

Intro to Computer Science

Grade 11 – Pre AP

Thread 1, Day 2

Russell Gordon, Lakefield College School

Submit attendance!



Thread 1, Day 2

Agenda

- Poll Everywhere setup
- Checking in...
- Video: New Beginnings
- Big Ideas for AP Computer Science Principles
- Abstraction: Counting by 10's and by 2's
- Homework: Decimal to Binary Conversion

Poll Everywhere Setup

Please go to: pollev.com/mrgordon/

You need an account before you can register with Russell Gordon

Log in to Poll Everywhere

Next

Or

 Sign in with Google

 Sign in with Apple

[Reset password](#)

New to Poll Everywhere?

Create an account

Use this option! 😎
(LCS account please)

Submitting one word at a time...
... considering everything going on in the
world right now, and in your own life, how
are you feeling?

Video

New Beginnings



Big Ideas

AP Computer Science Principles

#1

Creative Development

10-13% Exam Weighting

Creative Development

AP CSP: Big Idea #1

"In this big idea, students work collaboratively to design and develop programs using an iterative development process. They identify the needs of all users by gathering input from people from different backgrounds and demographics. Once the program is developed, they test it to ensure it meets these needs."

#2

Data

17-22% Exam Weighting

Data

AP CSP: Big Idea #2

"In this big idea, students will gain a deep understanding of how information is stored on a computer in binary and seamlessly translated into what is seen on the screen or heard through speakers. Students will also learn how data are processed to learn something new."

#3

Algorithms and Processing

30-35% Exam Weighting

Algorithms and Processing

AP CSP: Big Idea #3

"All programming languages, whether block-based or text-based, use similar programming structures and commands. Having a basic understanding of how these building blocks are combined to form algorithms and abstractions in one language makes it easier to apply these same understandings to other programming languages."

"This big idea focuses on determining the efficiency of algorithms, as well as writing and implementing algorithms in a program."

#4

Computer Systems and Networking

11-15% Exam Weighting

Computer Systems and Networking

AP CSP: Big Idea #4

"In this big idea, students will learn how computer systems and networks, primarily the Internet, work. Students will learn about how information is transmitted on the Internet and about the safeguards that have been put in place to keep this system from breaking down."

#5

Impact of Computing

21-26% Exam Weighting

Impact of Computing

AP CSP: Big Idea #5

"The creation of computer programs can have extensive impacts, some unintended, on societies, economies, and cultures. In this big idea, students explore these effects, the legal and ethical concerns that come with programs, and the responsibilities of programmers."

Data

AP CSP: Big Idea #2

- Abstraction
 - Abstraction is the process of reducing complexity by focusing on the main idea.
 - By hiding details irrelevant to the question at hand and bringing together related and useful details, abstraction reduces complexity and allows one to focus on the idea.

Please grab a sheet of
paper...

Follow this link to see notes on
decimal to binary conversion in
PDF form

Homework

Decimal to Binary Conversion

- Use paper to complete the first four conversions only on this sheet.
- Please show your work on separate sheet of paper – no direct conversions using technology, since the point is to learn how to the conversions yourself. 😊
- You may find this summary note in PDF form helpful.
- You may find this summary video helpful.
- Please post results in your Portfolio space on Spaces.

Thank-you!