Algorithms & Programming: Program Development (2)   Grade: 5

Standard 5.AP.PD.02

Observe **intellectual property** rights and give appropriate attribution when creating or **remixing** programs

Essential Skills

Reflect on work produced and assess the desired restrictions to the ability of others to **remix** or reuse that work.

Identify ways creators can restrict how others reuse and remix their work and the reasons they may do so.

Essential Questions

How can I give appropriate credit to the ideas and creations of others when I use them in my work?

Why would you want to use or **remix** someone else's work?

What reusing and remixing restrictions would you want on your own work? Why?

Explanation

Students should give credit when using or **remixing** the intellectual property of others including ideas, pictures, music, code, etc. when creating **computer programs**. The student should give attribution in the format requested by the teacher. Proper attribution at this stage does not require a formal citation, such as in a bibliography or works cited document, but may be comments in programs, links to sources, or credits at the end of a presentation. By 5th grade, students should be familiar with different levels of permissions to reuse and remix the work of others.

Think of this as similar to….

When you write informational text and use details from books, databases, and/or websites, you must cite your sources.

Implementation Examples—What would this look like in the classroom?

Title	Description	Link	Content Connection & Notes
Research a Famous Person	**Grade 3**--Students examine a starter (sample) program about a famous person. Students (as a class, in groups or individually) research a person of their choosing to find facts about that person. The students then remix the starter project, so it is about the person they researched. Students should identify the ideas of others that they have used and provide attribution for the starter program and for the information about the person they researched within their program or in the program notes. (The link provided is to a fairly complex program which can be simplified depending on your students; the process of remixing the program should be modelled). **Grade 4**--Attribution for the starter program and the information about the person should be in the appropriate format. Identify images and/or music relevant to the person and determine if they can be added to the project. **Grade 5**--Students share the project they created and decide what limits they would like to put on how others' reuse it.	This Teddy Roosevelt Scratch project can be used as a starter/sample project	
Sharing Fairly	**Grade 3**--Students create an original computer program (it can be very simple). After learning about what copyright is, what types of works can be protected by copyright, they protect their own work with a copyright. **Grade 4**--Students learn about Fair Use and identify what and when items are covered under Fair Use. Encourage students to remix or incorporate parts of the programs of others into their own projects and discuss how to provide attribution appropriately. **Grade 5**--Students react to the reuse of part of their project and consider what limits they would like to impose on how their own work and what type of attribution they would like to be given. Students should also consider why they or others would not want their work re-used or remixed.	Sharing Fairly	This lesson also aligns with **CS** IC.SLE.01. To appropriately meet this standard, the students should create a computer program. This is also lesson 10 Digital Sharing from Code.org Course E.

Title	Description	Link	Content Connection & Notes
Creative Commons	**Grade 4**--Students find an image or music that they would like to use in a programming project. They then determine if and how the attribution for the image or music should be included in the project. Include the attribution in the appropriate format. Students learn about Creative Commons licenses and how that affects attribution and may or may not limit permitted use. **Grade 5**--Students consider their own program and what copyright or license they would like to assign to it. How would they feel if someone used the project and did not give them any credit?	Creative Commons	This lesson also aligns with CS IC.SLE.01

Standard: AP.PD.02 Grade: 5

These annotations are a collaboration between Maryland Center for Computing Education and the Maryland State Department of Education.