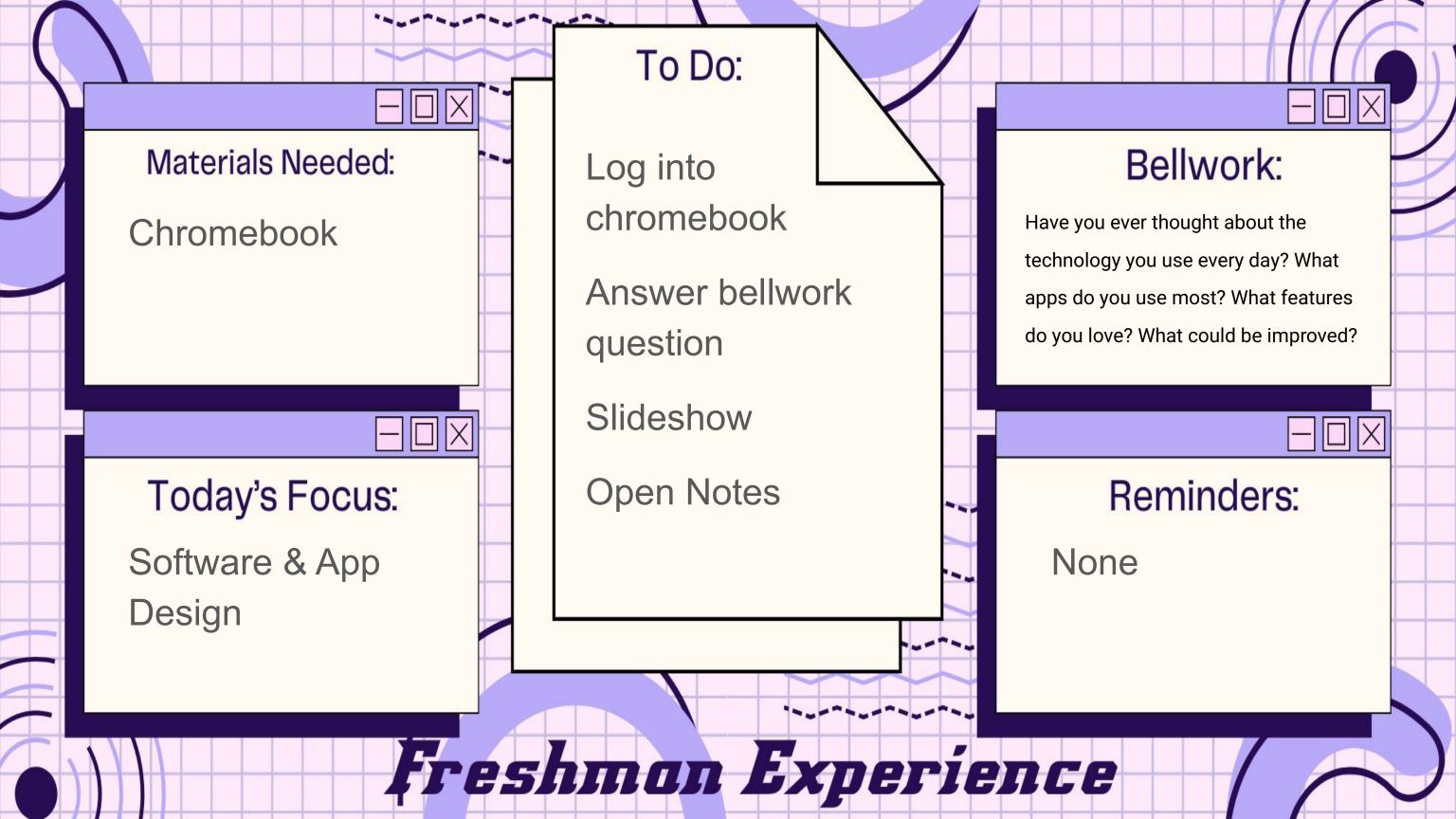# Software & App Design

Welcome to the world of Software & App Design! This presentation will guide you through the classes available to Agua Fria District students

Materials Needed:

Chromebook

Today's Focus:

Software & App Design

To Do:

Log into chromebook

Answer bellwork question

Slideshow

Open Notes

Bellwork:

Have you ever thought about the technology you use every day? What apps do you use most? What features do you love? What could be improved?

Reminders:

None

Freshman Experience

Reflection Question

Have you ever thought about the technology you use every day? What apps do you use most? What features do you love? What could be improved? These questions can help you understand what software design is about.

User Experience

How enjoyable and easy it is for people to use an app.

User Interface

The visual design of an app, including buttons, icons, and menus.

Functionality

The specific tasks an app can perform, like making a call or playing a game.

Three Levels of Software & App Design

1 **Software & App Design 1**
Learn the fundamentals of programming, such as variables, data types, and control flow.

2 **Software & App Design 2**
Explore the principles of user interface (UI) design, including layout, color, and typography.

← **Completer after Year 2**

3 **Software & App Design 3**
Create simple projects, such as a basic calculator or a website or game.

Software & App Design

1 Software and App Design 1 is an introductory course that teaches the basics of programming and design. You'll learn about the different types of software and apps, and how they are created.

1 Programming using Python

Learn the fundamentals of programming, such as variables, data types, and control flow.

2 Design Principles

Explore the principles of user interface (UI) design, including layout, color, and typography.

3 Project Development and Data analysis

Create simple projects, such as a basic calculator or a website or game.

Software & App Design 2

Software and App Design 2 builds upon the fundamentals from Software and App Design 1. You'll delve deeper into programming and design, and explore more complex projects.

1 Advanced Programming

Learn object-oriented programming, data structures, and algorithms.

2 User Experience Design

Develop user research and testing skills, focusing on usability and accessibility.

3 Interactive Design

Create interactive apps using graphical user interfaces (GUIs).

4 Teamwork

Collaborate with classmates on larger projects, working through design and development phases together.

Course 2 - Computer Science Principles

AP Computer Science Principles introduces foundational concepts of computer science. Explore algorithms, data analysis, and the impact of computing on society. Develop critical thinking and problem-solving skills through hands-on projects.

Software & App Design 3

Software and App Design 3 is an advanced course that focuses on the AP Computer Science A class. You'll learn about programming in Java, industry best practices, and the use of advanced programming languages.

Data Structures and Algorithms

Explore efficient data structures and algorithms for solving complex problems.

1. Arrays
2. 2D Arrays
3. Array Lists

Software Development Lifecycle

Learn the stages of software development, from planning and requirements gathering to testing and deployment.

- Planning
- Design
- Development
- Testing
- Deployment

Advanced Programming Languages
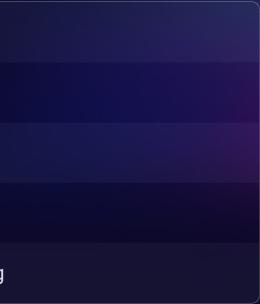
Learn to program in advanced languages such as Java.

Technical Skills

Software and App Design requires a blend of technical and creative skills. Programming languages are essential, but so are design principles and problem-solving abilities.
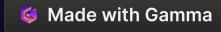
Programming Languages	Java, Python, JavaScript
IDEs (Integrated Development Environment)	VS Code, Jetbrains
Version Control Systems	Git, GitHub
Databases	SQL
Problem-Solving	Logical thinking, debugging, critical thinking

Career Paths

Software and App Design opens doors to a wide range of careers. From developing mobile apps to building complex software systems, there's a path for everyone with the right skills and interests.

1

Software Engineer

Develop and maintain software applications for various platforms.

2

Web Developer

Build and maintain websites and web applications.

3

App Developer

Create mobile apps for iOS, Android, or other platforms.

4

UX/UI Designer

Design user interfaces and experiences for software and apps.

5

Game Developer

Develop video games for consoles, computers, or mobile devices.

FBLA

The Future Business Leaders of America (FBLA) is a great organization for students interested in business and technology. It provides opportunities for leadership development, networking, and career exploration. **This is the CTSO (Career & Technical Student Organization)**

Competitions

FBLA offers a variety of competitions in software and app design, allowing you to showcase your skills and gain valuable experience.

Networking

Connect with other students and professionals in the field, building relationships and learning from their experiences.

Leadership Development

FBLA provides opportunities to develop leadership skills through workshops, conferences, and community service projects.

Career Exploration

Gain insights into different career paths in software and app design through presentations, guest speakers, and industry tours.

Emerging Trends

The world of software and app design is constantly evolving. Keep an eye on emerging trends like artificial intelligence, virtual reality, and blockchain technology, as they will shape the future of the industry.

AI and Machine Learning

AI is transforming app development, enabling intelligent features and personalized experiences.

Virtual and Augmented Reality

VR and AR are creating immersive experiences, transforming gaming, entertainment, and education.

Blockchain Technology

Blockchain is revolutionizing data security and transparency, creating opportunities for innovative apps.