have happened if Rainbow Fish had not given a shiny scale to that character?"* Students will list the negative events that would have occurred, and then subtract a negative event each time they recall a positive event that became of Rainbow Fish's generosity. *Were there more negatives or positives?* (ELA.W.1.8)

Specific Academic Ability:
English Language Arts:
- Students will have a choice of writing an acrostic poem about Rainbow Fish from the words FISH, RAINBOW, or BUBBLES. Students will total the number of letters used in each line. (ELA.W.1.2)

- Students will create a picture book, retelling the story of Rainbow Fish. Students will use words such as subtract or take away to describe Rainbow Fish giving another scale away, as well as writing the math problem at the bottom of the page. (ELA.SL.1.5)

Math:
- Students will play the *Rainbow Fish Maths Game* in groups of four. Students will take turns rolling a di to move spaces on the game board. Each space directs students to add or subtract a scale to their fish. The first person to have ten scales or the most scales at the end of the game is the winner. (1.OA.5)
- Students will use tablets to look up the colors of the rainbow, then look around the classroom to see how many rainbow colors they can see from their seat (red, orange, yellow, green, blue, indigo, and violet). Students will find the sum of each by creating a bar graph for each color. (1.OA.5)

Science:
- Students will use effective questioning and imagine what it would be like to be rainbow fish. Students will watch a clip from *The Incredible Mr. Limpet* and use numbers and a T-chart to list the positive/negative things a fish would encounter. Students will classify fish (plankton, nekton, benthos, etc.) and other ocean life forms using www.kidsgeo.com. Students may also make a picture graph of the number of ocean life forms they can classify for each area. (K.LS1.1)
- Students will work with a partner to discuss weather conditions necessary to create a rainbow (rain, sunlight, etc.). Students will create a weather forecast that will include an opportunity for rainbows. *(Example: A student might have two days of sunny weather, two days with a chance of showers, and three days for heavy rain.)* Students will create math problem based on their forecast (e.g., 7 days-2 sunny days=5 rainy days, etc. Forecasts and answers will vary. (K.ESS.2.1)

Social Studies:
- Students will connect the story of Rainbow Fish with real-life events. Students will research the effects of humans on ocean life forms, and make a list of pros/cons. Students will research and count the number of oil spills in the last twenty years. (SS.EP.4.4.1)
- Students will use tablets to research Sir Isaac Newton, the first to explain how a rainbow forms. Students will first use paper and pencil to subtract the year he was born from 2014 to see how old he would be today. Students will check their work with a calculator. (SS.EP.5.1.1)

Creativity:
- Students will reuse items such as CDs, water bottles, Popsicle sticks, paper, and buttons to make their own version of *Rainbow Fish.* Students will count the number of objects used to create their *Rainbow Fish.* (AH.EP.4.4.2)
- Students will take a bucket of broken crayons and pick out a handful (roughly 20). Students will count out (add) the number of broken crayons, and then create a plan for a product called the Rainbow Crayon, that would be made by using their broken crayons. (AH.EP.4.4.2)

Leadership:
- Students will write about a time they gave away/subtracted something that was special to them with someone they love (toy, game, etc.) Students must tell how it felt to give something away one at a time. *Were there any remaining?* (ELA.SL.1.5)

- Students will make a list of items that are valuable to them, and subtract one thing from that list that they would give to someone in need. (ELA.SL.1.5)

Visual and Performing Arts:

Art:
- Students will research the number of colors in the rainbow and create a picture of a rainbow using forms of mixed media, numbering and writing the name of each color in the correct order in the rainbow. (AH.EP.4.4.2)
- Students will use "Rainbow Writing" (use 3 or more crayons) to write their numbers from 1-20. Students will then count by 2s, 5s, and 10s to get from 1 to 20. Students will relate counting by those numbers to adding by 2, 5, or 10. (1.OA.5)

Music:
- Students will sing and clap the rhythm of "I Wish I Were a Fish" with Henry Limpet. The teacher will turn the song off at random, and students will count the number of beats that were clapped. (AH.EP.4.1.4)
- Students will write their own song about Rainbow fish, using words that will describe his total number of shiny scales and how many he has each time on is subtracted. (AH.EP.4.1.5)

Drama:
- Students will create a skit about *Rainbow Fish* giving away/subtracting his scales, and act it out in front of the class. (AH.EP.4.3.1)
- Students will write a play about how the rainbow got its colors, adding one color at a time. (AH.EP.4.3.1)

Dance:
- Students will play musical chairs with movements that mimic swimming to the tune of "I Wish I Were a Fish". One student at a time will be subtracted from the group. (AH.EP.4.2.1)
- Students will work in a group to create movements that represent movements that would represent a happy fish, an angry fish, a sad fish, and a scared fish. Students will count the number of movements per mood, and then discuss which mood had the most movements. (AH.EP.4.2.1)

Materials/Equipment:
ELMO Projector
YouTube connection
Computer

References:
CE Vector Website (Free Fish Outline)
http://www.cevector.com/ilustration/outline-of-a-fish-post-2
KidsGeo Website
www.kidsgeo.com
TES Connect Website: *(free membership required to access Rainbow Fish Maths Game)*
http://www.tes.co.uk/TaxonomySearchResults.aspx?parametrics=40002,40057,40058&event=23&mode=browse
Read Write Think Website (T-Chart Graphic Organizer)
http://www.readwritethink.org/classroom-resources/printouts/chart-30225.html
Storyline Online Website (Rainbow Fish Read by Ernest Borgnine

www.storylineonline.net
YouTube (*I Wish I Were A Fish* from *The Incredible Mr. Limpet)*
http://www.youtube.com/watch?v=sItfoiWpnb8

LESSON PLAN Ref:	Equal Grouping Unit (foundations of multiplication)		

KCAS Standard:
2. OA.3 Determine whether a group of objects (up to 20) has an odd or even number of members, e.g., by pairing objects or counting them by 2's to write an equation to express an even number as a sum of two equal addends.

NAGC Standard:
3.3 Students with gifts and talents develop their abilities in their domain of talent and/or area of interest.

Subject/Course:	Math		
Best Practices:	Choice, Acceleration		
Lesson Title:	Skip-counting		
Grade Level:	2nd	**Lesson Duration:**	varies

Description of the Lesson: During this unit on foundations of multiplication, the teacher will pre-assess students to determine their current understanding about the basics of equal grouping used to begin multiplication. The teacher will provide students with a variety of ways to investigate equal grouping through studying even numbers, and skip counting. The teacher will read the story *Even Steven and Odd Todd.* Students will be provided a number(s) up to 20. They will use manipulatives to determine if their number belongs to Odd Todd or Even Steven. Students will place their number and a picture representation on a cut out of Odd Todd or Even Steven. The teacher will make a connection about how you can count things that are even by skip counting by 2's. Based on the pre-assessment below are extension or enrichment activities that you could use with Primary Talent Pool Students.

Extensions for Gifted Students:
General Intellectual Ability
- Students will brainstorm a list of things that come in pairs (i.e. eyes, bicycle wheels, twins, etc.). From this list, students will create at least three word problem using the different things that come in pairs. Example, a child was in a bicycle shop. They counted twenty bicycle wheels. How many bicycles were in the shop? Solutions must be provided.
- The students will create repeated addition and multiplication sentences to match the numbers on Even Steven (i.e. 6 is the same as 2+2+2 or 3 groups of 2 =6 or 3 x 2=6) (**3.NBT.3**)

Specific Academic Ability
- **English Language Arts (ELA)**: Students will answer the following journal prompt. Is it always true that when you add two even numbers the sum will always be a multiple of 2 and even? They will provide at least three examples to prove their position on this statement.

- **Math**: Students will use a hundreds chart to look at the qualities of even numbers. From this discovery, students will determine a rule that lets you know how you can tell

if any number is odd or even. They will provide several examples that prove their theory.

Creativity
- Students will write from the perspective of Odd Todd and tell about their experience visiting Even Steven. They will describe their position of why they prefer odd things instead of even by using at least two examples from the text.

Leadership
- Students will present or write a position paper on ways to deal with peers who may differ from us. They will determine strategies that Even Steven can use to appreciate the differences of his cousin Odd Todd.

Visual and Performing Arts
- Students create a verse to the beat of the "Ants go Marching One by One". Students determine a land animal that goes walking two by two. They create an illustration to go along with their new verse. They have to determine the number of animals that went walking two by two, and then total amount of legs that took the trip. (Ex: Six dogs go marching two by two hurrah, hurrah) Their illustration has to include the number of land animals and an equation to determine the number of legs that go marching two by two.

Materials/Equipment:
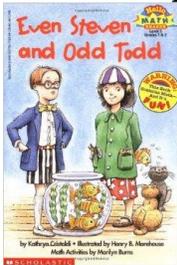
 Even Steven and Odd Todd

You Tube Video
(if students are unfamiliar with the "Ants go Marching" they may listen to this version)
http://www.youtube.com/watch?v=ARfLaNJcpsw

Teacher created cut out of Even Steven and Odd Todd

References:

www.quantiles.com

LESSON PLAN Ref:	Geometry Unit

KCAS Standard: 2.G.1
Recognize and draw shapes having specified attributes, such as a given number of angles or a given number of equal faces. Identify triangles, quadrilaterals, pentagons, hexagons, and cubes.

NAGC Standard:
3.3 Students with gifts and talents develop their abilities in their domain of talent and/or area of interest.
3.4 Students with gifts and talents become independent investigators.

Subject/Course:	Math		
Best Practices:	Independent Study, Acceleration		
Lesson Title:	Exploring Polygons		
Grade Level:	2nd grade	**Lesson Duration:**	Varies

Description of the Lesson: This is one of the activities that the teacher will do during their unit on geometry. The teacher will read aloud *The Greedy Triangle.* Students will discuss the attributes of various shapes in the book. Teacher will introduce the term polygon to students. Students will experiment with the geoboard to explore the shapes from the story. They will work to label sides and corners to identify specific shapes. Using geoboard paper, students will create one of the shapes from the story and correctly label the attributes. Throughout this unit, the teacher will do a variety of formative assessments to determine students who need an enrichment activity in lieu of the regular/comprehensive assignment. Below you will see extensions that can be used for the Primary Talent Pool Students

Extensions for Gifted Students:
General Intellectual Ability
- Students will begin to categorize pictures of shapes into different categories (i.e. quadrilaterals vs. non-quadrilaterals). Partners will discuss similarities and differences. They will look for real-life examples of these polygons. Students will determine one shape to defend to the shape shifter (teacher) as to why he should not allow the shape to transform by defending the loss it would have on the environment if this shape disappeared.
- Students will use online research materials (i.e. Encyclomedia) to view videos that describe polygons and their attributes. They will create a presentation (i.e. Prezi, PowerPoint, etc.) to the class using their research from the videos on the various types of polygons in our environment.

Specific Academic Ability
- **English Language Arts (ELA):** Students will work with word cards to categorize words with similar prefixes (ex: Triangle, tricycle, triplets). They will use this understanding to develop a definition of their prefix. They will create a new silly word using their prefix (ex: Tri-monster- a monster with three scary heads) (**RF3.3**)

- **ELA**: Students will create a literary story with a different polygon as the main character. They will determine their story elements by using *The Greedy Triangle* as the model.(**W.3.3b**)

Creativity
- Using a geoboard, students will create a new polygon that was not in the book. They will determine a name for their new shape. They will identify the attributes of the shapes.

- Students will take on the personality of a shape in a writing piece. They will use their imagination to write in their chosen shape's diary critiquing the reasons why they should not visit the shape shifter by noting their strengths.

Leadership
- Students will discuss characteristics of greed in the book and qualities of greed seen in their real world. Individual or partners will develop a short conflict resolution lesson to teach students about the characteristics of greed and how to avoid having these qualities in their classroom.

Visual and Performing Arts
- **Music:** After viewing a couple of videos on polygons (listed in materials), students will create their own song about a polygon(s).
- **Art**: Students will discuss how polygons are used to create artwork. Students will examine selected art work that utilizes polygons (i.e. Picasso, Paul Klee, and Andrew Goldsworthy). Students will then create their own art masterpiece that uses at least three polygons. They will title their artwork.
- **Drama:** Students will use their bodies to act out the transformation of the triangle in the book as one child acts as the narrator of the story.

Materials/Equipment:
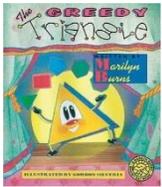
 The Greedy Triangle by Marilyn Burns

Art work images by selected artists (i.e. Picasso, Paul Klee, and Andrew Goldsworthy)

Construction paper, canvas, etc. to develop their artwork

http://www.ket.org/encyclomedia/

Songs on YouTube about Polygons
- http://www.youtube.com/watch?v=3H7xKX78wWg
- http://www.youtube.com/watch?v=030irTbckkg

References:

www.quantiles.com

LESSON PLAN Ref:	3rd Grade Area/Perimeter

KCAS Standard:
ELA: ELA.W.3: Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.
Math: 3.MD.5: Recognize area as an attribute of plane figures and understand concepts of area measurement. a. A square with side length 1 unit, called "a unit square" is said to have "one square unit" of area, and can be used to measure area. B. A plane figure which can be covered without gaps or overlaps by *n* unit squares is said to have an area of *n* square units.
Science: 3-5-ETS1-1: Define a simple design problem reflecting a need or a want that includes specified criteria for success and constraints on materials, time, or cost.
3-5-ETS1-2: Generate and compare multiple possible solutions to a problem based on how well each is likely to meet the criteria and constraints of the problem.
Social Studies: 2.19 Students recognize and understand the relationship between people and geography and apply their knowledge in real-life situations.
Music: **AH-EP-4.1.5** Students will sing alone and with others a varied repertoire of music.
Art: AH-EP-1.4.1 Students will identify or describe elements of art and principles of design in works of art. In the extensions section, this lesson relates to the Element of Art: form.
Drama: AH-EP-4.3.1 Students will perform in dramatic situations that incorporate Literary, Technical and Performance elements.
Dance: **AH-EP-4.2.1** With a partner or in a small group, students will perform dances using the elements of dance and various movements.

NAGC Standard:
1.6 *Cognitive and Affective Growth*. Students with gifts and talents benefit from meaningful and challenging learning activities addressing their unique characteristics and needs.
1.7 *Cognitive and Affective Growth*. Students with gifts and talents recognize their preferred approaches to learning and expand their repertoire.
2.2 *Identification*. Each student reveals his or her exceptionalities or potential through assessment evidence so that appropriate instructional accommodations and modifications can be provided.
2.6 *Evaluation of Programming*.
Students identified with fits and talents have increased access and they show significant learning progress as a result of improving components of gifted education programming.

Subject/Course:	Math		
Best Practices:	Choice, Multiple Assessment, Independent Study		
Lesson Title:	Area and Perimeter		
Grade Level:	3rd	**Lesson Duration:**	Varies

Description of the Lesson: In the regular classroom, students will explore area and perimeter. Students will visit the "Everything you wanted to know about Area and Perimeter" website to further explore the topic (see references below).

Students will use 1" grid paper to create one building (they could color/decorate their building) and glue it onto their construction paper. They will find the area and perimeter of the building.

Next, students will create other buildings on their grid paper of various shapes and sizes to create a cityscape. They will cut the other buildings out and glue onto colored construction paper. Students will then find the perimeter of each building. Students will also find the area of each building. At the end, students will find the total area and perimeter of their city scape.

Extensions for Gifted Students:
General Intellectual Ability
- Students could pretend that a new city is being built. The city commissioner wants equal amounts of park/green space and housing space, but also wants plenty of shopping and industrial space. Use your problem solving skills to create a city that has equal parts of park and housing as well as plenty of shopping and industrial space. Include the area and perimeter of each area, as well as the total area of the whole city on your blue prints.

Specific Academic Ability
- **English/Language Arts:** Students can write in words, explaining their thinking of how they find the area and perimeter of a city. Students could even turn their writing into a book. (ELA.W.3)
- **Math:** Instead of just finding the area and perimeter, students could begin to explore the volume of their city. (3.MD.5)
- **Science:** Students will use effective questioning as they pretend to be an engineer. Examples: What other things would their city need to be an effective city? Example: bridges, sidewalks, streets, etc. Why would an engineer need to know the area and perimeter and how would they build these things in their city? Students will use grid paper to draw a scale aerial version of their city including the improvements. (3-5-ETS1-1 and 3-5-ETS1-2)
- **Social Studies:** Let students choose a famous building or landmark (example: the pentagon). Use Google Earth to see an aerial view of the building or landmark they choose. Students will do research to figure out the perimeter of the building, and then they will figure out the area of the building. (2.19)

Creativity
- Students will design an aerial view of their dream house. What will be the size and shape of each room?

Leadership
- The student is the leader of a city. The student will take a poll of the class to find out what area of the city is most wanted: park/green space, housing, industrial, or shopping. Students will create a city that shows what kind of city YOUR class would want.

Visual and Performing Arts
- **Music**- Students will create a song that explains how to find the area and perimeter of shapes. (AH-EP-4.1.5)

- **Art**- Students will create a 3-D city using manipulatives. Students will find the area and perimeter of their city. They could even begin to explore the volume of their city. (AH-EP-1.4.1)
- **Drama-** Using several students in the class, students can create a skit or play that shows how to find the area and/or perimeter of a city. (AH-EP-4.3.1)
- **Dance-** Students will create a dance that shows how area can decrease or increase based on if you are standing high or low, or if you have one or two people included in the dance. (AH-EP-4.2.1)

Materials/Equipment:
1" grid paper
Scissors
Pencils
Crayons/markers/colored pencils
Colored Construction paper

References:
Quantile Website:
https://quantiles.com/

Google Earth:
http://www.google.com/earth/

Build your own online city:
http://www.planitgreenlive.com/en/build-your-own-city

"Everything you wanted to know about Area and Perimeter" online game:
http://www.bgfl.org/bgfl/custom/resources_ftp/client_ftp/ks2/maths/perimeter_and_area/index.html

LESSON PLAN Ref:	Number and Operations in Base Ten – Decimals for 5th grade

KCAS Standard:

5.NBT.7 – Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.

NAGC Standard:

3.1. – Curriculum Planning – Students with gifts and talents demonstrate growth commensurate with aptitude during the school year.
3.3. – Students with gifts and talents develop their abilities in their domain of talent and/or area of interest.

Subject/Course:	Math		
Best Practices:	Accelerating by subject, Digital Differentiation		
Lesson Title:	Using Decimals for real purposes		
Grade Level:	5th	**Lesson Duration:**	1 hour approximately

Description of the Lesson:
The classroom teacher has taught the students how to add, subtract, multiply, and divide decimals to hundredths by using multiple strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. The teacher will hang pieces of chart paper throughout the room highlighting various strategies to demonstrate how to solve the operations. Each strategy will be titled on the chart papers (and can include, but not be limited to) the strategies of: bar model, area model, standard algorithm, fair sharing model (grouping), number line model, fractions, powers of tens, place value model, using base ten blocks, etc… Students will be paired as partners and given an addition, subtraction, multiplication, or division problem involving decimals to the nearest hundredth. Each pair of students must demonstrate the answer to their problem by using three different strategies on the chart paper strategies listed on the wall. The class will conduct a share square to reflect/record their thinking regarding each strategy to address misconceptions and clarify their own understanding of the strategies. Afterwards, individual students will complete a constructed response explaining one of the strategies they used in solving the problem.

Extensions for Gifted Students:

General Intellectual Ability and/or Creativity:
- Students will create a game that is modeled from Monopoly. (The money should include both dollars and cents.) Property and item cards must have decimals to the nearest hundredth represented. Chance cards should be included as strategy solving cards. Students must show their work using a varied strategy in order to advance forward on the Monopoly board. The players must be able to add and subtract decimals throughout the game and keep a running total of their profits/losses. (5.NBT.7)

- Students will design a PowerPoint or digital presentation/video that teaches other students how to multiply fractions with visual representations. Students can use this link as an example in designing. https://learnzillion.com/lessons/555-multiply-decimals-to-the-hundredths-by-using-fractions Students can import drawings or pictures to help in their explanation of how to multiply fractions. (5.NBT.7)
- Students will design an artistic, 2-dimensional representation of a function machine that will add, subtract, multiply, and divide decimals. The machine must provide detailed information on how it works and provide at least 1 solved example problem for each function it completes. For example, the center of the machine would spin a specific decimal to the hundredth. Then, another decimal to the nearest hundredth would be dropped in the top of the machine as the "input." Another decimal to the nearest hundred would complete the function of adding through a slide and subtracting through a conveyor belt, multiplying through a tube, and dividing through a special side compartment, etc… students will provide at least one solved problem as a caption near where the "output" of each machine works. (5.NBT.7)

Specific Academic Ability:
- **English Language Arts:** Student can complete the following writing prompt: A student in Mr. Jones' classroom always relies on solving problems with decimals on his calculator. One day the decimal button becomes broken on the calculator. Write a story about how the student can solve addition, subtraction, multiplication, or division problems without the use of a calculator. Be sure to "highlight or bold" some helpful hints or phrases in your story to help the student remember how to solve the operations. (ELA.W.5.2) (5.NBT.7)
- **Math:** Once a student has mastered the standard of adding, subtracting, multiplying, and dividing decimals through a formative assessment, the student can begin to use ratio and rate reasoning to solve real world and mathematical problems. Students can begin comparing decimals with percentages. Students will find five items of interest and record the original and sale prices from online shopping sources or newspaper advertisements. Then, students will determine the percentage that was discounted, based on the difference of the original and sale price in ratio format. Students will choose another store and complete the process of determining the original and sale prices of the same items. Then, students will judge which store provides the better discounts overall. (6.RP.3)
- **Math:** Students will be given menus from local restaurants with various prices to the nearest hundredths. Students will add the total of the complete meal, selecting an appetizer, main course, dessert, and beverage. Then, the student will multiply the total by the current state tax, city tax, and/or restaurant tax in the town to find the grand total amount he/she would spend on a meal. Then, students will determine the amount of tip (the choices of: 15%, 18%, and 20%) to leave the waiter/waitress based on the grand total amount of the bill. Afterwards, students will look on the menu to determine the most cost effective full course meal and compare the prices with the most expensive full course options that the menu provides. (5.NBT.7) (6.RP.3)
- **Science:** Students will research the amounts and percentages of water and fresh water in various reservoirs throughout the Earth. Students will find statistics to the nearest hundredth, regarding the average amount of water in three different lakes. Students will

compare the percentages/decimals and determine the difference in average water levels that each lake maintains. Then, students will analyze the impact that these three lakes have on human activities and recommend the best lakes to conduct specific activities (for example, hydro-electric power, fishing, etc…) (ESS2.C) (ESS3.C) (5.NBT.7)

- **Social Studies:** Students will choose 3 specific event locations that happened in U.S. History. Record the city and state of each location. Then, go to an online map website, like MapQuest or Google Maps, and find the calculated distance to the nearest hundredth between your home and each separate location that you have chosen. Print each map detailed report and add the total round trip distance you would travel to each location. Then, add a grand total of mileage traveled, if you planned three separate trips from your house to these locations within a year. Choose your favorite event location and create a path across the continental United States that will be the longest route from your home and determine the round trip total. Then, create a route that will be the shortest from your home to the destination and determine the round trip total. (SS-05-5.1.1) (5.NBT.7)

Creativity:
"See lesson above with General Intellectual extensions"

Leadership:
- The student will divide the activities or amount of time spent on subjects during the regular school day. Each amount of time that is spent on various subjects will be turned into a percentage and decimal to represent the average amount of time spent on subjects during the regular 5th grade school day. After analyzing the amount of time spent on each subject, justify which subject(s) need more and less time. Then, taking a leadership role in the school, present your findings and your analysis to the principal, administration, or school leader about what subject you think should be the longest part of the day and how the schedule should be adjusted. (**5.NBT.7**) (**6.RP.3**)

Visual and Performing Arts:
- **Music**: Students will create a song or rap that illustrates one of the strategies to follow when adding, subtracting, multiplying, or dividing decimals. (**AH-05.4.1.1**) (**5.NBT.7**)
- **Art**: Students will design a colorful mosaic, based on a specific number of perfect squares. Then, the student will determine decimal, percentage, and fraction equivalents of the mosaic. This website will provide the format and foundation of the lesson. http://mason.gmu.edu/~jsuh4/math%20masterpiece.pdf (Website link is not Mac compatible) (**AH-05.4.4.1**) (**AH-05.4.4.2**) (**5.NBT.7**)
- **Drama:** Students will write a short script or improvise a skit that will highlight the strategies to follow when adding, subtracting, multiplying, or dividing decimals. Students will need to determine the setting and scenery for their dramatization. (**AH-05.4.3.1**) (**AH-05.4.3.2**) (**5.NBT.7**)

Materials/Equipment:
- Chart paper and/or clip boards for original lesson

- Construction paper/cardboard, markers, scissors, and colored paper to design the Monopoly-type game for a GI/CR extension
- Computer with Microsoft PowerPoint or access to Prezi or other online presentation software and a camcorder for a GI/CR extension
- Newspaper circulars or advertisements or online shopping sites for one of the math extensions
- Local Menus or access to menu prices online for one of the math extensions
- Access to online mapping services, like MapQuest for the social studies extension
- Construction paper, scissors, and glue needed for the art extension mosaic.

References:

- **Books:**
  N/A

- **Websites:**
  - The link below is for the 5th grade Common Core Math Flip Book, regarding the standards.
    http://katm.org/wp/wp-content/uploads/flipbooks/5th-Flipbookedited2.pdf

  - This site provides an example of how to create a video demonstrating how to multiply decimals, using pictures or manipulatives in the GI/CR extension.
    https://learnzillion.com/lessons/555-multiply-decimals-to-the-hundredths-by-using-fractions

  - Here are some online map websites to use with the social studies extension:
    - https://maps.google.com/
    - http://www.mapquest.com/
    - https://maps.yahoo.com/
    - http://www.bing.com/maps/

  - *This site is to be used with the art extension of creating a mosaic with construction paper squares.* http://mason.gmu.edu/~jsuh4/math%20masterpiece.pdf (This link is not Mac compatible.)

LESSON PLAN	Making and Investigating fraction strips
KCAS Standard: **3.NF.A. Number and Operations- Fractions**: Understand a fraction 1/b as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction a/b as the quantity formed by a parts of size 1/b. **4.NF.A. Number and Operations- Fractions**. Explain why a fraction a/b is equivalent to a fraction (n x a)/(n x b) by using visual fraction models, with attention to how the number and size of the parts differ even though the two fractions themselves are the same size. Use this principle to recognize and generate equivalent fractions. **5.NF.B.3. Number and Operations- Fractions**. Interpret a fraction as division of the numerator by the denominator (a/b = a ÷ b). Solve word problems involving division of whole numbers leading to answers in the form of fractions or mixed numbers, e.g., by using visual fraction models or equations to represent the problem. For example, interpret 3/4 as the result of dividing 3 by 4, noting that 3/4 multiplied by 4 equals 3, and that when 3 wholes are shared equally among 4 people each person has a share of size 3/4. If 9 people want to share a 50-pound sack of rice equally by weight, how many pounds of rice should each person get? Between what two whole numbers does your answer lie? **3.G.A.2: Geometry:** Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. For example, partition a shape into 4 parts with equal area, and describe the area of each part as 1/4 of the area of the shape	
NAGC Standard: **2.1** Teachers must differentiate, replace, supplement, or Modify curricula to facilitate higher level learning goals. **2.2** Means for demonstrating proficiency in essential regular curriculum concepts and processes must be established to facilitate appropriate academic acceleration. **2.3** Gifted learners must be assessed for proficiency in basic skills and knowledge and	

Subject/Course:	Math		
Topic:	Understanding fractions as a number		
Lesson Title:			
Grade Level:	4	**Lesson Duration:**	1-3 days
Description of the Lesson: http://illuminations.nctm.org/Lesson.aspx?id=1724 Students make and use a set of fraction strips to represent the length model, discover fraction relationships, and work with equivalent fractions.			

- Guided Whole Group work

1. When you folded your strip into two prts, what fraction of the whole strip did one strip represent? [1/2]
2. When you folded your strip into four parts, what fraction of the whole strip did one strip represent? [1/4]
3. What other fractions have the same value as 1/2? [2/4, 3/6, 4/8]
4. What other fraction has the same value as 2/3? [4/6]
5. What do you notice about the fractions that are the same as 1/2? [Prompt students to examine the relationship between the numerator and the denominator. Students should notice that the denominators are always double the numerators.]
6. Can you identify other fractions for which there are no fraction strips that are the same as 1/2 based on this pattern? [Accept any equivalent fraction such as 6/12, 7/14, 8/16, 9/18, 10/20.]
7. For each of the strips (halves, fourths, sixths, eighths), we can show a fraction equivalent to 1/2. Why do we not include 1/2 of our thirds strip? [These pieces cannot be divided evenly into halves. Prompt students to also notice that the denominators are even for those fractions that can be divided into 1/2s.]

Examining students' recordings and written reflections can be helpful in making instructional decisions about their understanding of fraction relationships.

Extensions for Gifted Students:

General Intellectual Ability:
- Problem solving - Stuffed with Pizza
- Tito and Luis are stuffed with pizza! Tito ate one-fourth of a cheese pizza. Tito ate three-eighths of a pepperoni pizza. Tito ate one-half of a mushroom pizza. Luis ate five-eighths of a cheese pizza. Luis ate the other half of the mushroom pizza. All the pizzas were the same size. Tito says he ate more pizza than Luis because Luis did not eat any pepperoni pizza. Luis says they each ate the same amount of pizza. Who is correct? Show all your mathematical thinking.

http://schools.nyc.gov/NR/rdonlyres/D0A70F2D-1133-418C-B68F-95E6D714F357/0/NYCDOEG5MathStuffedwithPizza_Final.pdf

- The Mangoes Problem
  As a group, or independently work to solve the following problem. Explain your strategy and the reason you chose that strategy. One night the King couldn't sleep, so he went down into the Royal kitchen, where he found a bowl full of mangoes. Being hungry, he took 1/6 of the mangoes. Later that same night, the Queen was hungry and

couldn't sleep. She, too, found the mangoes and took 1/5 of what the King had left. Still later, the first Prince awoke, went to the kitchen, and ate 1/4 of the remaining mangoes. Even later, his brother, the second Prince, ate 1/3 of what was then left. Finally, the third Prince ate 1/2 of what was left, leaving only three mangoes for the servants. How many mangoes were originally in the bowl?

Specific Academic Ability:
- Language Arts:Writing Prompt: Create a picture of a fictional town that represents the homes, business, restaurants and green spaces in fractional terms. Write a story that explains why each part of the town is represented by a particular fraction.
- Science: Select an animal that can be observed on our school grounds on a daily basis. Collect predetermined data about the frequency or type of animal you view. Create a report on that particular animal in fractional terms. For example, document how many and type of birds observed daily before class starts. Then create a report that shows your findings using fractions and analyze your data.

Acceleration:
- Use a drawing to explain why 2/4 is equal to 1/2.
- Write an explanation with diagrams to show why 2/5 is less than 4/7.
- Sketch Fraction Bars to show that 2/3 ÷ 1/6 is equal to 4.
  Draw a diagram to show why 1/2 times 1/3 is equal to 1/6

Shading Blank Fraction Bars to See Inequalities
Shading Blank Fraction Bars to See Equality and Inequality
Shading Blank Fraction Bars to See Inequality Relationships
Shading Blank Fraction Bars to Approximate Sums and Differences
Shading Blank Fraction Bars to Determine Products of Fractions
Shading Blank Fraction Bars to Determine Quotients of Fractions

Creativity:
- Design a mural or pixel wall that visually represents even number fractions. The fractions could be represented by color, shape, line, textures, or media. For example, 1 half of the wall is blue, etc…

Leadership:
- Create a class demonstration that shows the understanding of equivalent fractions using kid friendly terms, simulations or materials. Present demonstrations to class or small group.

Visual and Performing Arts:

- Visual: Using a digital graphic design program or any art medium preferred, create a work of 2D or 3D of art that represents the use of equivalent fractions.
- Music: Create a song to a popular tune that reflects the students understanding of equivalent fractions.
- Dance: Choreograph a dance that represents fractional movements of the entire work. For example, 1/3 of the movements were upper body, 4/12 were step movements and 2/6 were rotational movements.

Materials/Equipment:

Websites:
- Mathplayground: http://www.mathplayground.com/Fraction_bars.html
- Fraction bars : http://www.fractionbars.com/
- Livebinders: http://www.livebinders.com/play/play?id=475495#anchor
- Illuminations: qhttp://illuminations.nctm.org

References:

LESSON PLAN Ref:	Mythology

KCAS Standard:
ELA.RL.4.3: 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).   **ELA.RL.4.9:** Compare and contrast the treatment of similar themes and topics (e.g. opposition of good and evil) and patterns of events (e.g. the quest) in stories, myths, and traditional literature from different cultures.   **ELA.W.4.3:** Write narratives to develop real or imagined experiences or events using effective technique, descriptive details, and clear event sequences.   **ELA.W.4.7:** Conduct short research topics that build knowledge through investigation of different aspects of a topic.   **ELA.SL.4.4:** Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 4 reading and content, choosing flexibility from a range of strategies.

NAGC Standard:
3.3 Talent Development: Students with gifts and talents develop their abilities in their domain of talent and/or area of interest.   **4.5 Communication Competence:** Students with gifts and talents develop competence in interpersonal and technical communication skills. They demonstrate advanced oral and written skills, balanced biliteracy or multiliteracy, and creative expression. They display fluency with technologies that support effective communication.

Subject/Course:	ELA		
Best Practice:			
Topic:	Mythology		
Lesson Title:	Hybrid Creatures		
Grade Level:	4	**Lesson Duration:**	Varies

Description of the Lesson: During a unit on Mythology, students research, compare and contrast the various hybrid creatures that exist in Greek and Roman myths (ex. Hydra, Centaur, Harpy, Minotaur, etc.)

Extensions for Gifted Students:
General Intellectual Ability   • Students explore other types of hybrids that exist today (crops, cars, animals) and explain the benefits of hybrid characteristics   **Specific Academic Ability**   • Science: Students choose a hybrid creature and describe how that creature's physical features help that creature survive in its environment.   • Language Arts: Students choose a hybrid creature and write a persuasive piece about why that creature's traits are better than another creature's traits.   **Creativity**

- Students create a new hybrid creature (choosing a combination of human/animal characteristics) and complete a creative writing piece to go along with it (may choose from multiple genres).
- Students create a new hybrid creature and complete a visual representation of that creature (mixed media, illustration, painting, or sculpture, etc.)

Leadership
- Students research a hybrid creature that takes on a leadership role in a Greek or Roman myth (such as Triton) and uses evidence from the text to describe that character's leadership traits
- Students can debate which of two hybrid creatures would make a more effective leader

Visual and Performing Arts
- Drama: Students dramatize a specific hybrid creature, coming to class in costume and speaking from that character's point of view
- Drama, Dance, Visual Art, Music: Students create a short video trailer for a specific myth

Materials/Equipment:
Research materials (books/internet):
Video recording device
Art and Writing Materials

References/Resources:
- www.mythical-creatures-and-beasts.com/hybrids.html
- www.mythicalarchive.com
- www.mythography.com
- www.brainpop.com (mythology)

LESSON PLAN Ref:	Operations and Algebraic Thinking: Gain Familiarity with Factors and Multiples

KCAS Standard:

4.0A.4: Find all the factor pairs for a whole number in the range 1-100. Recognize that a whole number is a multiple of each of its factors. Determine whether a given whole number in the range 1-100 is a multiple of a given one-digit number. Determine whether a given whole number in the range 1-100 is prime or composite.

NAGC Standard:

3.3 Students with gifts and talents develop their abilities in their domain of talent and/or area of interest.
3.6 Students with gifts and talents benefit from gifted education programming that provides a variety of high quality resources and materials.

Subject/Course:	Math		
Best Practices:	Student Choice, Acceleration by Subject, Questioning Techniques, Digital Differentiation, Competition		
Lesson Title:	Getting to Know You from 1-100		
Grade Level:	4	**Lesson Duration:**	3-5 days

Description of the Lesson: Teach the lesson on Factor Findings from NCTM ILLUMINATIONS. http://illuminations.nctm.org/Lesson.aspx?id=3280 Students create posters for different numbers to be displayed in the classroom for resources throughout the year. They make discoveries about factors using color tiles and graph paper representations of their work. Students will identify the factors of a given number using color tiles, graph paper, and a factor rainbow.

Extensions for Gifted Students:
General Intellectual Ability
- Use a T- chart or graphic organizer of choice to sort the entire prime and composite numbers from 1-500. Analyze your lists to find patterns and relationships. Report your findings to your teacher. **(Math.4.0A.4)**
- Enroll online in Calculation Nation to challenge players from all over the world to build speed and accuracy with your math skills as well as a healthy perspective of competition. **(PLVS. Big Idea: Personal Wellness. Academic Expectation 5.1**)

Specific Academic Ability
- **English Language Arts:** Use PowerPoint and Clip Art or another technology of choice to create a presentation dictionary of following terms: factor, factor pairs, multiple, whole number, range, prime, and composite, and digit. Present your finished product to the class. **(ELA.4.RIT.4)**
- **Math:** Research divisibility on www.mathgoodies.com/lessons/vol3divisibility.html. Design a divisibility test of 10 different numbers from 100-1,000,000. Challenge your classmates with your quiz! Example: Determine whether 9,042 is divisible by 2,3,4,6,

9, and 10. Remember to create an answer key with divisibility rules to support the correct answers. **(Math.4.0A.4)**

- Calculate the GCF and the LCM of 24 and 72; create a flow chart to explain how to find the GCF and LCM for any two numbers. **(Math.4.0A.4 *See Quantile Teacher Assistant QT-N-221 and QT-N-222 Quantile Measure 780Q*)**
- Write a letter to persuade your school to start a Math Olympiad team and compete internationally with 5 written competitions per year. Research more at www.moems.org **(PLVS. Big Idea: Employability Skills. Academic Expectation 4.2)**
- **Science:** Refer to a Weather app or local newspaper to record the predicted daytime and nighttime temperatures for a week. Using prime factorization of each temperature to find all factor pairs. Describe any patterns you discovered between the daytime and nighttime temperatures. Record your findings in your science journal. **(Earth's Systems. Processes that Shape the Earth 4-ESS2-2)**
- **Social Studies:** Investigate and chronologically create a timeline of significant events in KY history. Analyze the dates for interesting and meaningful patterns across and within decades. **(Social Studies. Big Idea. Historical Perspective. Academic Expectation 2.20)**

Creativity

- Read the book *Stay in Line* by Teddy Slater. Imagine there are 25, 50, and even 100 children to line up on the playground in different arrays. Create a plan of each total on graph paper, and then test your paper plan during recess on your 4th grade peers. How many different combinations can you create? **(Technology. Big Idea: Research, Inquiry/Problem-Solving and Innovation. Academic Expectation 5.1)**
- Create a board game called "Factor Fun House or Multiple Mania". Design the board, write the rules, and test the success of your game with a small group of classmates. (**Technology. Big Idea: Research, Inquiry/Problem-Solving and Innovation. Academic Expectation 5.2)**

Leadership

- If you could multiply yourself, what one digit number would you multiply yourself by to create more clones of you? Justify why you would need that many clones, and describe some of the tasks you and your clones would do to help others in your class, school, or community. **(PLVS. Big Idea: Employability Skills. Academic Expectation 3.7)**
- Research 3 career choices that use math skills on a daily basis. Design a multimedia presentation that illustrates a day in the life of someone at work in these 3 careers. **(PLVS. Big Idea: Career Awareness, Exploration, Planning. Academic Expectation 5.4)**

Visual and Performing Arts:

- Music: Create a vocal or instrumental duet 8-16 measures in length. The two vocals or instruments will represent composite and prime numbers. The purpose of the message of the song is to help others better understand the differences between prime and composite numbers. Post your performance on youtube.com. **(Arts and Humanities. Big Idea: Purposes for Creating the Arts. Academic Expectation 1.14)**
- Art: Use the true colors of the rainbow and assign a color to each of the first 7 prime numbers, and then factor the numbers 26, 30, 34, and 77 to create a landscape picture

with your choice of media that includes one or more of the factor rainbows you just created.   For example, 2 might =red, and 3 might =orange. If you factored 6, then the rainbow in your landscape would only have two colors: red and orange. **(Arts and Humanities. Big Idea: Purposes for Creating the Arts. Academic Expectation 1.13)**
- Drama: Write a commercial that advertises the beneficial attributes of composite numbers as opposed to prime numbers and use the I pad to video it. Show your math commercial on the school news program. **(Arts and Humanities. Big Idea: Purposes in the Arts. Academic Expectation 2.22)**
- In most fairytales, 3 is a common number. There are often 3 main characters, 3 wishes, 3 trials, etc. Write and perform an original a story (practice the art of storytelling) that reveals the importance of another math pattern in the life of your main character. **(Arts and Humanities. Big Idea: Purposes for Creating the Arts. Academic Expectation1.12)**
- Dance: Research and analyze the dance steps required of 2 or more different folk dances. How many steps are required to finish the set and to finish the whole dance? Discover patterns in your answer. Create a dance tutorial to teach the dances to others. Post your tutorial on youtube.com. **(Arts and Humanities. Big Idea: Structure in the Arts. Academic Expectation1.15)**

Materials/Equipment:
- Plastic color tiles
- graph paper
- crayons
- poster board
- scissors
- glue

References:

- NCTM ILLUMINATIONS Resources for Teaching Math
  http://standards.nctm.org/document

- **Websites:**
  - http://Illuminations.nctm.org/Activity.aspx?id=4134
  - https://quantiles.com/tools/quantile-teacher-assistant/
    Note: Quantile Teacher Assistant (Use the Impending QSCs for challenge and acceleration and Supplemental QSCs for enriching lessons and making connections across lessons and math strands.)
  - www.mathgoodies.com/lessons/vol3divisibility.html.

- **Competitions:**
  - Math Olympiad for Elementary Students www.moems.org

- Calculation Nation TM (Compete online all over the world) **www.calculationnation**.nctm.org/

- **Additional Math Resources:**
  - **APP:** The 24 Game (Multiplication)
  - AIMS Education Foundation www.**aims**edu.org/
  - Khan Academy www.youtube.com/user/**khanacademy**

- **Books**:
  - *Math for Smarty Pants* (Found in the Grades 4-6 Marilyn Burns Classroom Math Libraries)
  - *Strategies for Differentiation Instruction Best Practices for the Classroom* by Julia L. Roberts and Tracy F. Inman

LESSON PLAN Ref:	Number and Operations in Base Ten – Decimals for 5th grade

KCAS Standard:

5.NBT.7 – Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.

NAGC Standard:

3.1. – Curriculum Planning – Students with gifts and talents demonstrate growth commensurate with aptitude during the school year.
3.3. – Students with gifts and talents develop their abilities in their domain of talent and/or area of interest.

Subject/Course:	Math		
Best Practices:	Accelerating by subject, Digital Differentiation		
Lesson Title:	Using Decimals for real purposes		
Grade Level:	5th	**Lesson Duration:**	1 hour approximately

Description of the Lesson:
The classroom teacher has taught the students how to add, subtract, multiply, and divide decimals to hundredths by using multiple strategies based on place value, properties of operations, and/or the relationship between addition and subtraction. The teacher will hang pieces of chart paper throughout the room highlighting various strategies to demonstrate how to solve the operations. Each strategy will be titled on the chart papers (and can include, but not be limited to) the strategies of: bar model, area model, standard algorithm, fair sharing model (grouping), number line model, fractions, powers of tens, place value model, using base ten blocks, etc… Students will be paired as partners and given an addition, subtraction, multiplication, or division problem involving decimals to the nearest hundredth. Each pair of students must demonstrate the answer to their problem by using three different strategies on the chart paper strategies listed on the wall. The class will conduct a share square to reflect/record their thinking regarding each strategy to address misconceptions and clarify their own understanding of the strategies. Afterwards, individual students will complete a constructed response explaining one of the strategies they used in solving the problem.

Extensions for Gifted Students:

General Intellectual Ability and/or Creativity:
- Students will create a game that is modeled from Monopoly. (The money should include both dollars and cents.) Property and item cards must have decimals to the nearest hundredth represented. Chance cards should be included as strategy solving cards. Students must show their work using a varied strategy in order to advance forward on the Monopoly board. The players must be able to add and subtract decimals throughout the game and keep a running total of their profits/losses. (5.NBT.7)

- Students will design a PowerPoint or digital presentation/video that teaches other students how to multiply fractions with visual representations. Students can use this link as an example in designing. https://learnzillion.com/lessons/555-multiply-decimals-to-the-hundredths-by-using-fractions Students can import drawings or pictures to help in their explanation of how to multiply fractions. (5.NBT.7)
- Students will design an artistic, 2-dimensional representation of a function machine that will add, subtract, multiply, and divide decimals. The machine must provide detailed information on how it works and provide at least 1 solved example problem for each function it completes. For example, the center of the machine would spin a specific decimal to the hundredth. Then, another decimal to the nearest hundredth would be dropped in the top of the machine as the "input." Another decimal to the nearest hundred would complete the function of adding through a slide and subtracting through a conveyor belt, multiplying through a tube, and dividing through a special side compartment, etc… students will provide at least one solved problem as a caption near where the "output" of each machine works. (5.NBT.7)

Specific Academic Ability:
- **English Language Arts:** Student can complete the following writing prompt: A student in Mr. Jones' classroom always relies on solving problems with decimals on his calculator. One day the decimal button becomes broken on the calculator. Write a story about how the student can solve addition, subtraction, multiplication, or division problems without the use of a calculator. Be sure to "highlight or bold" some helpful hints or phrases in your story to help the student remember how to solve the operations. (ELA.W.5.2) (5.NBT.7)
- **Math:** Once a student has mastered the standard of adding, subtracting, multiplying, and dividing decimals through a formative assessment, the student can begin to use ratio and rate reasoning to solve real world and mathematical problems. Students can begin comparing decimals with percentages. Students will find five items of interest and record the original and sale prices from online shopping sources or newspaper advertisements. Then, students will determine the percentage that was discounted, based on the difference of the original and sale price in ratio format. Students will choose another store and complete the process of determining the original and sale prices of the same items. Then, students will judge which store provides the better discounts overall. (6.RP.3)
- **Math:** Students will be given menus from local restaurants with various prices to the nearest hundredths. Students will add the total of the complete meal, selecting an appetizer, main course, dessert, and beverage. Then, the student will multiply the total by the current state tax, city tax, and/or restaurant tax in the town to find the grand total amount he/she would spend on a meal. Then, students will determine the amount of tip (the choices of: 15%, 18%, and 20%) to leave the waiter/waitress based on the grand total amount of the bill. Afterwards, students will look on the menu to determine the most cost effective full course meal and compare the prices with the most expensive full course options that the menu provides. (5.NBT.7) (6.RP.3)
- **Science:** Students will research the amounts and percentages of water and fresh water in various reservoirs throughout the Earth. Students will find statistics to the nearest hundredth, regarding the average amount of water in three different lakes. Students will

compare the percentages/decimals and determine the difference in average water levels that each lake maintains. Then, students will analyze the impact that these three lakes have on human activities and recommend the best lakes to conduct specific activities (for example, hydro-electric power, fishing, etc…) (ESS2.C) (ESS3.C) (5.NBT.7)

- **Social Studies:** Students will choose 3 specific event locations that happened in U.S. History. Record the city and state of each location. Then, go to an online map website, like MapQuest or Google Maps, and find the calculated distance to the nearest hundredth between your home and each separate location that you have chosen. Print each map detailed report and add the total round trip distance you would travel to each location. Then, add a grand total of mileage traveled, if you planned three separate trips from your house to these locations within a year. Choose your favorite event location and create a path across the continental United States that will be the longest route from your home and determine the round trip total. Then, create a route that will be the shortest from your home to the destination and determine the round trip total. (SS-05-5.1.1) (5.NBT.7)

Creativity:
"See lesson above with General Intellectual extensions"

Leadership:
- The student will divide the activities or amount of time spent on subjects during the regular school day. Each amount of time that is spent on various subjects will be turned into a percentage and decimal to represent the average amount of time spent on subjects during the regular 5th grade school day. After analyzing the amount of time spent on each subject, justify which subject(s) need more and less time. Then, taking a leadership role in the school, present your findings and your analysis to the principal, administration, or school leader about what subject you think should be the longest part of the day and how the schedule should be adjusted. (**5.NBT.7**) (**6.RP.3**)

Visual and Performing Arts:
- **Music**: Students will create a song or rap that illustrates one of the strategies to follow when adding, subtracting, multiplying, or dividing decimals. (**AH-05.4.1.1**) (**5.NBT.7**)
- **Art**: Students will design a colorful mosaic, based on a specific number of perfect squares. Then, the student will determine decimal, percentage, and fraction equivalents of the mosaic. This website will provide the format and foundation of the lesson. http://mason.gmu.edu/~jsuh4/math%20masterpiece.pdf (Website link is not Mac compatible) (**AH-05.4.4.1**) (**AH-05.4.4.2**) (**5.NBT.7**)
- **Drama:** Students will write a short script or improvise a skit that will highlight the strategies to follow when adding, subtracting, multiplying, or dividing decimals. Students will need to determine the setting and scenery for their dramatization. (**AH-05.4.3.1**) (**AH-05.4.3.2**) (**5.NBT.7**)

Materials/Equipment:
- Chart paper and/or clip boards for original lesson

- Construction paper/cardboard, markers, scissors, and colored paper to design the Monopoly-type game for a GI/CR extension
- Computer with Microsoft PowerPoint or access to Prezi or other online presentation software and a camcorder for a GI/CR extension
- Newspaper circulars or advertisements or online shopping sites for one of the math extensions
- Local Menus or access to menu prices online for one of the math extensions
- Access to online mapping services, like MapQuest for the social studies extension
- Construction paper, scissors, and glue needed for the art extension mosaic.

References:

- **Books:**
  N/A

- **Websites:**
  - The link below is for the 5th grade Common Core Math Flip Book, regarding the standards.
    http://katm.org/wp/wp-content/uploads/flipbooks/5th-Flipbookedited2.pdf

  - This site provides an example of how to create a video demonstrating how to multiply decimals, using pictures or manipulatives in the GI/CR extension.
    https://learnzillion.com/lessons/555-multiply-decimals-to-the-hundredths-by-using-fractions

  - Here are some online map websites to use with the social studies extension:
    - https://maps.google.com/
    - http://www.mapquest.com/
    - https://maps.yahoo.com/
    - http://www.bing.com/maps/

  - *This site is to be used with the art extension of creating a mosaic with construction paper squares.* http://mason.gmu.edu/~jsuh4/math%20masterpiece.pdf (This link is not Mac compatible.)

Appendix

Gifted and Talented Top 10 Best Practices

Best Practice	Description	Suggested Examples	Resources (books, websites)
Digital Differentiation	To help students develop 21st Century Skills, teachers can facilitate learning experiences using technology. Digital differentiation allows students to find, understand, and apply answers to Essential Questions using multiple avenues for learning. Students need to learn effectively and live productively in an increasingly global and digital world.	Jennifer's statement: The teacher might give an essential question and students are allowed to choose Maybe categorize? Learning/Presentation/ Applications Animoto Audacity Blogger Dictionary.com Dropbox Edmodo EduBlogs Geogebra Glogster Edu GoAnimate Google Docs Google for Educators Google Maps Khan Academy MindMeister Penzu PhotoStory Poll Anywhere Prezi Teacher Tube Twurdy Voicethread	Books: • *Teaching Digital Natives: Partnering for Real Learning* by Marc R. Prensky • *Digital Learning Strategies: How do I assign and assess 21st century work?* by Michael Fisher • *Web 2.0 How-to for Educators* by Gwen Solomon • *Using Web 2.0 and Social Networking Tools in the K-12 Classroom* by Beverly Crane Websites: • Cool Tools for 21st Century Learners http://d97cooltools.blogspot.com/p/about-me.html#.U5c-MBbHOFI • The 100 Best Web 2.0 Classroom Tools Chosen By You http://www.edudemic.com/best-web-tools/ Videos: • Did You Know? 2011 https://www.youtube.com/watch?v=BLJ4VmWk5tw&list=FLDqhxu_Do3eeN1daAe54oGw&index=19 Documents: • Framework for 21st Century Learning http://www.p21.org/storage/documents/1.__p21_framework_2-pager.pdf • ISTE Standards for Students: http://www.iste.org/docs/pdfs/20-14_ISTE_Standards-S_PDF.pdf

		Voki WebQuest Wikispaces Wordle Wordpress	
Real World Problem Solving	A process used to solve a problem or find the answer to an unknown using specific parameters. Usually the process involves hands-on learning experiences, such as competitions and not the use of a text book.	Students could be grouped in the regular classroom by interests, ability or invitation to prepare and participate in the competition/event. English Language Arts: • Poetry Out Loud • Kids Philosophy Slam Math: • Math Counts • The Stock Market Game Science: • Future City • Lego League Social Studies: • Mock Trials • Kentucky United Nations Assembly Visual and Performing Arts: • Odyssey of the Mind • Governor's Derby Celebration • Kentucky Music Educators Association (Band and Vocal Music) • Kentucky Art Education Association	Books: • *Academic Competitions for Gifted Students: A Resource for Teachers and Parents* by Mark K. Tallent-Runnels and Ann C. Candler-Lotven • *Competitions: Maximizing Your Abilities* by Frances A. Karnes, Ph.D., and Tracy L. Riley, Ph.D. Websites: • Poetry Out Loud - http://artscouncil.ky.gov/Grants/POL.htm • Kids Philosophy Slam - http://www.philosophyslam.org/ • MathCounts - http://mathcounts.org/ • Stock Market Game - http://stockmarketgame.org/ • Future City - http://futurecity.org/ • Lego League - http://www.firstlegoleague.org/ • Mock Trials - http://www.nationalmocktrial.org/ • Kentucky United Nations Assembly – http://kyymca.org/kuna • Odyssey of the Mind- http://www.odysseyofthemind.com/wf2014/default.php • Dream Out Loud Challenge– http://migration.kentucky.gov/newsroom/kheaa/2014dol.htm

		• Soil Conservation Poster Contest • Dream Out Loud Challenge Creativity: • Future Problem Solving	
Seminars	Seminars means discussion-based sessions on specific topics focusing on advanced content and higher level process skills. Seminars are also an opportunity to provide students with engaging experiences designed to challenge them academically.	Seminars could be presented by guest speakers who are content experts. School counselors could host seminars on affective domain topics such as perfectionism, underachievement, leadership skills, or college and career awareness.	Books: Websites: Retired Teachers: Local Colleges and Universities: Community Partners: • 4 – H • Community Theater
Multiple Assessments	By planning to meet the needs of each learner, assignments will be tiered and students will be given a variety of methods to demonstrate their learning.	Students will complete a pre-assessment. The teacher will analyze results and plan tiered assignments (formative assessments) based on high, middle, low level learners, and/ or multiple intelligences with a common theme/standard. The outcome for each student is the same, but the means to reaching the outcome will differ (tests, projects, reports, etc.) The summative assessment may also be differentiated.	<u>Books</u>: • *Assessment and Student Success in a Differentiated Classroom* by Carol Ann Tomlinson Tonya R. Moon • *Using the Common Core State Standards for Mathematics With Gifted and Advanced Learners* Edited by Susan K. Johnsen, Ph. D., and Linda J. Sheffield, Ph.D. • *Using the Common Core State Standards for English Language Arts With Gifted and Advanced Learners* Edited by Joyce VanTassel-Baska, Ed.D. • *Using the Next Generation Science Standards With Gifted and Advanced Learners* by Cheryll M. Adams, Ph.D., Alicia Cotabish, Ed.D., and Mary Cay Ricci • *Strategies for Differentiating Instruction* by Dr. Julia Roberts and Tracy Inman <u>Websites</u>:

c

Questioning Techniques/ Effective Questioning	Effective questioning involves planning with a purpose to move the learner beyond anticipated yes/no or fill-in-the blank responses, and encourages students to think past the content at face value. Purposeful planning of effective questioning may peak student interest and lead to student-led questions, discussions, and activities.	Students are learning about adding whole numbers. An ineffective question might be: *"Two plus three is?"* An effective question might be *"How many ways can you get five?"* Examples of Question Techniques: • KWL Graphic Organizer • If/-Then Questions • Closed vs. Open Ended Questions • Compare/Contrast Questions • Point-of-View Questions • Socratic Method	Books: • *Active Questioning: Questioning Still Makes a Difference* by Nancy Johnson • *Advancing Differentiation: Thinking and Learning for the 21st Century* by Richard M. Cash, Ed.D • *Questioning Strategies for Teaching the Gifted* by Elizabeth Shaunessy • *Questioning Makes the Difference* by Nancy Johnson-Farris Websites: • New Jersey Education Association: http://www.njea.org/teaching-and-learning/classroom-tools/classroom-management/effective-questioning-techniques
Independent Study	A self-directed course or study of a selected topic under the supervision of a teacher or the auspices of a university. This strategy can be used with students that have demonstrated mastery of content.	Students are learning about symmetry of two dimensional shapes. Gifted students are given the opportunity to explore symmetry of three dimensional shapes and rotational symmetry.	Books: • *Using the Common Core State Standards for Mathematics With Gifted and Advanced Learners* Edited by Susan K. Johnsen, Ph. D., and Linda J. Sheffield, Ph.D. • *Using the Common Core State Standards for English Language Arts With Gifted and Advanced Learners* Edited by Joyce VanTassel-Baska, Ed.D. • *Using the Next Generation Science Standards With Gifted and Advanced Learners* by Cheryll M. Adams, Ph.D., Alicia Cotabish, Ed.D., and Mary Cay Ricci Websites:

			• Khan Academy: http://www.khanacademy.org/ • Study Island: http://www.studyisland.com/ • Compass Learning: http://www.compasslearning.com/ • Dreambox: http://www.dreambox.com/
Choice	This strategy can be used with students who are ready to demonstrate understanding of content by choosing an activity based on their individual interests, learning styles, and abilities.	Students are reading the same text. The target skill is to describe in detail characters, setting, or events. For example: Gifted students are given an extensions menu and allowed to choose from a variety of activities such as: draw a picture, write a song, act it out, give a speech, dramatization, create a video, etc.	Books: • *Teaching Gifted Kids in the Regular Classroom* by Susan Winebrenner • *Advancing Differentiation* by Richard M. Cash, Ed.D. Websites: • Tic-Tac-Toe for Student Choice Activities: http://www.formativedifferentiated.com/uploads/3/1/3/8/3138836/cube_and_thinkdot_template.pdf • Dare to Differentiate: https://www.daretodifferentiate.wikispaces.com/Choice+Boards
Cluster Grouping	Description A grouping assignment for gifted students in the regular heterogeneous classroom. • This strategy includes intentionally placing those that have been identified in a content area or are performing in the top 5% of ability in the grade level. • The teacher is typically trained in strategies to meet needs of GT students. • It is a budget friendly way providing full time GT environment.	Example Typically, five or six gifted students with similar needs, abilities, or interests are clustered in the same classroom, which allows the teacher to more efficiently differentiate assignments for a group of advanced learners rather than just one or two students.	Resources *It is essential that purposeful staff development is provided in order to assure appropriate strategies are used for GT students in a heterogeneous classroom.* Books: • *The Cluster Grouping Handbook: A Schoolwide Model: How to Challenge Gifted Students and Improve Achievement for All Paperback* by Susan Winebrenner (Author), Dina Brulles (Author), Bertie Kingore (Foreword) • *Cluster Grouping for the Gifted* by Claire Fleischman-McInerney Websites: • http://www.nagc.org/index.aspx?id=162

	• Students are given the opportunity to be challenged with rigorous curriculum with their peers rather than serving as a peer leader or tutor.		• http://home.wsd.wednet.edu/wsd/Instructional/enrichment/ cluster%20classrooms.pdf
Learning Centers	A learning center is a hub of learning where a teacher provides appropriate choices of learning experiences that will ensure challenges for all students, in all grade levels. This will allow teachers to differentiate the content, process, and product in the learning center. In order to provide additional learning opportunities, the teacher must pre-assess the students. One page how-to begin Learner Center and place this at the top of the Resources. Steps in creating learning centers: (Think content, process, & product) • Once you have pre-assessed, you need to determine the content and standards in which the student needs enrichment.	An example for a 3rd grade Math lesson could be: • The teacher creates a fraction menu choice board with one option (one square) focusing on comparing fractions. This would address Common Core standard 3.NF.3. • The student could create a commercial for a specific item that is on sale. The student must use equivalent fractions to try to convince the buyer to pay for one fraction over the other. • (Student Example: The student tries to persuade consumers to purchase a video game that is 10/20 off, instead of one that is ¾ off.)	Books: • *Differentiating Instruction with Centers in the Gifted Classroom* (Page 15) by: Dr. Julia Roberts & Julia Roberts Boggess ISBN 978-1-59363-839-9. • *Assessing Differentiated Student Products* by: Dr. Julia Roberts & Dr. Tracy Inman ISBN: 978-1-59363-355-4 Websites: • Differentiating Instruction with Menus books with Menu Choice Boards: http://www.prufrock.com/Differentiating-Instruction-With-Menus-Set-of-4-Books-Grades-3-5-P345.aspx • Bloom's vs. Webb Chart – to use when planning the "process" of your learning center http://www.paffa.state.pa.us/PAAE/Curriculum%20files/7.%20DOK%20Compared%20with%20Blooms%20Taxonomy.pdf • Engine-uity – Pre-made Learning Centers, aligned with Bloom's Taxonomy http://www.engine-uity.com

	• Determine the process in which you want to develop your learning center. Examples: Bloom's chart task cards, interest choice boards (Menu board, Think-Tac-Toe, etc.), Webb's Depth of knowledge • Decide on the differentiated product that will meet the needs, interests & abilities of the student(s). Examples: advertisement, bulletin board, movie, scrapbook, puppet show, poster, interview, digital presentation, cartoon, etc…) • A variety of assessment measures can be used, but rubrics are the most beneficial. For example, Developing & Assessing Products (DAP tools), rubrics for presentations & written products, checklists, etc…		
Acceleration	This practice is simply presenting curriculum content earlier or at a faster pace, after pre-assessment has occurred. Acceleration can be subject or grade based. It is helpful to have a district policy and	Teachers can offer acceleration in a variety of ways: flexible grouping for subject areas, grade skipping, Advanced Placement programs, Dual credit, early graduation/early entrance,	Books: • *Acceleration Strategies for Gifted Learners* by: Joyce Van Tassel-Baska, Frances Karnes, & Kristen Stephens • *Iowa Acceleration Scale 2nd Edition Manual K-8* by: Susan Assouline, Ann Lupkowski-Shoplik, Nicholas Colangelo Websites:

	procedure in place for various types of acceleration.	college courses in high school, high school credit in middle school and International baccalaureate.	• The Institute for Research and Policy on Acceleration: http://www2.education.uiowa.edu/belinblank/researchers/ • *A Nation Deceived*: http://www.accelerationinstitute.org/Nation_Deceived/Get_Report.aspx