[1-to-1 Teaching & Learning](https://sites.google.com/site/laptopsandlearning/21st-century-teaching-learning)‎ > ‎

**Levels of Implementation-SAMR**

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| **SAMR Model** **Understanding Levels of Technology Implementation**  The SAMR Model is a tool designed that was designed by [Dr. Ruben Puentedura](http://www.hippasus.com/%22%20%5Ct%20%22_blank) to (1) help educators integrate technology in their classes and to (2) understand the levels of rigor involved in that work.  The model's simple design allows educators to build their capacity to better understand the complexity involved in successfully implementing 1-to-1 or technology in the classroom.    * [A graphic view of this model](http://langwitches.org/blog/wp-content/uploads/2011/08/SAMR-Model.jpg%22%20%5Ct%20%22_blank)
* [6 Minutes with Ruben Puentedura](http://www.hippasus.com/rrpweblog/%22%20%5Ct%20%22_blank)

 **SAMR Levels*****S*ubstitution**Defined: Technology acts as direct tool substitute with no functional improvement.Example: Work can be completed without the use of the technology, including: word processing, digital worksheets, submitting essays and worksheets; printed assignments.  ***A*ugmentation**Defined: Technology acts as direct tool substitute with functional improvement.Example: Work requires technology to be completed, including: Digital worksheets that require students to collect online information or resources provided by the teacher; worksheets submitted to teacher’s electronic/digital drop-box. Students may begin online communication or collaboration with other students (ex:  online discussion. ***M*odification**Defined: Technology allows for significant task redesign. Example:  Work requires students to effectively search for and collect online resources that they share with the teacher and other students (ex: online academic bookmarking, online discussions); students regularly collaborate (either face-to-face or digitally) with other students and/or experts; students communicate with others about their learning. Students begin to use their ‘voice' to share their learning ideas with the teacher. ***R*edefinition:**Defined:  Technology allows for the creation of new tasks that were previously inconceivable.Example: Work requires students to create new ideas, thoughts, understandings, projects, or products; students share these with others (either in class, across campus, in the community, or with others around the world).Students use online tools to display the results of their work, to compare results, and to develop deeper levels of understanding. Students have a regular ‘voice’ in developing the classroom learning culture.   **Transformation**

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| **Levels of 1-to-1 Implementation** | **Levels Defined** | **Examples from the classroom** |
| **Redefinition** | Technology allows for the creation of new tasks that were previously inconceivable. | Student work requires technology use so that students can complete tasks previously not available (tasks that would otherwise be inconceivable for teachers or students). |
| **Modification** |  Technology allows for significant task redesign. | Student work requires technology to be used and because of this, there is a significant redesign of student tasks (the technology supports high levels of critical thinking-Blooms or Webb’s DOK- and enables 21st century learning opportunities). |
| **Augmentation** |   Technology acts as direct tool substitute with functional improvement. | Student work requires technology to be completed and the requirements of the tasks students are being directed to do generally require increased critical thinking with technology acting as a learning tool (the technology supports the student tasks or enables 21st century learning opportunities). |
| **Substitution** | Technology acts as direct tool substitute with no functional improvement. | Student work can be completed without the use of the technology.  No significant change in the tasks students are being asked to complete. |

  **Enhancement**Based on SAMR Model of Technology Use Ruben R. Puentedura  **SAMR and Unit or Lesson Planning**  The SAMR Model is a very helpful tool for educators as they (1) plan for and implement technology as student thinking and learning tools, (2) as they reflect on their use of technology as a teaching tool, and (3) as they identify the levels of cognitive rigor in tasks students are asked or expected to complete.   The effectiveness of this tool increases when it is combined with three additional tools:  [1-to-1 Frameworks](https://sites.google.com/site/laptopsandlearning/21st-century-teaching-learning/1-to-1-learnng-frameworks%22%20%5Ct%20%22_blank) (which defines broad uses for technology in our educational work), [Bloom's Taxonomy, and Webb's Depth of Knowledge](http://www.ride.ri.gov/.../5_Bloom_and_Webb_DOK_KHess_2005%22%20%5Ct%20%22_blank)  (NOTE:  This chart is attached below titled, "Applying Webb's DOK to Bloom's Taxonomy").  The final resource that helps educators understand levels of cognitive rigor is a definition of rigor as well as the identification of components included in rigor.  For our purposes we will use the following modified definition of rigor from [Dr. Robyn Jackson:](http://mindstepsinc.com/about-us/leadership/%22%20%5Ct%20%22_blank) ***Basically, rigor is helping students learn how to think* (and do increasingly challenging tasks) *for or by themselves.*** Components include:1. Students create meaning out of what they learn.
2. They organize information so they can create mental models.
3. They integrate individual skills into whole sets of processes.
4. They apply what they have learned to new or novel situations.

  **SAMR Model Lesson Planning Template****Lesson objective/s**

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| **SAMR Levels  Blooms and/or Webb’s DOK**  |  **Levels Defined** | **Ideas for the 1-to-1 student engagement during a lesson or lessons** |
| **Redefinition****Extended thinking****Creating & Evaluating** |  Technology allows for the creation of new tasks that were previously inconceivable. Student cognitive processes require increased (including highest levels of) critical thinking (higher levels of Bloom’s Taxonomy or Webb’s Depth of Knowledge or DOK).  This level may include 4 of the 5 1-to-1 Frameworks. |            |
| **Modification****Strategic thinking****Analyzing** |  Technology allows for significant task redesign. Student cognitive processes require increased critical thinking (various levels of Bloom’s Taxonomy or Webb’s Depth of Knowledge) |            |

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| **Augmentation****Skills & concept development****Applying**  |  Technology acts as direct tool substitute with functional improvement. Students must use the technology, but the work includes limited critical thinking skills (various levels of Bloom’s Taxonomy or Webb’s Depth of Knowledge). |            |
| **Substitution****Recall**R**emembering Comparing** |  Technology acts as direct tool substitute with no functional improvement. Student work can be completed without the use of the technology.  No significant change in the tasks students are being asked to complete. |             |

                           **Questions to consider as you plan:**1. Which practices should I keep doing?
2. Which practices should I start doing?
3. Which practices should I quit doing?

  **Lesson and Unit Planning  and Technology Implementation** The SAMR Model is a very helpful tool for educators as they (1) plan for and implement technology as student thinking and learning tools, (2) as they reflect on their use of technology as a teaching tool, and (3) as they identify the levels of cognitive rigor in tasks students are asked or expected to complete.  However, the SAMR Model   , there are two additional tools that help teachers plan for, implement, and reflect on rigor.  The   **Examples** **Searching and Collecting Information or Resources****Transformation**

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| **SAMR Levels Blooms and/or Webb’s DOK**  | **Levels Defined** | **Ideas for the 1-to-1 student engagement during a lesson or lessons** |
|    **Redefinition****Extended thinking****Creating & Evaluating** | Technology allows for the creation of new tasks that were previously inconceivable. Student cognitive processes require increased (including highest levels of) critical thinking (higher levels of Bloom’s Taxonomy or Webb’s Depth of Knowledge or DOK). This level may include 4 of the 5 1-to-1 Frameworks. |   Student work requires technology use so that students can complete tasks previously not available (tasks that would otherwise be inconceivable for teachers or students).**Search Example**:  Students acknowledge that they must search for and collect online information or resources.  They are knowledgeable and effective at the Search-Evaluate-Validate-Analyze process.  They may also consult with acknowledged experts who can provide them with additional information and ideas.  They use online tools to display the results of their work, to compare result |
|       **Modification****Strategic thinking****Analyzing** |   Technology allows for significant task redesign. Student cognitive processes require increased critical thinking (various levels of Bloom’s Taxonomy or Webb’s Depth of Knowledge) |   Student work requires technology to be used and because of this, there is a significant redesign of student tasks (the technology supports high levels of critical thinking-Blooms- and enables 21st century learning opportunities).**Search Example**:  Students are required to use one of the class approved search engines to search for and collect information or resources.  They are also required to complete the Search-Evaluate-Validate-Analyze process during their search.  They are asked to answer the teacher generated questions and to compose several of their own unique questions.  Students are required to share their findings with other class members through class online bookmarking sites (ex: diigo or delicious) and to incorporate what they find in online discussion |

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|     **Augmentation****Skills & concept development****Applying** | Technology acts as direct tool substitute with functional improvement. Students must use the technology, but the work includes limited critical thinking skills (various levels of Bloom’s Taxonomy or Webb’s Depth of Knowledge). |   Student work requires technology to be completed and the requirements of the tasks they are being directed to do generally requires either increased critical thinking with technology acting as a learning tool (the technology supports the student tasks) or enables 21st century learning opportunities.**Search Example**:  Students are directed to the teacher chosen websites (teacher previously identified sites); they are asked to answer the teacher generated questions about information found on the website and to generate several unique questions they must answer as well. |
| **Substitution****Recall**R**emembering Comparing** | Technology acts as direct tool substitute with no functional improvement. Student work can be completed without the use of the technology. No significant change in the tasks students are being asked to complete. |  Work can be completed without the use of the technology.  No significant change in the tasks students are being asked to complete.**Search Example**:  Students do not use technology to search for or collect research. |

  Examples can also be found on the attached documents found below.   **School implementation examples*** [Munich International School](http://beta.aalf.org/cms/?page=Global%20Storybook-%20Munich" \t "_blank)

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