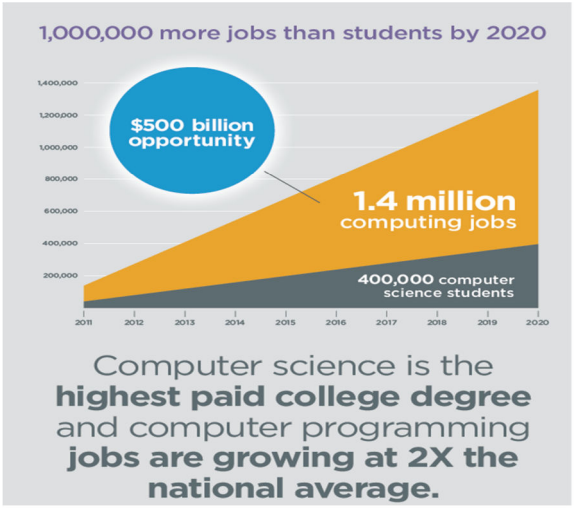
What is the Computer Science Academy (CSA)?

- Courses focus on learning **computer science concepts** through **inquiry and projects.**
- Themes and practices include the **creative nature of computing, problem-solving** using technology as a tool, and seeing the relevance and **impact of computer science.**
- Students in CSA take their **Computer Science class** and their **English class together** with the same students. The teachers work to build projects and skills across the curriculum – together we form a **small learning community.**
- **College and career skills** are built into the courses to prepare students for **higher education and future works as computing professionals.**

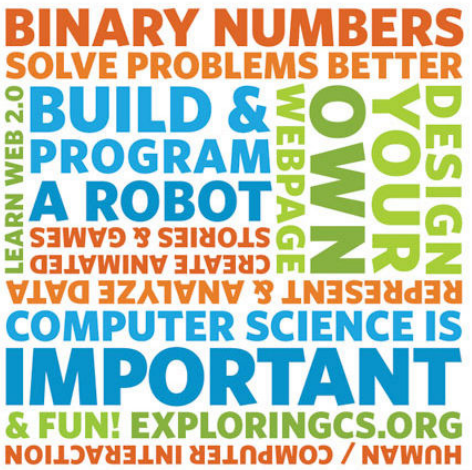
Why join CSA? Why computer science?

- Computational thinking is important across **ALL subjects,** not just computer science.
- **More than 50 percent** of all math and science jobs are for computer scientists.
- Computer science jobs are the **highest-paying jobs** for new graduates.
- Computing jobs are **growing 3 times faster** than the number of computer science graduates.
- **CSA field trips** to local universities, tech companies, game companies, and hackerspaces.
- **Guest speakers** from the tech industry to talk about various subfields within computer science.



CSA
Computer Science Academy @ Galileo

Creative Problem Solving for the 21st Century



"From phones to cars to medicine, technology touches every part of our lives. If you can create technology, you can change the world."

— Susan Wojcicki

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Exploring Computer Science (10th Grade)

- Computers and the Internet
- Societal impacts of computing
- Algorithms and abstraction
- Connections between Math and Computer Science
- Programming
- Models of Intelligent Behavior
- Web page design and development
- Data and Information
- Electronics/Robotics

Computer Science Principles (11th Grade)

- Fundamental computer programming concepts and skills
- Computer programming from practical perspective
- AppInventor & Mobile App Design
- Python programming language
- Hardware and Software Abstraction
- Design Cycle
- Creative Computing
- Problem-solving, problem analysis, and algorithm design
- Analysis of Data, Algorithms, and the Internet
- Global Impacts of Computing
- Professional norms of the software development industry
- Career opportunities in programming

Advanced Placement Computer Science A (12th Grade)

- Java Programming Language
- Object-Oriented Program Design
- Program Implementation
- Program Analysis
- Standard Data Structures
- Standard Algorithms
- Computing in Context

Sample CSA Student Schedule (required CSA courses highlighted)			
9th Grade	10th Grade	11th Grade	12th Grade
English 1	**English 2 (CSA)**	**American Literature (CSA)**	**English/European Literature (CSA)**
Computer Art	**Exploring Computer Science (CSA)**	**Computer Science Principles (CSA)**	**AP Computer Science A (CSA)**
Algebra 1	Geometry	Algebra 2	Pre-Calculus or AP Calculus
Biology	Chemistry	Physics	AP Chemistry or AP Physics
College/Career & Health Ed	Modern World	US History	Democracy & Economics
PE	Spanish 1	Spanish 2	PE or Spanish 3