

K-5 Computer Science Course Syllabus

Course Description:

The Computer Science standards integrate computer literacy, educational technology, digital citizenship, information technology, and computer science. Computer literacy, educational technology, digital citizenship, and information technology are concepts that students are also exposed to in the Computer Technology Standards of Learning. In many ways, instruction in the Computer Science standards will compliment and expound upon, at a deeper level, the concepts and skills covered with the Computer Technology standards. However, there are distinct differences between computer technology and computer science. As the foundation for all computing, computer science is “the study of computers and algorithmic processes, including their principles, their hardware and software designs, their applications, and their impact on society” (Tucker et. al, 2006, p. 2).

Instructional Philosophy:

The Virginia Department of Education strongly encourages educators to make equitable access a guiding principle in the implementation of these computer science standards by giving all students the opportunity to learn computer science. We encourage the elimination of barriers that restrict access to computer science for students from ethnic, racial and socioeconomic groups that have traditionally been underrepresented. Schools should make every effort to ensure their computer science classes reflect the diversity of their student population. It is only through a commitment to equitable preparation and access that true equity and excellence can be achieved.

Major Course Goals:

The content of the Computer Science standards is intended to support the following seven practices for students: fostering an inclusive computing culture, collaborating around computing, recognizing and defining computational problems, developing and using abstractions, creating computational artifacts, testing and refining computational artifacts, and communicating about computing. The practices describe the behaviors and ways of thinking that computationally literate students use to fully engage in a data-rich and interconnected world. Computational thinking refers to the thought processes involved in expressing solutions as computational steps or algorithms that can be carried out by a computer (Cuny, Snyder, & Wing, 2010; Aho, 2011; Lee, 2016).

Major Course Projects & Instructional Activities:

Students will be introduced to various combinations of online and unplugged games and activities to learn the concepts of computer science and computational thinking. Concept videos showcasing diverse presenters will help students understand that anyone can have a future in the field of technology and computer science. Students will then be able to apply what they have learned to open-ended projects that are carefully designed to be creative, inclusive, and engaging.

Course Assessment Plan:

Elementary students are expected to develop computer science skills throughout elementary instruction as indicated in the 2017 Computer Science Standards of Learning. The [Computer Science Performance Task Common Rubric](#) (Word) is designed to align with the strands reflected in the 2017 Computer Science Standards of Learning and the expectations provided in the rubric are aligned to the skills and knowledge that students should have at the conclusion of their elementary computer science education experience.

****DPS follows a 10 point grading scale, however this course does not assign students grades.**

Classroom Expectations:

- **C**ome to class prepared to learn.
 - Mind, body, and actions must mirror this expectation. Students are expected to enter the room quietly, find their seats according to the seating chart, and sit quietly.
- **A**ct in a safe and responsible manner.
 - Students must keep their hands to themselves, handle all technology equipment and materials with care, follow all computer use and safety guidelines as listed in the DPS Acceptable Use Policy. Use of these devices and materials is a privilege—not a right.
- **R**espect and be considerate of yourself and others.
 - Our class period is a time for learning, growth, and exploration. It is **NOT** time for off-task behaviors like shadow-boxing, gossiping, dancing, hair styling, etc.
- **E**xercise respect for school property and the personal property of others.
 - Mistreatment of computer equipment and/or course materials violates the AUP. Violation of the AUP can result in loss of computer privileges.

**** All school rules will always apply in our computer classroom with strict adherence to the Gibson Elementary Schoolwide Behavioral Expectation Agreement.**

Supplies and Materials:

- Curiosity
- Imagination
- Determination
- Creativity

****All other materials and supplies will be provided by the teacher.**

DPS Homework Policy:

Homework will not be assigned; however, parents can choose to receive email notifications about extension activities they can complete with their child/children at home.

All students have also been added to educational programs via the Clever Portal. Typing Jungle and Kodable are available on my Clever Portal Teacher Page. Students may work independently on these programs at any time.

Extra Help:

If you have any questions or concerns, please contact me using either of the forms of contact listed in the next section.

Contact Information:

- Email: lca'stle@mail.dps.k12.va.us
- Google Voice Number (calls and texts): (434) 533-0354
- E. A. Gibson Elementary: (434) 799-6426
- ClassDojo - Homeroom Teacher's Class

Please note that school hours are 7:40 - 2:55. For all phone calls, please leave a message, and I will return your call as soon as possible.
