

WELCOME TO CLASS

Welcome to AP Computer Science Principles. My goal is to make the expectations in this class simple: I will teach the concepts, provide opportunities to practice, and give students regular chances to ask questions and demonstrate what they know.

The two most important habits for success are effort and communication. Students do not need to understand everything immediately. They do need to participate in the learning process and communicate when something does not make sense.

Grades are based on demonstrated mastery of district Learning Intentions. Assessments may include tests, quizzes, projects, performance tasks, or other opportunities to show learning. Practice prepares students for those assessments rather than adding points to the gradebook.

WHAT CLASS USUALLY LOOKS LIKE

Starter: about 10 minutes | Main lesson: about 20 minutes | Remaining time: practice, Side Quests, questions, project work, or reassessment preparation. Fridays include at least 30 minutes for assessment and reassessment when the project schedule allows.

Practice & Homework

- Homework is practice and will not be collected for points.
- Assignment lists and answer keys will be posted in Google Classroom.
- Students should check their own work and come prepared to ask questions.
- Selected homework problems will be worked on the board and discussed as a class.
- Additional in-class practice may be offered as Side Quests.

Assessment & Reassessment

- Reassessment opportunities are built into the regular class schedule.
- For an additional reassessment outside the scheduled opportunity, students should complete the related practice, self-check it with the posted key, complete the Side Quest, and submit the short reassessment request form.
- The goal of reassessment is new evidence of learning, not additional points for paperwork.

Technology, Materials & Communication

- Bring a pencil and a charged school computer every day. Lined paper, highlighters, and standard school supplies are also helpful.
- Phones are not permitted under school policy. Playing computer games during class results in an office referral.
- Google Classroom: assignment list and answer keys. Weekly Agenda: links and what you missed. Infinite Campus: grades.
- After an absence, check Google Classroom and the Weekly Agenda and communicate about anything you do not understand.
- Extra help is available before school and at lunch Monday, Wednesday, and Thursday. After-school help is by appointment.
- For family communication, use the district email convention: firstname.lastname@boiseschools.org.

AP COURSE EXPECTATIONS

No prior programming experience is required. Students should expect substantial programming, project work, AP-style practice, and the AP Create Performance Task. Students are expected to take the AP Computer Science Principles exam; students who opt out are responsible for the district/school opt-out fee.

WHAT WE WILL LEARN

No prior programming experience is required. This is an AP course with substantial programming and project work.

Semester 1

Unit / Block	Topic	Students will learn
Weeks 1-4	Programming Launch & Python Foundations CMU CS Academy Unit 1	Turtle graphics, procedures, parameters, arguments, variables, strings, integers, functions, conditionals, loops, and debugging.
Weeks 5-7	CMU CS Academy Unit 2	Program purpose, Boolean logic, branching, functions, iteration, indices, testing, and debugging through an interactive-fiction project.
Week 8	Internet & Computing Systems	Networks, packets, routing, protocols, fault tolerance, scalability, the digital divide, and ethical considerations.
Weeks 10-14	Lists, Loops & Practice Create	Lists, traversals, procedures, algorithms, program video, Personalized Project Reference, and AP-style written responses.
Weeks 15-18	Official Create Performance Task	A complete program using sequencing, selection, iteration, a student-developed procedure, and data abstraction, with required Create components.

Semester 2

Unit / Block	Topic	Students will learn
Weeks 19-20	Information & Digital Data	Binary, encoding, overflow, rounding, text/images/audio, lossy and lossless compression, analog versus digital, and digital ownership.
Weeks 21-22	Cybersecurity & Computing Innovations	Privacy, data collection, passwords, phishing, encryption, public keys, benefits, harms, unintended consequences, and ethics.
Week 23	Algorithms & Efficiency	Search, efficiency, reasonable and unreasonable problems, heuristics, parallel computing, limits of computation, and algorithmic bias.
Spring	AP Exam Preparation	AP pseudocode, code tracing, released multiple-choice questions, passage-based questions, written responses, mock exams, and individual weakness repair.
After AP Exam	Creative Computing Capstone	A post-exam project emphasizing creativity, collaboration, computing impacts, and transfer of programming skills.

IMPORTANT

This is a year-long roadmap. Pacing may shift as students need additional practice, school events occur, or assessment data shows that a topic needs more time. The Learning Intentions remain the destination even when the route changes.

Effort + communication + reassessment = the clearest path to success.