



Cyber Security Initiative for Nevada Teachers (CSINT)

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Navy Junior Reserve Officers Training Corps (NJROTC)



The NJROTC program goals are to provide an opportunity for secondary school students to learn about the basic elements and requirements for national security and their personal obligations as American citizens to contribute toward national security. The NJROTC has the following basic objectives:

- Promote Patriotism
- Develop informed and responsible citizens.
- Promote habits of orderliness and precision, and develop respect for constituted authority.
- Develop a high degree of personal honor, self-reliance, individual discipline, and leadership
- Promote an understanding of the basic elements and requirements for national security.
- Develop respect for and an understanding of the need for constituted authority in a democratic society.
- Develop an interest in the military service as a possible career.

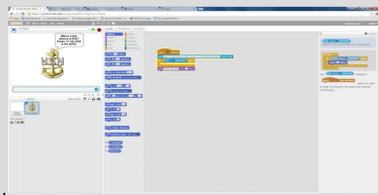


Scratch enhances NJROTC knowledge:

Introduction – During the annual military inspection (AMI) cadets are expected to know all facets of the US Navy uniform. Most importantly they should be able to visually recognize all of the rank insignias of the collar devices for the NJROTC and the US Navy ranks. Learning to write programming code through Scratch provides a way for the cadets to learn visual recognition of the collar devices.

Engagement - Besides the US military are there other organizations that use ranks to identify their employees? Why is it important for individuals in the military to know each others rank?

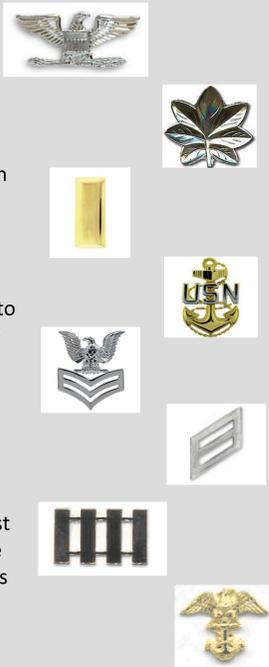
Exploration - Using the Scratch website located at https://scratch.mit.edu/projects/editor/?tip_bar=home cadets will create and run their own animations that identify each of the collar insignias for the NJROTC and US Navy ranks.



Explanation – Cadets using Scratch not only assists them to memorize the NJROTC and Navy rank collar devices. Cadets will also be asked to provide their understanding of basic programming language syntax.

Elaboration - As the cadets use Scratch to create code, in order to animate the collar devices for each NJROTC and Navy rank, they gain a deeper understanding of computer science and how a computer program is written. By assembling code to create the animations the cadets develop the skill of “paying attention to detail” which they will use through out their lives.

Evaluation - - Cadets will be given a Pre and Post Assessment covering the NJROTC and US Navy Rates and Ranks. The Pre/Post assessment is made up of forty (40) fill in the blank and multiple choice questions pertaining to NJROTC and US Navy Rates/Ranks collar insignias.

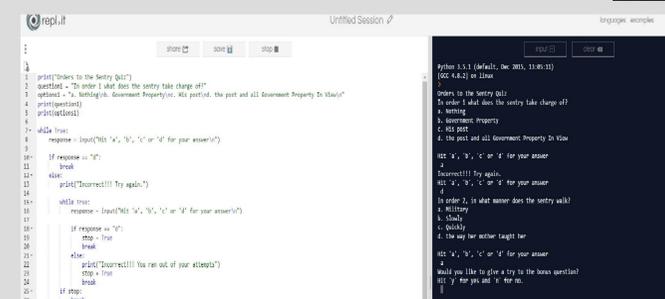


Python enhances NJROTC knowledge:

Introduction – During the annual military inspection (AMI) cadets are expected to have memorized (verbatim) the 11 Orders to the Sentry, their National Chain of Command, as well as their own battalion’s chain of command. Learning Python code provides a way for the cadets to learn without getting bored by the traditional methods which are often monotonous in nature.

Engagement - Why is it important to know who you work for? Why is it important to know what the expectations are of you when you are on the job?

Exploration - Using the repl.it website and Python code, cadets will create and run their own quizzes on the orders and chain of commands.



Explanation – Cadets will be asked to describe how using Python code to create quizzes will enhance their learning. They will also be asked if being exposed to the rudimentary elements of coding, will benefit them in the future and why.

Elaboration - As the cadets create Python code to create quizzes, they gain a deeper understanding of computer science and how a program is written using Python code. Furthermore, through writing Python code they also develop the highly needed skill of “paying attention to detail” a skill they will need throughout their lives.

Evaluation - - Cadets will be given a Pre and Post Assessment for the orders to the sentry subject matter only. The orders to the sentry assessment will consist of eleven (20) fill in the blank questions which pertain to the exact wording for each of the Orders and personnel within the National Chain Of Command.



NJROTC Promotes Positive Cyber Citizenship

Metadata Lesson:

Introduction - This Meta-Data lesson is designed to bring a concrete awareness to the cadets so that they understand that when they upload an image to the internet, they could also be uploading other sensitive information such as date, time, and location of where the picture was taken. This is important for the students to know, as meta-data can be maliciously used to identify an individual’s location as well as track their movements.

Engagement - Can you delete an image you posted to the internet? If yes, is it really deleted. What information are you providing when you upload an image to the internet? What is Metadata?

Exploration - Using the Exif tool software and a GPS location website such as GPS Coordinates found at: www.gps-coordinates.org cadets will extract metadata information from an image and determine the exact date and time the image was taken as well as the street address of image’s location.

Explanation – Cadets will be asked to explain the following terms: Metadata and GPS. Cadets will be asked to explain why having GPS information in metadata can be both positive and negative.

Elaboration - By examining digital photos, that contain metadata, the cadets learn in detail how their actions concerning uploading images to the internet can have both positive and negative impacts.

Evaluation - A rubric-based project. The project is based upon a scenario where the FBI asks the forensics team (made up of 5 cadets) to find out if any correlation can be obtained from the metadata embedded in the images on a thumb drive with the locations of the bank robberies that happened across the nation. The team examines metadata and creates a presentation.



Extra Curricular Activity/After School Program – CyberPatriot:

Carson HS NJROTC participates in the Air Force Association’s CyberPatriot competition. The competition puts teams of high school and middle school students in the position of newly hired IT professionals tasked with managing the network of a small company.



The CSINT communications module provided in-depth training that incorporated policies that deal with access control, application security, email security, firewalls, intrusion prevention systems, and wireless security all of which will be brought back to the Carson HS CyberPatriot team practice sessions.