

Bastian | Planning & Pacing Guide

UNIT 2: CIA TRIAD

Estimated Time in Hours: 6-7

<u>Big Idea(s)</u> 2 Establishing Trust 4 Data Security 8 Implications	<u>Enduring Understandings</u> 2.1, 4.1, 8.1	<u>Projects & Major Assignments</u> - Round Table Discussions - Key Vocabulary / Concepts Poster - CIA Triad Problems
Guiding Questions: <ul style="list-style-type: none"> • How are confidentiality, integrity, and availability interconnected? • What is essential for establishing trust in cybersecurity? 		
Learning Objectives & Respective Essential Knowledge Statements	Materials	Instructional Activities and Classroom Assessments
<p>2.1.1 LO: Students will evaluate methods of keeping information secret from those whom the information should be kept secret EK: 2.1.1a,e</p> <p>2.1.2 LO: Students will demonstrate that integrity involves trust and credibility. EK: 2.1.2a,b,c,d</p> <p>2.1.3 LO: Students will evaluate methods of protecting information and information systems from disruption and destruction. EK: 2.1.3a,b</p>	<ul style="list-style-type: none"> • “Cybersecurity: Crash Course Computer Science #31.” <i>YouTube</i>, uploaded by CrashCourse, 11 Oct 2017, https://www.youtube.com/watch?v=bPVaOIJ6ln0&feature=youtu.be • Textbook: Stallings, William and Brown, Lawrie. <i>Computer Security: Principles and Practice, Third Edition</i>. Pearson, 2015. • Window Notes Sheet (access a blank Window Notes template at https://toolsforclassroominstructionthatworks.com/ 	<p>Introduction to CIA and Key Vocabulary: (5-day lesson) Students will learn what cybersecurity is and the key concepts to the CIA Triad.</p> <ul style="list-style-type: none"> • In this lesson the basics of cybersecurity and the CIA Triad is introduced. Students begin with an introduction video to Cybersecurity. They learn the basics of cybersecurity. Students then read about the concepts that make up the CIA Triad in the textbook: “<i>Computer Security Principles and Practice - Third Edition</i>” by William Stallings & Laurie Brown. They read section 1.1, 1.2, and 1.6 and take Window notes on each section. They then share their notes with a group of 3-4 students and discuss what they have learned. They add to their notes based on the discussion with their peers. After the discussions students research and analyze methods for keeping information secret. They write an argument for the method they think is best. Students then have a round table discussion regarding the best method of keeping information secret using the arguments they have written. Students

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<p>4.1.1 LO: Students will analyze existing data security concerns and assess methods to overcome those concerns. EK: 4.1.1c,e,f,g</p>	<p>wp-content/uploads/2018/01/Window-Notes.pdf)</p> <ul style="list-style-type: none"> • Poster Paper • Markers 	<p>research and analyze methods of protecting information and information systems from disruption and destruction. They write an argument for the method they think is best. Students then have a round table discussion regarding the best method of protecting information using the arguments they have written. Students then create key concepts/ vocabulary image posters and share out their posters.</p>
<p>2.1.3 LO: Students will evaluate methods of protecting information and information systems from disruption and destruction. EK: 2.1.3c</p> <p>8.1.1 LO: Students will summarize and interpret the impact of cybersecurity ideas and events on the evolution of the field. EK: 8.1.1e,f</p>	<ul style="list-style-type: none"> • Textbook: Stallings, William and Brown, Lawrie. <i>Computer Security: Principles and Practice, Third Edition.</i> Pearson, 2015. • Notebook • Think in Threes Note Catcher 	<p>Understanding Implications of CIA Triad: (1- 2-day lesson) Students will apply their knowledge of the CIA Triad to problems to demonstrate their understanding of the implications of CIA.</p> <ul style="list-style-type: none"> • In this lesson students begin with a warm-up defining <i>Computer Security</i> in their notebooks. Students will then complete problems 1.1, 1.3, and 1.4 parts a-d from the textbook. Once the students complete the problems they discuss their answers with a partner. The lesson is wrapped up with a class discussion about the tradeoffs between confidentiality, integrity, and availability. Along with the impacts to business and critical infrastructure. <p>Assessment: <i>Using a Think in Three note catcher, students define the three parts of the CIA triad and write a paragraph explaining the CIA Triad in the box at the bottom of the note catcher. Students then complete Problem 1.4-part e from the textbook.</i></p>