

6.AP.4 Algorithms and Programming

The student will demonstrate proper attribution when incorporating ideas and works of others. (a) Identify and give proper attribution of information and assets from the Internet and other sources.



Integration Opportunities

Understanding the Standard

This standard doesn't really have much to do with programming on its face, but programmers often use code snippets, code examples, or other resources from other people as they work on their projects. It's important for programmers to cite resources like these appropriately in the same way they would for an image or a quotation from a book.

One important related topic that isn't explicitly referenced in the standard is the idea of "open source software", which refers to programs that have been released publicly by their authors. Open-source software is a very important part of the software ecosystem, and many important pieces of software that people use every day depend on open-source resources. Authors release open-source software under a "license", which specifies the conditions under which other programmers are permitted to use their code. Some licenses are very permissive, putting almost no restrictions on use, and others are limited.

Term	Definition
attribution	Providing credit to the author of resources that you have used in your own creative work
open-source software	Code published for free for others to use within the limits of a license

Visual Arts 6.8 Demonstrate proper attribution of intellectual property in art research, creation, use of source materials, and sharing.

Science 6.1f Gather, read, and synthesize information from multiple appropriate sources and give proper attribution of sources.

Music 6.8 Demonstrate proper attribution of intellectual property as it relates to music.

English 6.R.1 f,g Use standard citations for paraphrased or quoted information and demonstrate ethical usage of resources including AI and new technologies.

Prerequisite Knowledge

This standard does not have any prerequisite knowledge.

Summary of a Lesson

Chances are that when students write code, they will be using snippets of code from other people. Have students provide attribution to the resources they used in code "comments" (notes in a program which are ignored by the computer). You can also have students provide attribution for images, quotes, and other material they use in their program. For example, if a student created a game that plays out the events of the Salem Witch Trials, they can incorporate primary sources and provide attribution either in the game or in the code for the game.

You can also address this standard by teaching students to cite sources in other contexts (e.g., book reports, presentations). The standard does not include any requirements about when or how students provide attribution for sources, so you might also address this standard in a library sciences or creative writing context.

