

# UCF Veterans Legacy Program Curricular Materials



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Lesson Title	3-D Dedication: 3D Printing Dog Tags- Historical Context and Evolution
Grade(s)	4 - Social Studies and Makerspace 5 - Social Studies
Time (Minutes/ Days)	90-120 minutes

## Lesson Overview

In this lesson students will explore the history and significance of dog tags, understand their evolution over time and create their own dog tags using 3D Printing Technology. This lesson integrates Social Studies with hands-on Makerspace activities to deepen knowledge and appreciation of historical artifacts, while applying technology to learning.

As an addition OR alternative to the technology portion of this lesson, allow students to use primary source documents to engage with the lives of Veterans from various conflicts. This part of the lesson will allow students hands-on engagement with material primary sources—historical artifacts—critical thinking, and primary source analysis.

## Essential Questions

- How can we use modern technology to recreate historical artifacts, and how can this skill play an important role in preserving and communicating histories?
- How are dog tags an important piece to our nation's history?
- How can we apply our knowledge of the evolution of dog tags to the future of our Armed Forces?

## Florida State Standards

SS.4.A.1.1 Analyze primary and secondary resources to identify significant individuals and events throughout Florida History.

SS.4.A.1.2 Synthesize information related to Florida history through print and electronic media.

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SS.4.A.2.1 Compare Native American Tribes in Florida

SC. 4.N.1.1 Raise questions about the natural world, use appropriate reference materials that support understanding to obtain information, conduct both individual and team investigations through free exploration and systematic investigations, and generate appropriate explanations based on those explorations.

SS.5.AA.1.6 Examine the experiences and contributions of African Americans in early Florida.

SS.5.A.1.1 Use primary and secondary sources to understand history.

SS.5.A.1.2 Utilize timelines to identify and discuss American History time periods.

SS.5.CG.2.6 Explain symbols and documents that represent the United States.

## Required Materials

- Computers
- Internet
- Tinkercad software/accounts for students\*
- 3D Printers
- Filament for 3D Printer
- Sample Dog Tags for visual reference
- Historical information on dog tags (see bibliography for further reading)
- [History & Evolution of Dog Tags PowerPoint](#)
- Markers, paper and pencils for initial dog tag design and for brainstorming and while building background knowledge.
- Basic procedure to guide/prompt students to create a dog tag in the Tinkercad application (See Instructions Below)

*\* The teacher needs to set up a classroom in the application prior to starting this lesson.*

### Worksheet Activity

- [Printouts of the Evolution of Dog Tags worksheet \(See Below\)](#)
- [Printouts of primary source documents from the following biographies](#)

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published on the UCF VLP website:

- Abram (William) Lancaster -  
<https://vlp.cah.ucf.edu/biographies/sanc/BA-0-193-F.html>
- Jason Waitman -  
<https://vlp.cah.ucf.edu/biographies/sanc/BA-0-212-F.html>
- George J. Byers Jr. -  
<https://vlp.cah.ucf.edu/biographies/sanc/BD-0-119-F.html>

## Learning Objectives

Students will be able to describe the historical context of dog tags and the significance, evolution and apply their knowledge by designing and creating their own dog tags using 3D Printing technology.

## Procedure

### Introduction (5 minutes)

1. Begin with a brief discussion on the importance of identification and the history of dog tags. What do we already know (assessing prior knowledge).
2. Show students examples of dog tags from different time periods and discuss their evolution.

### Whole group lesson on historical context (10 minutes)

- Lecture on dog tags from the origin of the Civil War to modern-day use using the PowerPoint presentation found [here](#).
- Using technology in historical contexts.
- Optional to Print the following passage for students to read and annotate as well: [https://www.civilwar.si.edu/soldiering\\_id\\_tag.html](https://www.civilwar.si.edu/soldiering_id_tag.html)

### Student Activity (30 minutes)

- Students are given the Tinkercad activity to create a dog tag that is reflective of an assigned veteran who is memorialized in the Saint Augustine Cemetery.
- Dog tags must represent the time period that the veteran was alive.
- Dog tags must meet the criteria for 3-D printing.

*\*\*Depending on student knowledge of Tinkercad, they may be released to freely design, or utilize the "Step be Step Guide" (See below.)*

### Worksheet Student Activity (30 minutes)

- Break students into groups and have them examine the three different Veterans on the worksheet through primary sources.
- Using the service cards, interment cards, and muster rolls, have the students work together to analyze and draw identifying information from the sources to fill out the "Evolution of Dog Tags" worksheet.

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- If appropriate, have students present to the class what they learned about the Veteran they identified. Have them discuss how easy or difficult it was to find the information about their Veteran.
- Allow students to reflect on how historical actors might have had to use the same kinds of sources to identify someone.

### Teacher Notes:

In order for students to properly utilize Tinkercad, teachers must have a classroom created that students can join, by the teacher sharing the link to the classroom within the application. Tinkercad is free for both students and teachers.

### Peer Review (15 minutes)

- Students will share their designs of their Veterans dog tag with their table group.
- They must discuss why the time period their veteran/dog tag belongs to and what is unique about dog tags within that time period.
- Peers write 3 "glows" and 3 "grows" down on a sticky note to provide to their presenting students. This will allow students to make iterations and improvements of their design and presentation based on the suggested feedback.

### Saving for Printing and Improve Design (15)

- Give time for students to make the necessary minor adjustments. Once reviewed and improved, students will save their design as a STL file so that the teacher can send it for printing.
- It is suggested that the teacher reviews and approves the design and saves the STL file onto a jumpdrive for printing on the 3-D Printer.
- Dog tags can be printed and passed out prior to the 4th grade SAC field trip.

### Lesson Wrap up (15 minutes)

- Hold class discussion relating the use of technology to preserve what we know about historical items such as dog tags. Allow students to discuss what they found interesting, relating it back to the standards.
- Allow students to share the most challenging and rewarding parts of the lesson with the class.
- Allow students to select one of the essential questions, and write an answer to it based on what they learned. Teacher collects this as an exit slip

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## Example of Completed Tag for Printing:



## Bibliography for Further Reading/Teacher/Student Use

"Identification tag," Civil War Smithsonian, *Smithsonian Institute*, accessed July 15, 2024, [https://www.civilwar.si.edu/soldiering\\_id\\_tag.html](https://www.civilwar.si.edu/soldiering_id_tag.html)

Labbe, Savannah A., "The Evolution of the Military Dog Tag: From the Civil War to Present Day" (2016). *The Gettysburg Compiler: On the Front Lines of History*. 176. <https://cupola.gettysburg.edu/compiler/176>

Lange, Katie, "Dog Tag History: How the Tradition & Nickname Started," DOD News (blog), *U.S. Department of Defense (DOD)*, September 9, 2020, accessed July 15, 2024, <https://www.defense.gov/News/Feature-Stories/Story/Article/2340760/dog-tag-history-how-the-tradition-nickname-started/#:~:text=The%20half%2Ddollar%20size%20tags,worn%20under%20the%20field%20uniform.&text=These%20original%20World%20War%20I,Darden>.

Ruane, Michael, "Civil War battlefield museum gets rare Union soldiers, I.D. tag," *Washington Post*, December 17, 2021, accessed July 15, 2024, <https://www.washingtonpost.com/history/2021/12/17/civil-war-id-dog-tag/>.

UNT Special Collections, "Photograph of civil war dog tags, 19XX," University of North Texas Libraries, UNT Digital Library, <https://digital.library.unt.edu>, accessed July 15, 2024, <https://digital.library.unt.edu/ark:/67531/metadc873074/>.



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## How to Create a Dog Tag in Tinkercad

### Materials Needed:

- A computer or tablet
- Tinkercad app (ask your teacher for a code to join the classroom if you have not already created an account)

### Steps:

#### 1. Open Tinkercad:

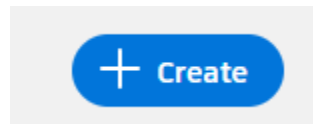
- Log into your Tinkercad account.
- Click "Create new design" to start a new project.



(free to sign up)

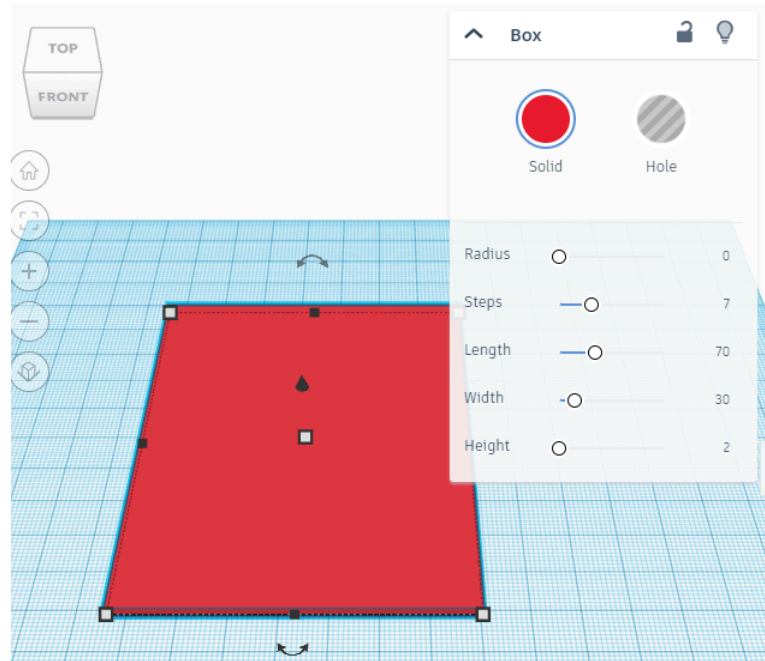
#### 2. Set the Workplane:

- Your work plane is the blue grid. This is where you will design your dog tag.



#### 3. Add a Rectangle:

- On the right side, you will see shapes. Drag a box shape onto your workplane.
- Resize the box to look like a dog tag.
- Pay attention to the size!
- Recommended size:
  - Length: 70 mm
  - Width: 30 mm
  - Height: 2 mm



#### 4. Round the Corners:

- Click the box to select it.
- On the shape menu, find and adjust the “radius” to round the corners. It is recommended to set them to 20 mm.



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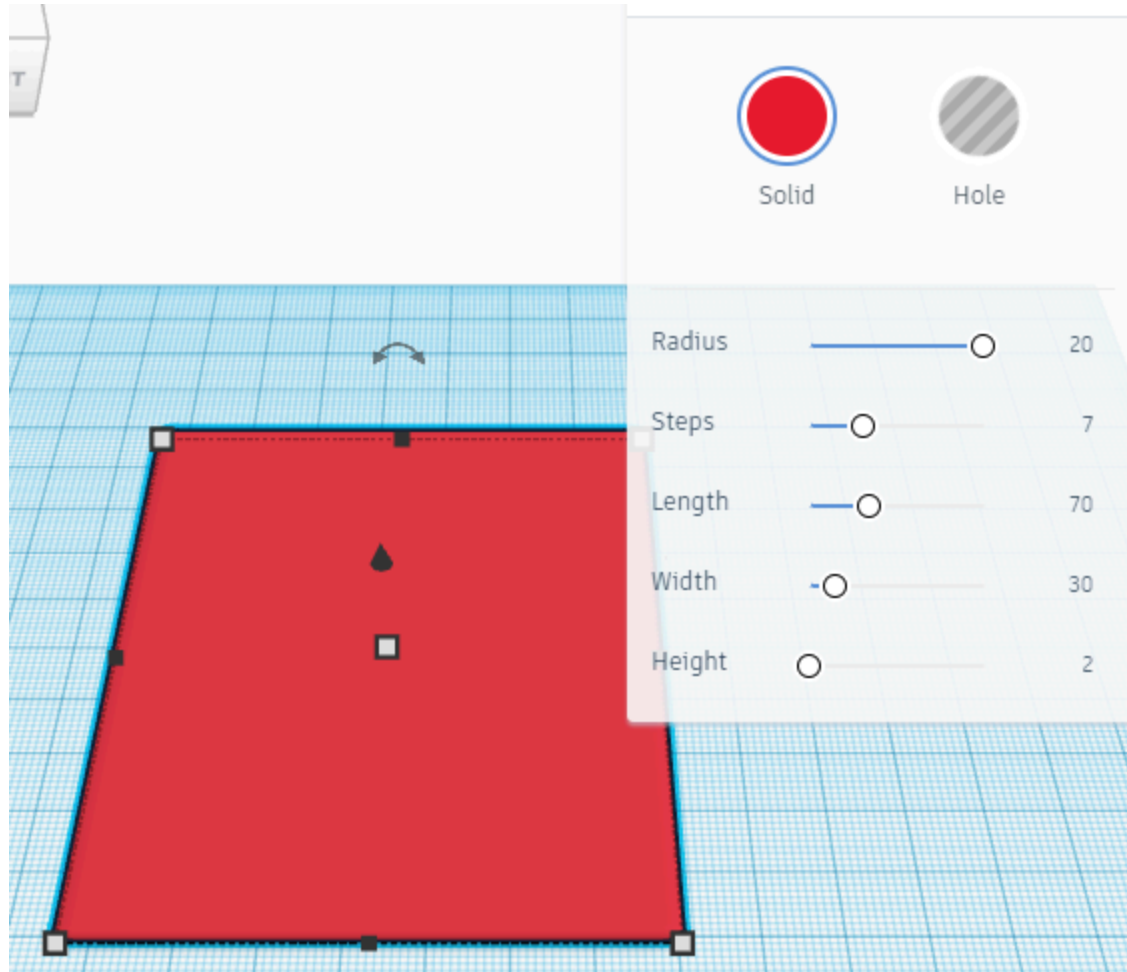
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5. Create a hole for the chain:

- Drag a cylinder shape onto the workplane.
- Resize the cylinder to have a diameter of 4mm in diameter and 2 mm in height.
- Turn it into a hole by clicking on “Hole” in the shape menu.
- Move the cylinder onto the dog tag on the upper middle part of the rectangle.
- Group the shapes by selecting all the shapes by dragging a box around them.
- Select the “Group” button in the top of the toolbar.



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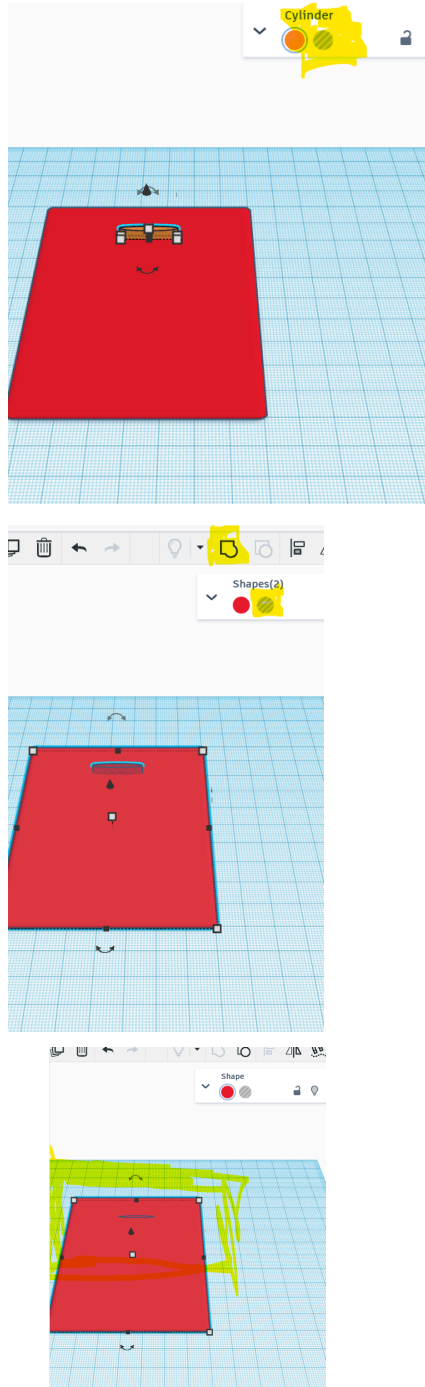


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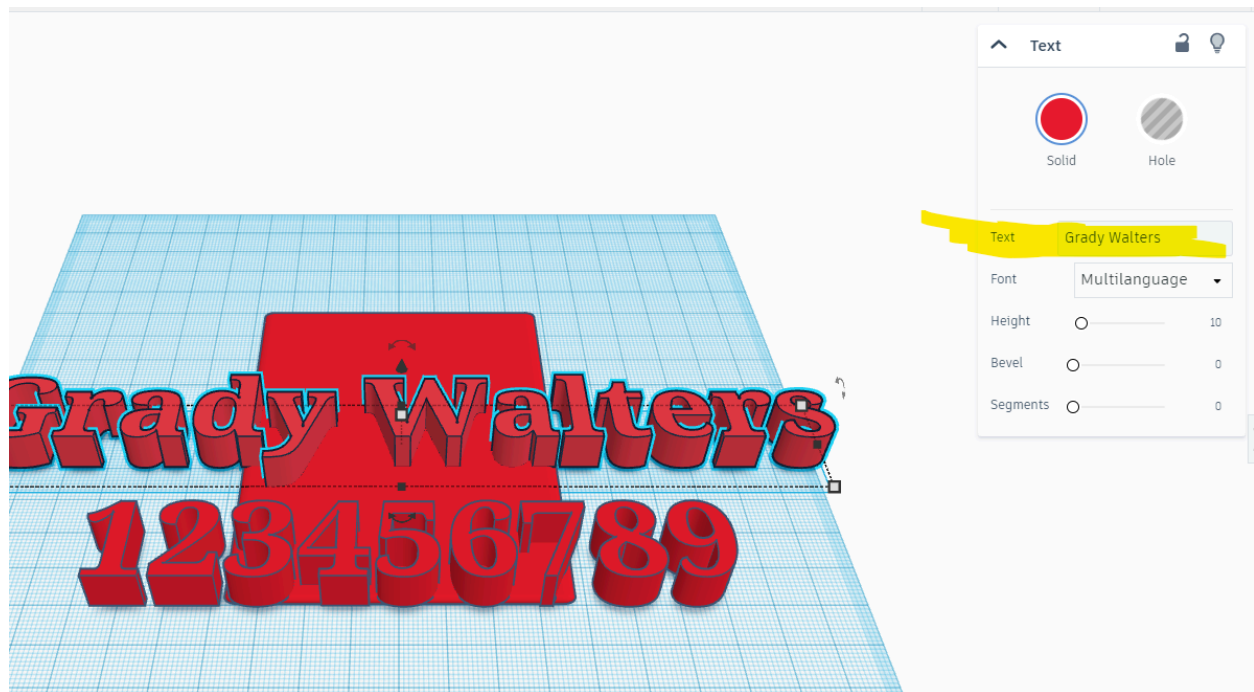
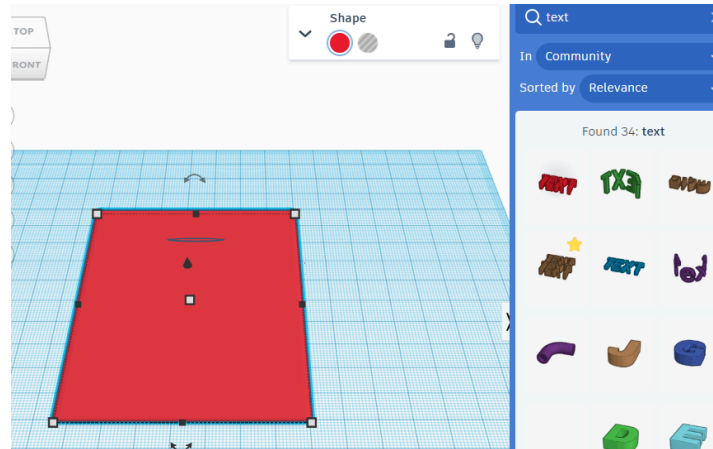
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## 6. Add Text:

- Drag the "Text" shape onto the workplane.
- Type your veterans name and service number into the text box.
- Resize and move the text to fit on the dog tag.
- Adjust the height of the text to 2mm.
- Make sure the text fits nicely on the dog tag.



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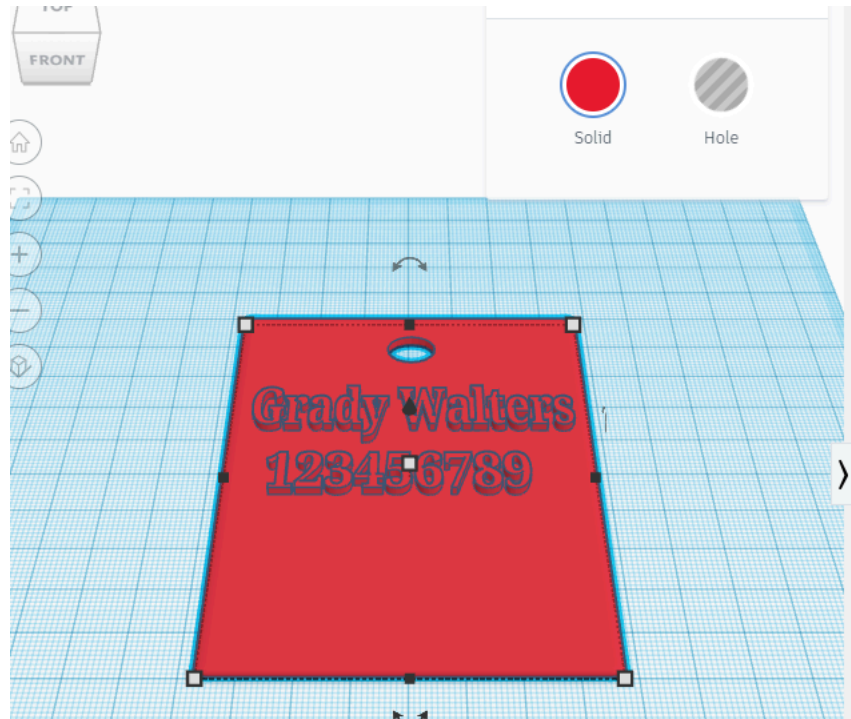
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7. Check your Design:
  - Look around your dog tag by dragging the view.
  - Make sure nothing goes below the plane, and everything is attached.
8. Save Design and Prepare for Printing:
  - Click Tinkercad at the top left to go back to the Dashboard.
  - Find your design, click the gear icon, and choose "download for 3D Printing."
  - Save as an STL file.
  - Raise your hand and tell your teacher so they can save it on a jump drive for the 3D Printer.



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### Download for 3D Printing

Download this model as an STL file if you want to use external services or 3D printers.

.STL

.OBJ

### Download for laser cutting

The 2D file contains cross section of the model on workplane suitable for laser cutting.

.SVG

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# The Evolution of Dog Tags

Using what you have learned about the history of military identification tags, fill out the tag with the information about the corresponding Veteran using assigned primary sources.

**IDENTIFIER**

I am \_\_\_\_\_

Co. \_\_\_\_\_ Reg't. \_\_\_\_\_

\_\_\_\_\_ Brig. \_\_\_\_\_ Div. \_\_\_\_\_ Corps.

**Abram (William)  
Lancaster  
1836- July 20, 1904**

Name \_\_\_\_\_

Rank \_\_\_\_\_

\_\_\_\_\_ Co.

\_\_\_\_\_ Div.

U.S.A.

**Jason Waitman  
February 27, 1895-  
December 9, 1936**

Name \_\_\_\_\_

Rank \_\_\_\_\_

Service Num. \_\_\_\_\_

**George J. Byers Jr.  
August 18, 1918-  
February 19, 1945**



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