

ASSESSING DEVELOPMENT OF COMPUTATIONAL PRACTICES

The following instrument can be used to assess students' development of fluency with computational thinking practices (*experimenting and iterating, testing and debugging, reusing and remixing, abstracting and modularizing*).

The first column indicates a question for the student (as part of a design journal prompt or interview, for example). The second, third, and fourth columns indicate how low, medium, and high levels of proficiency might be manifested.

EXPERIMENTING AND ITERATING	LOW	MEDIUM	HIGH
Describe how you built your project	Student provides a basic description of building a project, but no details about a specific project.	Student gives a general example of building a specific project.	Student provides details about the different components of a specific project and how they were developed.
Describe different things you tried out as you were working on your project	Student does not provide specific examples of what they tried.	Student gives a general example of trying something in the project.	Student provides specific examples of different things they tried in a project.
Describe revisions you made to your project and why you made them	Student says they made no revisions, or only states they made revisions but gives no examples.	Student describes one specific revision they made to the project.	Student describes the specific things they revised in the project and why.
Describe a time when you tried to do something new	Student provides no examples trying to do something new.	Student provides a general example of trying to do something new in the project.	Student describes specific new things they tried in a project.

Notes:

TESTING AND DEBUGGING	LOW	MEDIUM	HIGH
Describe a time when your project didn't run as you wanted	Student does not describe a situation that involves a problem with a project.	Student describes what went wrong in the project, but not what they wanted it to do.	Student gives a specific example of what happened and what they wanted to have happen when they ran the project.
Describe how you investigated the cause of the problem	Student does not describe a problem.	Student describes reading through the scripts, but does not provide a specific example of finding a problem in the code.	Student describes reading through the scripts and provides a specific example of finding a problem in the code.
Describe how you fixed the problem	Student does not describe what problems they experienced, or the solution.	Student provides a general example of making a change and testing it out to see if it worked.	Student provides a specific example of making a change and testing it to see if it worked.
Describe how other ways to solve the problem	Student does not provide an example of trying to solve a problem.	Student provides a general example of another solution to the problem.	Student provides specific examples of other solutions to the problem.

Notes:

REUSING AND REMIXING	LOW	MEDIUM	HIGH
Describe how you found inspiration by trying other projects and reading their scripts	Student does not describe how they found ideas or inspiration from other projects.	Student provides a general description of a project that inspired them.	Student provides a specific example of project that inspired them and how.
Describe a time you used a part of another project as a part of your project	Student does not describe how they adapted scripts, ideas, or resources from other projects.	Student provides a general description of scripts, ideas, or resources they adapted from other projects.	Student provides specific examples of scripts, ideas, or resources they adapted from other projects and how.
Describe a time you modified an existing project (either someone else's or your own) to improve or enhance it	Student does not describe modifying another project.	Student provides a general description of modifications they made to another project.	Student provides specific examples of modifications they made to other projects and why.
Describe how you give credit to others' work that you built on or were inspired by	Student does not give credit to others.	Student names people or projects that inspired them.	Student describes documentation in project and/or on the Scratch website of the people and projects that inspired them.

Notes:

ABSTRACTING AND MODULARIZING	LOW	MEDIUM	HIGH
Describe how you decided what sprites were needed for your project, and where they should go	Student provides no description of how they selected sprites.	Student provides a general description of deciding to choose certain sprites.	Student provides a specific description of how they made decisions about sprites based on goals for the project.
Describe how you decided what scripts were needed for your project, and what they should do	Student provides no description of how they created scripts.	Student provides a general description of deciding to create certain scripts.	Student provides a specific description of how they made decisions about scripts based on goals for the project.
Describe how you organized the scripts	Student does not describe how they organized scripts.	Student provides a general description of how they organized scripts.	Student provides specific examples of how they organized scripts and why.

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