



## LESSON PLAN

EVENT: Virtual Challenge

GRADE: K-8

LESSON TITLE: Build a Better Pencil

GET YOURSELF READY	
<p><b>Materials:</b></p> <ul style="list-style-type: none"> <li>• Paper</li> <li>• Pencil</li> <li>• Unsharpened Pencil (if you have one)</li> <li>• Art supplies: tape, paper clips, clay, pomp oms, rubber bands, pipe cleaners, Styrofoam, glue...anything you need to build a better pencil!</li> <li>• Website: Coca Cola Journey (optional): <a href="https://www.coca-cola.ie/stories/history-of-coca-cola-1886-1892">https://www.coca-cola.ie/stories/history-of-coca-cola-1886-1892</a></li> </ul>	<p><b>Your Preparation:</b></p> <ul style="list-style-type: none"> <li>• Gather Materials</li> </ul>
<p><b>Agenda:</b></p> <ul style="list-style-type: none"> <li>• Introduction</li> <li>• Activity</li> <li>• Submit idea</li> </ul>	
GET YOUR STUDENTS READY	
<p><b>Objective:</b> Students will be given the opportunity to design and make something using a variety of materials and simple tools. Using the pencil, students will investigate the ideas of planning and evaluation in the context of invention and design.</p>	<p><b>Proving Behavior:</b> Students will complete the design challenge by creating solutions to a problem using everyday tools and materials.</p>
CONTENT	
Activity	Description and Steps
<p><b>Introduction:</b> Brainstorming</p>	<p>Think about the following questions. Share with a friend your ideas.</p> <ul style="list-style-type: none"> <li>• What is an invention?</li> <li>• How do people come up with new ideas for things to make or build?</li> <li>• Have you ever come up with a new idea or design?</li> </ul> <p>Did you know that many inventions that we love today were actually mistakes! That's right, people had ideas and when they designed and made them, they didn't turn out exactly as planned....but rather than getting upset or frustrated, they were creative and found new uses for their product and these became just as well used and famous.</p>

For example, Coca Cola, the soda, was not supposed to be a well loved soda. The inventor was a pharmacist trying to make a medicine... (Go to the Coca Cola History website: <https://www.coca-cola.ie/stories/history-of-coca-cola-1886-1892> for the story.)

**Activity:**  
**The Pencil Problem**

Let's talk about the pencil. What is it? How is it used? Then ask what are some problems with the pencil?

Take a piece of paper and fold it half lengthwise. Use one side to write down things that you like or that work on the pencil. On the other side, write down a few problems with the pencil.

For today's challenge, you are going to need the following:  
Paper or notebook for taking notes  
Pen or pencil for writing  
Pencil (unsharpened or sharpened) for designing  
Art supplies: tape, paper clips, clay, pomp oms, rubber bands, pipe cleaners, Styrofoam, glue...

**Today's Challenge:**  
Your job is to come up with a plan for solving your pencil problem. You can come up with a few ideas, but in the end, you will chose one of your ideas to design, build and submit.

Take about 10 minutes to write down some ideas, and the circle the one you like best.

Next, draw a few designs to show what your new and improved pencil might look like.

Then, using the materials you have at home build your better pencil. Don't be afraid to test your pencil as you design to see if it works the way you want it to. And, certainly make changes as you go.

Once you have your design, you can submit it to us to complete the Challenge.

**YIP CHALLENGE SUBMISSION**

**TO SUBMIT YOUR DESIGN:**

Take a photo, or scan and upload a picture of your drawing or design.

Email it to your teacher, or send it to us,

Email it to: [hello@aaas-world.org](mailto:hello@aaas-world.org)

We can't wait to see your awesome ideas!