

## Art

- The student learned about form and texture through designing the 3D model of the grenade.
- They explored color and material choices when considering the visual appearance of the grenade.
- The activity encouraged creative thinking and expression through the design process.

## Math

- They applied geometric concepts while creating and manipulating the 3D model of the grenade.
- They used measurement and scale to ensure the dimensions of the grenade were accurate.
- The activity provided practical application of proportions and spatial reasoning.

## Science

- The student learned about materials science in considering the physical properties of the grenade.
- They gained insights into physics through understanding the mechanics of the grenade's functioning.
- The activity fostered an understanding of engineering principles by exploring the design and functionality of the grenade.

For continued development, students can explore the history and development of weaponry and explosives as an extension of this activity. They could also experiment with different types of 3D modeling software to further enhance their skills in creating complex and detailed designs.

## Book Recommendations

- [3D Printing: The Revolution in Personalized Manufacturing](#) by Melissa Koch: An engaging exploration of the history and potential of 3D printing for young readers.
- [Makerspaces: A Practical Guide for Librarians](#) by John J. Burke: This book provides insights into creating and using makerspaces, including 3D printing projects, in educational settings.
- [How Things Work: The Inner Life of Everyday Machines](#) by Theodore Gray: This book offers an in-depth look into the science and engineering behind everyday machines, including explosives and weaponry.

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