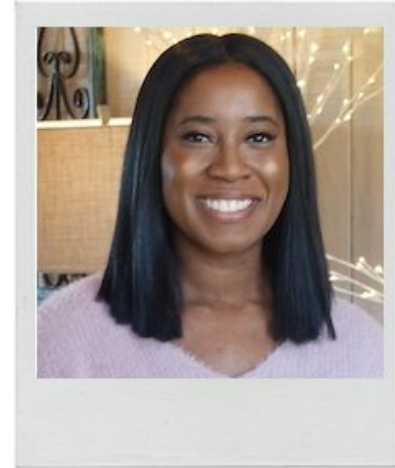




# CodeHS Webinar

---

How to Prepare Students for the AP Java Exam



**Alex Eacker**  
Curriculum Developer

**Anayo Ordu**  
Customer Success Manager

# Today's Agenda

---

1. AP Test Format
2. Available Resources
3. Review Strategies

# Exam Breakdown

---

# 2021 AP CS A Exam Breakdown

## **Section 1. Multiple Choice**

— 40 Questions | 1 Hour, 30 Minutes | 50% of Exam Score

## **Section 2. Free Response**

— 4 Questions | 1 Hour, 30 Minutes | 50% of Exam Score

# Overview of AP CS A Exam

## Section 1.

**Multiple Choice** — 40 Questions | 1 Hour, 30 Minutes | 50% of Exam Score

Question topics will include:

Units	Exam Weighting
<b>Unit 1:</b> Primitive Types	<b>2.5–5%</b>
<b>Unit 2:</b> Using Objects	<b>5–7.5%</b>
<b>Unit 3:</b> Boolean Expressions and if Statements	<b>15–17.5%</b>
<b>Unit 4:</b> Iteration	<b>17.5–22.5%</b>
<b>Unit 5:</b> Writing Classes	<b>5–7.5%</b>
<b>Unit 6:</b> Array	<b>10–15%</b>
<b>Unit 7:</b> ArrayList	<b>2.5–7.5%</b>
<b>Unit 8:</b> 2D Array	<b>7.5–10%</b>
<b>Unit 9:</b> Inheritance	<b>5–10%</b>
<b>Unit 10:</b> Recursion	<b>5–7.5%</b>

# Overview of AP CS A Exam

## Section 1.

**Multiple Choice** — 40 Questions | 1 Hour, 30 Minutes | 50% of Exam Score

Question topics will include:

These topics should be prioritized when reviewing!

Units	Exam Weighting
<b>Unit 1:</b> Primitive Types	<b>2.5–5%</b>
<b>Unit 2:</b> Using Objects	<b>5–7.5%</b>
<b>Unit 3:</b> Boolean Expressions and if Statements	<b>15–17.5%</b>
<b>Unit 4:</b> Iteration	<b>17.5–22.5%</b>
<b>Unit 5:</b> Writing Classes	<b>5–7.5%</b>
<b>Unit 6:</b> Array	<b>10–15%</b>
<b>Unit 7:</b> ArrayList	<b>2.5–7.5%</b>
<b>Unit 8:</b> 2D Array	<b>7.5–10%</b>
<b>Unit 9:</b> Inheritance	<b>5–10%</b>
<b>Unit 10:</b> Recursion	<b>5–7.5%</b>

# Overview of AP CS A Exam

## Section II

**Free Response** — 4 Questions | 1 Hour, 30 Minutes | 50% of Exam Score

Each question will relate to a specific topic:

- Question 1: Methods and Control Structures
- Question 2: Classes
- Question 3: Array/ArrayList
- Question 4: 2D Arrays



# Exam Dates & Format

---

# Exam Dates

**There are three testing dates for the AP CSA Exam:**

- 1. Thursday, May 6, 2021 - 12PM Local Time**
- 2. Tuesday, May 18, 2021 - 4PM Eastern Time**
- 3. Tuesday, June 1, 2021 - 4PM Eastern Time**

# Exam Dates

**There are three testing dates for the AP CSA Exam:**

- 1. Thursday, May 6, 2021 - 12PM Local Time**

This exam is administered with paper and pencil, and will be administered in school.

# Exam Dates

There are three testing dates for the **AP CSA Exam**:

2. **Tuesday, May 18, 2021 - 4PM Eastern Time**
3. **Tuesday, June 1, 2021 - 4PM Eastern Time**

This exam is administered digitally either at home or in school. The exam will be given at 4PM Eastern Time for **all** students.

# AP Digital Testing

- **Exam Day - Students cannot revisit answered questions, or move back and forth between unanswered items**
- **Educators/students can download the [2021 Digital AP Exams App](#) Software, where students can practice interacting with multiple-choice and free response items**
- **[AP Digital Testing Guide](#)**

# Picking Exam Dates

Schools make all decisions about which exams are offered. Students won't be able to choose exam dates on their own.

AP coordinators will be able to assign students to Administration 2 and/or 3 exams, if needed.

For more information, go to the College Board [website](#).

# Picking Exam Dates

**Which Exam Date Should I Choose???**

# Resources

---

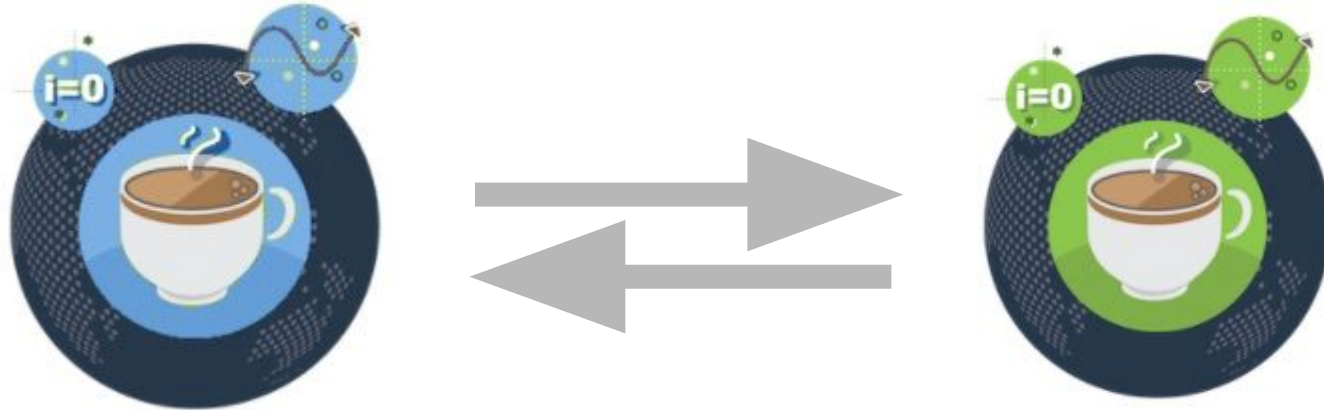


# CodeHS Resources

- 1. Nitro and Mocha Courses**
- 2. 2020 - 2021 Review Course**
- 3. CodeHS Practice**
- 4. FRQ Center**

# CodeHS Resources

## 1. Nitro and Mocha Courses




# CodeHS Resources

## 2. 2020-2021 Review Course



Review: AP<sup>®</sup> Computer Science A  
2020 - 2021



### 4. UNIT FOUR: ITERATION

3 LESSONS

Hide Lessons

---

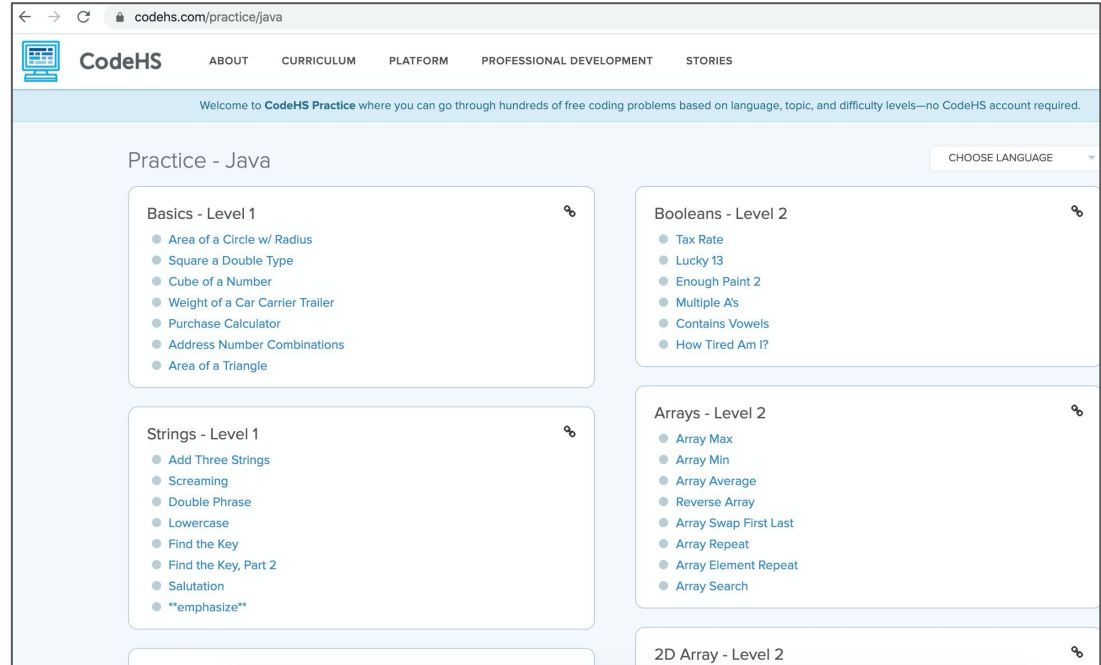
1 LESSON QUIZZES

2 PROGRAMMING PRACTICE BOOLEAN

3 UNIT QUIZZES

# CodeHS Resources

## 3. CodeHS Practice



The screenshot shows the CodeHS Practice website for Java. The page title is "Practice - Java" and there is a "CHOOSE LANGUAGE" dropdown menu. The page is divided into several sections, each containing a list of coding problems:


- Basics - Level 1**
  - Area of a Circle w/ Radius
  - Square a Double Type
  - Cube of a Number
  - Weight of a Car Carrier Trailer
  - Purchase Calculator
  - Address Number Combinations
  - Area of a Triangle
- Booleans - Level 2**
  - Tax Rate
  - Lucky 13
  - Enough Paint 2
  - Multiple A's
  - Contains Vowels
  - How Tired Am I?
- Strings - Level 1**
  - Add Three Strings
  - Screaming
  - Double Phrase
  - Lowercase
  - Find the Key
  - Find the Key, Part 2
  - Salutation
  - \*\*emphasize\*\*
- Arrays - Level 2**
  - Array Max
  - Array Min
  - Array Average
  - Reverse Array
  - Array Swap First Last
  - Array Repeat
  - Array Element Repeat
  - Array Search
- 2D Array - Level 2**

# CodeHS Resources

## 4. FRQ Center

### AP Computer Science A FRQ Center

This page lists resources for you and your students to practice AP CSA FRQs. It includes PDFs, pre-entered code, and autograded Practice Problems for FRQs from past exams.

Year & Problem Number	Topics	Questions PDF	Scoring Guide	Try it!	Assign	Playlist
2013 FRQ 1 - Song List	List of Objects	PDF	PDF	Complete (Text Only, Runnable) Part A (Text Only, Runnable) Part B (Text Only, Runnable)	Complete (Text Only, Runnable) Part A (Text Only, Runnable) Part B (Text Only, Runnable)	

# CodeHS Resources

## 4. FRQ Center

### AP Computer Science A FRQ Center

This page lists resources for you and your students to practice AP CSA FRQs. It includes PDFs, pre-entered code, and autograded Practice Problems for FRQs from past exams.

Year & Problem Number

2013 FRQ 1 - Song List

7 LightBoard Complete Class (Run Code)

Submit + Continue Save

```
1 public class LightBoardTester
2 {
3     public static void main(String[] args)
4     {
5         LightBoard test = new LightBoard(5,5);
6         test.printLights();
7
8         System.out.println("\nEvaluate Light for each Light in LightBoard:");
9         for(int row = 0; row < 5; row++)
10        {
11            for(int col = 0; col < 5; col++)
12            {
13                System.out.print(test.evaluateLight(row, col) + "\t");
14            }
15            System.out.println();
16        }
17    }
18 }
```

Output Docs Exercise More

5 points

The `LightBoard` class models a two-dimensional display of lights, where each light is either on or off as represented by a `Boolean` value. You will implement a constructor to initialize the display and a method to evaluate a light.

```
public class LightBoard
{
    /** The lights on the board, where true represents on and
     * false represents off.
     */
    private boolean[][] lights;
    /** Constructs a LightBoard object having numRows rows and
     * numCols columns.
     * Precondition: numRows > 0, numCols > 0
     * Postcondition: each light has a 40% probability of being
     * set to on.
     */
    public LightBoard(int numRows, int numCols)
    { /* to be implemented in part (a) */ }

    /** Evaluates a light in row index row and column index col
     * and returns a status as described in part (b).
     * Precondition: row and col are valid indexes in lights.
     */
    public boolean evaluateLight(int row, int col)
    { /* to be implemented in part (b) */ }

    // There may be additional instance variables, constructors,
    // and methods not shown.
}
```

# External Resources

1. AP Classroom
  - a. [Course Hub](#) (CED, Pacing Guide, AP Daily Video List)
  - b. [AP Practice](#)
  - c. [YouTube Live](#) - 4PM Eastern, Weekdays
  - d. [College Board - Past FRQs and Sample Scoring](#)
2. Message groups
  - a. [AP Community](#)
  - b. [Facebook AP CS A Teachers](#)
  - c. [CodeHS Educators Facebook Group](#)

# Review Strategies

---



# Keys to Success

- 1. Practice writing Java!**
- 2. Form Study Groups**
- 3. Employ Study Guides**

# Practice Writing Java

- Utilize the [FRQ Center](#)
- [CodeHS Practice](#)
- Exercises in [2020 - 2021 Review Course](#)
- Writing Code by Hand!

# Form Study Groups

**Study groups allow students to collaborate and reinforce knowledge.**

Options:

- Form study groups for students (avoids cliques and encourages differentiation)
- Allow students to form their own (encourages autonomy and discipline)

# Form Study Groups

**For either option, you can hold study groups accountable by:**

- Creating study group assignments
- Collecting “meeting notes”
- Using class time for collaborative studying
  - Create designated roles for group members

# Employ Study Guides

**Study guides can be helpful to clarify concepts that students might be struggling with!**

You can use **Progress Tracking** to assign students specific sections of a study guide to reteach!

# Employ Study Guides

**Some useful study guides:**

<https://ap-computer-science-guide.github.io/>

<https://www.albert.io/blog/one-month-ap-computer-science-study-guide/>

<http://interactivepython.org/runestone/static/JavaReview/index.html>

# Questions?

---

# Links

College Board Updates	<a href="https://apcentral.collegeboard.org/about-ap-2021/updates">https://apcentral.collegeboard.org/about-ap-2021/updates</a>
AP Classroom	<a href="https://myap.collegeboard.org/">https://myap.collegeboard.org/</a>
CodeHS review course	<a href="https://codehs.com/apjava_review">https://codehs.com/apjava_review</a>
Recommended study guides	<a href="https://ap-computer-science-guide.github.io/">https://ap-computer-science-guide.github.io/</a> <a href="https://www.albert.io/blog/one-month-ap-computer-science-study-guide/">https://www.albert.io/blog/one-month-ap-computer-science-study-guide/</a> <a href="http://interactivepython.org/runestone/static/JavaReview/index.html">http://interactivepython.org/runestone/static/JavaReview/index.html</a>
CodeHS Virtual Guide	<a href="https://codehs.com/virtual">https://codehs.com/virtual</a>
Nitro Syllabus	<a href="https://codehs.com/syllabus/6165">https://codehs.com/syllabus/6165</a>
Mocha Syllabus	<a href="https://codehs.com/syllabus/mocha">https://codehs.com/syllabus/mocha</a>



# Thanks!

Our next webinar will be:

**Create a Java Graphics Pong Game!**

**Teacher-led workshop with Gary VanDerLinden**

Apr. 28th @ 3pm - 3:30pm CT

RSVP at [codehs.com/virtualevents](https://codehs.com/virtualevents)