

I can understand the distinction of “invention and innovation.”

Engineering, **technology**, and **science** are commonly used terms, but what do they mean and what impact do they have on our lives? For example, some of you may have had an X-ray for a broken arm, or you may have a water purification device attached to your household faucet. Were these products created through the application of science or engineering?

[101 Inventions](#) (list of items)

1. What is the artifact you have chosen to investigate?

Catcher's Mask.

2. What is the purpose of your artifact?

Protects Catchers and Umpires during a baseball game or when a pitcher is warming up or practicing.

3. Who was the original inventor (who owns the patent?), and when was your product invented? What was already current?

In 1876 Fred Thayer innovated a fencing mask with his concept of the “rat trap” design. Soon used by pros in the 1880s.

4. How was it used when originally invented? How is it used today?

It has been used the same way. Innovation has only made it lighter , more comfortable and safer for those that wear it.

5. What are some of the innovations that this product has undergone since its original invention? Include the date of each innovation.

Was (start)	Innovation	Now
-Heavy Steel -Dogskin (pad) -Goat Hair (-Mouse trap design		-Hockey Style Polycarbonate Shell Cage in front -Traditional

6. How has this product impacted society in a positive way?

Innovation has created less injuries (safer) and lighter use for users.

7. How has this product impacted society in a negative way?

Industrial biproducts from manufacturing polycarbonate and other metals.

8. Complete a chart like the one shown to document how science, technology, math, and engineering were all used in the creation of your technological product.

ITEM	Science	Technology	Engineering	Math
Catcher's Mask	Metals and Polycarbonate melt and mold at certain temperatures.	Molded polycarbonate shells and lighter strong metals. Higher density synthetic cushion. Synthetic padding/pad	Lighter shell size, arrow dynamic testing to create less impact for the user. Durability of synthetic materials.	What are the optimal measurements, amount of material?

9. Insert at least 4 images and captions (describing) that have shown innovation of your invention.



Resources

Title	Link
The Evolution of Catcher's	https://sabr.org/journal/article/the-e

Equipment	volution-of-catchers-equipment/
Library of Congress	https://www.loc.gov/exhibitions/baseball-american/about-this-exhibition/introduction/baseball-then-and-now/enter-the-hockey-style-mask/
Key Man's Collectibles	https://keymancollectibles.com/equipment/1880catchersmask1899.html