

Inventing Products

Goal: Students will come up with ideas for new product inventions (school supplies, home appliances, etc.).

Suggested Materials:

- Old toys and sports equipment (consider asking students to bring in their favorite old toys, games, etc.)
- Pens, pencils, paper, etc.
- Pictures of products, including home appliances, office/school supplies, tools, toys, etc. You may opt to:
 - use an interactive whiteboard or computer(s) to display products on a website or websites
 - bring in or have kids bring in old magazines featuring existing products
 - bring in some sample products or have each student bring in 1-2 things to share



Procedure:

Step 1: Identify the Type of Product

Ask students to think about products they use and then pick a product type, such as:

- Office and school supplies
- Home tools and appliances
- Toys, games, and sports equipment

Step 2: Brainstorm

Hand out product pictures or examples based on students' product type choices. Then ask:

- What do you like about the product handed to you?
- What do you think doesn't work?
- What do you think you can make work better?
- Can you think of a completely new product to get the same job done in an easier or better way?
- What could this product do other than its designated "job"? What would you need to change to make it do that?

Step 3: Find Solutions

Ask students to list problems they discovered with the product they observed.

- What can you change to make it work better?
- Pick the best solution that you'd be able to work on.

Step 4: Design

Students will need to build on their ideas, understanding that their first design/concept will not always be their best.

- What does your redesigned product/idea look like?
- What materials will you need to make a prototype (or working example)?
- Make notes of what you want to do and create drawings of your invention.

Step 5: Refining & Naming

Now that students have an idea of how their product might look, they can SCAMMPER to refine it.



- Substitute—What could you do instead or in a different way?
- Combine—Can you combine different parts?
- Adapt—Can you make it better?
- Minify/Magnify—Can you make it smaller or bigger?
- Put to other uses—Are there new ways to use it?
- Eliminate—What might you need to get rid of?
- Rearrange/Reverse—Can you interchange components?

An especially fun part of inventing a product is naming it! Encourage kids to be creative and choose names that will be catchy, easy to remember, fun to say, etc.

Step 6: Test the Idea

Get everyone in the class to share their ideas. Thoughts and reactions from classmates will help students understand if their idea would really work and will give them new ideas.

Step 7: Review

Have students write or present a review of their product invention experience.

