

Project Bright IDEA 2: Interest Development Early Abilities

**A Jacob Javits Gifted Education Program
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Concept: Change

Topic: North Carolina: Past, Present, and Future

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Grade Level: 4

**The North Carolina Department of Public Instruction
Exceptional Children Division
Academically or Intellectually Gifted Program**

The American Association For Gifted Children at Duke University

Big Ideas Manifested

Topic – North Carolina: Past, Present and Future
Text – Now and Ben
Author – Gene Barretta
Publisher/Date- Henry Holt and Co., 2006

Concepts	Themes
<ul style="list-style-type: none"> • Change • Technology • The impact of history • Inventions 	<ul style="list-style-type: none"> • Forefathers in North Carolina • Using the Past to Improve the Future • Inventions vs. discovery • Positive vs. negative
Issues or Debates	Problems or Challenges
<ul style="list-style-type: none"> • Is technological advance positive or negative? • Is change always necessary for growth? • Can progress continue at the same rate? 	<ul style="list-style-type: none"> • Negative uses of inventions • Growth • Unfair or obsolete laws
Processes	Theories
<ul style="list-style-type: none"> • Historical Inquiry • Analyzing Causes and Effects of Change 	<ul style="list-style-type: none"> • Technological advances are not always positive. • Change is necessary for growth.
Paradoxes	Assumptions or Perspectives
<ul style="list-style-type: none"> • Laws can sometimes hinder progress. • Initially positive change can become negative. • Conflict to end conflict 	<ul style="list-style-type: none"> • Be careful what you wish for. • Technological change advances a society.

Concept: Change

**Topic: North Carolina: Past,
Present and Future**

Suggested Text Selection(s): Now and Ben by Gene Barretta

Look, Listen and Identify:

Intelligent Behaviors

Story Focus: Thinking Flexibly, Creating, Imagining and Innovating, Applying Past Knowledge to New Situations

Student Activities : Finding Humor, Questioning and Problem-Posing, Metacognition

NC Standards: Social Studies Goal 3 - 3.02 – Identify people, symbols, events and documents associated with North Carolina’s history.

3.04 – Compare and contrast ways in which people, goods, and ideas moved from the past with their movement today

Science Goal 3 – 3.6 Describe and identify materials that are conductors and non-conductors of electricity.

3.9 – Recognize lightning as an electrical discharge and show proper safety behavior when lightning occurs.

Local Pacing Guide Timeline:

Thinking Skills Focus: Compare and Contrast, Analyze, Evaluate, Predict, Create, Synthesize

Topic Focus: Historical and Technological Change in North Carolina

Concept Focus: Change

Overarching Generalizations: Change can be either positive or negative.
Patterns of change are inevitable and necessary for growth.
Change generates additional change.

More Complex Generalizations (Two or more concepts):

- Use the past to improve the future.
- What patterns emerge through change?

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Duke University

Directions for Teachers:

Display sentence strips with the generalizations. Discuss topics and vocabulary words needed to gain a deeper understanding of the conceptual lessons.

Suggested Topics for Discussion: Forefathers in North Carolina’s History
The Role of Electricity
Inventions and their influence on North Carolinians
What is a genius?
Invention versus Discovery
When does technology cease being positive? Or does it?

Suggested Vocabulary Words for Discussion:

genius	invention
innovation	discovery
political cartoon	Declaration of Independence
scurvy	forefather
fad	odometer
conductor	lightning rod
document	

A Six-Step Process for Teaching Academic Vocabulary Terms:

1. Provide a description, explanation or example of the new vocabulary term.

2. Ask students to restate the description, explanation or example in their own words using complete sentences.
3. Ask students to construct a picture, symbol or graphic representing the term or phrase.
4. Engage the students periodically in activities that help them add to their knowledge of the terms in a booklet that they have created (Keep it simple.)
5. Periodically ask students to discuss the terms with one another (**Think** of your favorite vocabulary words from the unit; **pair** with a vocabulary buddy, **share** by discussing the vocabulary terms with your vocabulary buddy.) Teacher should model process each time before students do the Think, Pair, Share with Vocabulary Buddy.
6. Construct games to periodically involve students and allow them to play with the terms.

Robert Marzano

Vocabulary Extension:

Categorize words into their own categories.
Use words in concrete poetry.

Select a generalization(s) and essential questions. Introduce one or more of the following topics:

Six Facets of Understanding

Facet 1 – EXPLANATION
What changes did Ben Franklin’s discovery of lightning generate?
Facet 2 - INTERPRETATION
How can change be positive or negative? How did electricity change our way of living?
Facet 3 - APPLICATION
Thinking about an electrical invention of your choice, how could we change it to improve its usefulness?
Facet 4 - PERSPECTIVE
How would you compare and contrast your daily life with that of one of your forefathers?
Facet 5 – EMPATHY
Imagine you are Mr. William Blount, and you’ve returned to Raleigh for a visit . How might you feel about the changes that are evident?
Facet 6 – SELF-KNOWLEDGE
What is something you became more aware of after reading, Now and Ben? What would you like to learn more about?

**Read: Now and Ben
Task Rotation Learning Activities**

4th Grade

North Carolina History

All conceptual activities must include discussing and/or relating to the selected generalization(s) through essential questions.

<p align="center">Mastery Learner (A) Sensing- Thinking</p> <p>Select a North Carolinian that signed the US Constitution. Collect data on this person and choose important information to display in a center about this person.</p> <p>Which intelligent behaviors would help you collect data on this person?</p> <p align="center">V _ L _ S * _ M _ B _ P _ I _ N _</p>	<p align="center">Interpersonal Learner (B) Sensing-Thinking</p> <p>Appraise the original Bill of Rights. Write a letter that William Blount would send a friend evaluating the worth of these 10 amendments. Choose one to defend your decision to change.</p> <p>Which intelligent behavior would a lawmaker use to determine whether or not a law was fair to all people?</p> <p align="center">V _ L * _ S _ M _ B _ P _ I _ N _</p>
<p align="center">Understanding Learner (C) Intuitive-Thinking</p> <p>Imagine you are the governor of North Carolina, and your office is in the North Carolina State Capitol Building. Research the history of the capitol building. Compare and contrast the original building and grounds to how they appear today. Draw conclusions as to why change was necessary and complete an Open Compare and Contrast graphic organizer.</p> <p>Which intelligent behaviors would be required to be an architect?</p> <p align="center">V _ L * _ S * _ M _ B _ P _ I _ N _</p>	<p align="center">Self-Expressive Learner (D) Intuitive-Feeling</p> <p>Suppose you are a member of the North Carolina Legislature. Create and publish a new law that will improve life in North Carolina. Predict what will happen as a result of your new law. Draw a political cartoon that demonstrates the effect of this law.</p> <p>Which intelligent behaviors would a political cartoonist use to create political cartoons?</p> <p align="center">V * _ L _ S * _ M _ B _ P _ I _ N _</p>

Real World Connections With Products:

Letter, skit, report, debate, newspaper advertisement, invention, political cartoon, chart, display

Real World Applications: Lawmaker, cartoonist, inventor, scientist, actor, advertising executive

Real World Terms: Design, decide, predict, invent, analyze, collect, research, draw conclusions, compare and contrast, appraise, write, create, illustrate, identify, explain, evaluate, imagine, perform

Connect all products in the unit to real world applications reflecting the concept, generalizations and topic. The above is an example of how this might be accomplished.

Concept Focus: Change

Overarching Generalizations:

- Change can be either positive or negative.
- Change is inevitable and necessary for growth.

More Complex Generalizations (Two or more concepts):

- Change generates additional change.
- Use the past to improve the future.

Essential Question

Through examining the cultural and technological history of North Carolina, judge how change can be positive or negative. Should Franklin's discovery of electricity be celebrated or regretted?

What is the environmental impact of electricity?

Include concept and intelligent behavior that leads to deeper understanding of the concept through exploration of the generalization)

Materials Needed for Task Rotation and/or Task Rotation Menu:

Chart paper

Poster paper

Internet access for research

Copy of the US Constitution

Open Compare and Contrast graphic organizer

MetaCognitive Discussion (Essential Questions):

(Whole Group)

Conceptual Perspectives:

- 1. Is change necessary for growth?**
- 2. Is change always good?**
- 3. Can change be intentional or unintentional?**
- 4. What factors cause change?**
- 5. What changes do you see from our forefathers to present-day leaders?**

Intelligent Behaviors:

- 1. What intelligent behaviors could we exhibit as inventors?**
- 2. In what way(s) can we demonstrate the following intelligent behaviors?**
 - *Persisting**
 - *Questioning and Posing Problems**
 - *Taking responsible risks**
- 3. Why is it important to remain open to continuous learning when it comes to the Concept of change?**
- 4. What intelligent behaviors should lawmakers use?**
- 5. Based on what you know about North Carolina, how can you apply past knowledge to new situations in regard to lawmaking?**

Literary Perspectives:

- 1. Do you think the title *Now and Ben* is appropriate?**
- 2. How could you use thinking maps to organize information in the story? What types of information would they show?**
- 3. What are some examples from the book that reflect remaining open to continuous learning and taking responsible risks as applied to Benjamin Franklin?**
- 4. What similar patterns do you see in *Now and Ben*? How do they relate to change?**

Student/Teacher Reflections:

Did the task rotations lead to a better understanding of change

Math Task Rotation Learning Activities

Grade 4

Electricity through the Ages

All conceptual activities must include discussing and/or relating to the selected generalization(s) through essential questions.

<p style="text-align: center;">Mastery Learner (A) Sensing- Thinking</p> <p>Hypothesize about which small appliances use the most electricity. Using a power meter, measure the wattage of different appliances. Using a calculator, compute the average cost per month of each appliance. Collect your data into a chart. Identify the most expensive and least expensive appliances and draw conclusions.</p> <p>*Note: Use the average cost of 10 cents per kilowatt hour for your calculations. Be sure to take into account whether an appliance is on all day (like a clock radio) or used part of a day. For example, you may base TV usage on an average of 4 hours per day.</p> <p>Which intelligent behaviors would be needed to collect and measure data?</p> <p style="text-align: center;">V _ L * _ S _ M _ B _ P _ I _ N _ *</p>	<p style="text-align: center;">Interpersonal Learner (B) Sensing-Thinking</p> <p>Given a choice, would you choose to live in a town with or without electricity? Conduct a survey that asks this question. Include a question asking which electrical invention your respondents would most miss. Survey 30 people of ALL ages. Hypothesize results before you begin your survey. Construct a graph of your choice that displays your data. Reflect on what life would be like without electricity.</p> <p>Which intelligent behaviors are required when surveying people?</p> <p style="text-align: center;">V _ L _ S _ M _ B _ P * _ I * _ N _</p>
<p style="text-align: center;">Understanding Learner (C) Intuitive-Thinking</p> <p>Evaluate data comparing energy usage and population of different countries. Draw conclusions. Create a double bar graph to display the data.</p> <p>Which intelligent behaviors are needed to create a bar graph?</p> <p style="text-align: center;">V * _ L _ S * _ M _ B _ P _ I _ N _</p>	<p style="text-align: center;">Self-Expressive Learner (D) Intuitive-Feeling</p> <p>Imagine what the world would be like if Ben Franklin had not discovered electricity. Choose a household task that is normally completed using electricity. Try completing this activity with and without electricity. Record the time taken to complete the activity each way, and compare the results. You may need to create a solution to complete this task without electricity. Write and perform a humorous short skit showing how it used to be done before the discovery of electricity.</p> <p>Which intelligent behaviors are necessary to perform as an actor?</p> <p style="text-align: center;">V * _ L _ S _ M _ B * _ P _ I _ N _</p>

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Real World Connections With Products: Manuals, skits, classifying, debates, designing, and publishing

Real World Applications: actor, designer, publisher

Real World Terms: design, judge, debate, research, perform, produce

Connect all products in the unit to real world applications reflecting the concept, generalizations and topic. The above is an example of how this might be accomplished.

Concept Focus: Electricity

Overarching Generalizations:

Electricity can be both helpful and hurtful.
Electricity brings positive and negative change.

**More Complex Generalizations (Two or more concepts):
Conflict can result from man vs. nature.**

Materials Needed for Task Rotation and/or Task Rotation Menu

- paper
- markers, scissors, and basic classroom materials

MetaCognitive Discussion (Essential Questions):

(Whole Group)

Conceptual Perspectives:

1. Is electricity always positive?
2. Can electricity be dangerous?
3. Does man always use natural resources in positive ways?
4. What would the world be like without the discovery of electricity?

Intelligent Behaviors:

1. What intelligent behaviors did you use when you designed your graphic organizer?
2. What intelligent behaviors did you use when you designed your safety brochure?
3. What intelligent behaviors did your partner display when debating?

Literary Perspective:

1. Look for examples of change from the original inventions of Ben Franklin to how they are now.
2. Refer back to Now and Ben for examples of Ben Franklin’s connection to electricity?

Student/Teacher Reflections

How could we incorporate more intrapersonal activities (meta-cognition)?

Concept: Change

Topic: Social Studies: North Carolina History

Generalization(s): Change generates additional change.

Essential Question(s): Through examining the cultural and technological history of North Carolina, can you decide whether change can be positive or negative?

Task Rotation Menu

Level	Mastery	Understanding	Self-Expressive	Interpersonal
1	Identify two North Carolinians who signed the US Constitution. Complete a bubble map about this person.	Research the history of the original NC State Capitol building. Compare and contrast the original to the one that stands today. Draw a picture of each.	Brainstorm problems in North Carolina. Create a new law that will improve life in NC. Write this law and defend why you think people will like it.	Read the Bill of Rights. Categorize them into two lists of ones you like and the ones you don’t like.

2	After researching North Carolinians who signed the US Constitution, choose one to collect data about. Display important information in a center.	Research the history of the original NC State Capitol Building. Compare it to the one that stands today. Draw conclusions as to why change was necessary and complete an Open Compare and Contrast graphic organizer.	Examine laws in NC that are about education. Find a law at least 100 years old, and a law that has been ratified within the last 15 years. Compare the two laws and hypothesize why they are so different. Present your findings to the class.	Reflect on the Bill of Rights. Write a letter that William Blount would send a friend evaluating the worth of one of these 10 amendments.
3	Research North Carolinians who signed the US Constitution. Create a photo story about this person and evaluate the importance of their role in this famous event.	Research the history of the North Carolina State Capitol Building. Write a letter to the NC legislature proposing changes that make the building better-suited to today's needs.	Examine life in NC, and create and publish a new law that will improve life in NC. Then predict what will happen as a result of your new law. Draw a political cartoon that demonstrates the effect of this law.	Appraise the original Bill of Rights. Write an editorial stating whether or not you think the social idea behind one of these laws is still relevant and important today. To support your opinion, cite a specific example from recent NC history or a current NC event.

Real World Connections With Products:

Real World Applications:

Real World Terms:

Connect all products in the unit to real world applications reflecting the concept, generalizations and topic. The above is an example of how this might be accomplished.

Concept Focus:

Overarching Generalizations:

More Complex Generalizations (Two or more concepts):

Essential Question:

(Include concept and intelligent behavior that leads to deeper understanding of the concept through exploration of the generalization)

Materials Needed for Task Rotation and/or Task Rotation Menu

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MetaCognitive Discussion (Essential Questions):

(Whole Group)

Conceptual Perspectives:

Intelligent Behaviors:

Literary Perspective:

Student/Teacher Reflections:

Student Reflections and Assessments
Task Rotation Learning Experience
Grade 4

All conceptual activities must include discussing and/or relating to the selected generalization(s) through essential questions.

<p style="text-align: center;">Mastery Learner (A) Sensing- Thinking</p> <p>Research important events in North Carolina’s history. Make a time-line of what you consider the most important events. Imagine you are a newspaper reporter living at the time of the event, and publish a news article giving the details of this important happening.</p> <p>Which gifted intelligent behaviors would be needed to be a newspaper reporter?</p> <p style="text-align: center;">V*_L*_S_M_B_P_I_N__</p>	<p style="text-align: center;">Interpersonal Learner (B) Sensing-Thinking</p> <p>Write a letter to Ben Franklin expressing your views and opinions on the changes electricity has made in North Carolina. Use specific examples to evaluate both positive and negative influences.</p> <p>Which intelligent behaviors would you use when deciding the importance of electrical inventions?</p> <p style="text-align: center;">V*_L*_S_M_B_P*_I_N__</p>
<p style="text-align: center;">Understanding Learner (C) Intuitive-Thinking</p> <p>How can change sometimes be negative? Choose an invention that has had a negative impact on North Carolina’s environment, and analyze its negative influence. Write the lyrics to a song or rap song to express and justify your view.</p> <p>Which gifted intelligent behaviors would be required to be a songwriter?</p> <p style="text-align: center;">V_L_S_M*_B_P_I_N*_</p>	<p style="text-align: center;">Self-Expressive Learner (D) Intuitive-Feeling</p> <p>Ben Franklin had many ideas for new inventions. Brainstorm a list of existing inventions that could be modified to improve them. Choose one from your list and make a model. Make an accompanying illustration that shows how it works.</p> <p>Which intelligent behaviors would an inventor need to be successful?</p> <p style="text-align: center;">V_L_S*_M_B*_P_I_N__</p>

Real World Connections With Products: Song, invention, time-line, news article, letter

Real World Applications: songwriter, newspaper reporter, inventor

Real World Terms: evaluate, judge, research, decide, publish, invent, modify, illustrate

Connect all products in the unit to real world applications reflecting the concept, generalizations and topic. The above is an example of how this might be accomplished.

Concept Focus: Change through Inventions

Overarching Generalizations:

Electrical inventions can have a positive or negative influence.

Inventions usually make life easier.

Mankind cannot continue to use non-renewable energy resources at the current rate.

More Complex Generalizations (Two or more concepts):

Past inventions impact present and future inventions.

Essential Question:

(Include concept and intelligent behavior that leads to deeper understanding of the concept through exploration of the generalization)

Through examining the cultural and technological history of North Carolina, judge whether change can be positive or negative.

How has electricity changed relationships in society?

Materials Needed for Task Rotation and/or Task Rotation Menu

- Research materials on North Carolina's history and inventions
- Classroom supplies
- Computers

MetaCognitive Discussion (Essential Questions):

(Whole Group):

Conceptual Perspectives:

Intelligent Behaviors:

Literary Perspective:

Student/Teacher Reflections

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APPENDIX

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Additional Instructional Concept-Based Activities