Title: Necessity, the Mother of Invention  
Submitted by: Barbara Cerwinske  
Grade 3


Day 1: Engage with *How Ben Franklin Stole the Lightning* by Rosalyn Schanzer, read-aloud.

Questions for discussion:

1. What is an invention? (Something that is made to meet a need or solve a problem.)
2. What is the difference between an invention and a discovery? (An invention is something that is created; a discovery is something that is found for the first time.)
3. Make a list of Franklin’s inventions and his discoveries.
   a. Inventions: swim paddles, library chair, wooden arm, odometer, clock with a second hand, daylight saving time, bifocals, Franklin stove, glass armonica, lightning rod, etc.
   b. Discoveries: breathing fresh air and drinking lots of water help you be healthy, exercise and weight lifting help keep folks fit, eating citrus fruit give people healthy gums and skin, pouring a few drops of oil on angry waves in a lake causes the water to become smooth as glass, lightning is electric current, etc.

Day 2: Explore and Explain

1. Pass out the Ben Franklin Imaginative Inventions worksheet and have students in their small groups, give the problem or need and the solution for each of the inventions that were listed on Day 1.
2. Pass out the Improve a Benjamin Franklin Invention worksheet and have students pick one invention and answer the questions about that invention.

Day 3: Evaluate
In your group, create an advertisement for your new product. Be sure to include a drawing of it and how it will be more useful and/or better than the original.

- 3 points: A labeled drawing of the improved invention, including a creative name.
- 2 points: Two reasons why people should buy the invention.
- 1 point: Directions for using the invention safely or a warning label.
- Extra points: A catchy slogan, a jingle, or a drawing or the invention’s packaging.

Reference:
Indiana State Standards:

Technology and Science

3.1.6

Give examples of how tools, such as automobiles, computers, and electric motors, have affected the way we live.

3.1.7

Recognize that and explain how an invention can be used in different ways, such as a radio being used to get information and for entertainment.

Decoding and Word Recognition

3.1.3

Read aloud grade-level-appropriate literary and informational texts fluently and accurately and with appropriate timing, change in voice, and expression.

Analysis of Grade-Level-Appropriate Nonfiction and Informational Text

3.2.2

Ask questions and support answers by connecting prior knowledge with literal information from the text.
Locate appropriate and significant information from the text, including problems and solutions.

(Worksheets attached)
Ben Franklin’s Imaginative Inventions

<table>
<thead>
<tr>
<th>PROBLEM OR NEED</th>
<th>SOLUTION</th>
<th>NAME OF INVENTION</th>
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<tr>
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<td>Swim paddles</td>
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<td>Bifocals</td>
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<td>Glass harmonica</td>
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<td>Franklin stove</td>
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<td>Lightning rod</td>
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<td></td>
<td>Daylight savings time</td>
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</tbody>
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Name:_______________________
Improve a Benjamin Franklin Invention

1. Choose an invention from the Ben Franklin Imaginative Inventions that you would like to improve.

2. What was the original purpose for this invention?

3. What could you do to make this invention more useful or more fun?

4. What are the benefits of your improved invention?

5. What are the risks of your improved invention?

6. What will you call your new invention?