


LESSON: Create PT - Code Segment Practice		Time: 45 minutes
<p>Overview:</p> <p>Students have completed at least one Create PT Practice and can use the code for practice creating required documentation for the digital portfolio. Students must upload a PDF of their entire code (no name) and also images of four code segments. This lesson gives them practice in identifying the four code segments and creating images using a snipping tool. The lesson can be used for each Create PT practice, one at a time, or after a few have been completed.</p> <p>The assignment document has space for three Create PT Practice programs. It can be adapted for your needs.</p>		<p>Objectives:</p> <ul style="list-style-type: none"> • I can create a PDF of the code • I can create images of code segments using a snipping tool • I can identify a function with a parameter that uses sequencing, selection and iteration • I can identify code that calls the function • I can identify a list that is being created or storing data • I can identify code that uses the list in a meaningful way
<p>Standards:</p> <p>2-AP-12 Design and iteratively develop programs that combine control structures, including nested loops and compound conditionals.</p> <p>3A-AP-14 Use lists to simplify solutions, generalizing computational problems instead of repeatedly using simple variables.</p>	<p>CSP Framework:</p> <p>Computational Thinking Practices:</p> <p>4.C Identify and correct errors in algorithms and programs, including error discovery through testing.</p> <p>6.A Collaborate in the development of solutions.</p>	<p>Create PT Requirements:</p> <ul style="list-style-type: none"> • Create a list • Use the list in a meaningful way • Create a function with at least one parameter • The function must have sequence, selection and iteration • Values of the parameter must affect the section of code that is executed • Call the function with argument
<p>Preparation:</p> <p>Decide if you want to do a Create Practice PT together, or have them work individually or in pairs.</p> <p>Decide if students will do the practice for one program, or for multiple programs. Adjust the assignment document for your decision.</p>	<p>Links:</p> <ul style="list-style-type: none"> • Assignment • Instructions slide deck • Instructions for snipping tool • Create PT Practice #2 • Create PT Practice #3 • Create PT Practice #4 • Daily reflection form 	<p>Agenda:</p> <ul style="list-style-type: none"> • Warm-up (5 minutes) • Code Segment Practice (40 minutes)
<p>Vocabulary:</p> <ul style="list-style-type: none"> • No new vocabulary during this lesson • You can review Create PT vocabulary: parameter, argument, function, sequential, selection, iteration 		
<p>Assessment:</p> <ul style="list-style-type: none"> • Daily reflection journal or Google form • Assignment completion • Creation of PDF documents 		


Teaching Guide

Warm-up (5 minutes)

 **Discuss** – Use a discussion strategy, like journaling, working at boards, selecting random students, or a form of think-pair-share.

- Slides 1-6 review the Create Performance Task. Use them as needed.
- Slides 6-12 are specifically about the Personal Project Reference students will create from the Create PT. Slide 6 is an overview, and the rest of the slides show actual language for the PPR. Some information is highlighted for emphasis.

Coding (40-60 minutes)

 Students can work individually or with a new random partner. For the actual Create PT, this part must be done individually.

IMPORTANT:

This lesson can be adapted many ways to meet the needs of your students. You can work an example with the students and then let them try another example on their own. You can have students complete this practice after each Create PT Practice. Or you can wait until they have completed a few practices and then do this lesson. The assignment document has room for Practice #2, Practice #3 and Practice #4. If you are adapting the lesson, just modify the assignment document.

IMPORTANT:

If the lesson is presented as it is planned, students will use their complete Create PT Practice #2, #3 and #4 for this lesson. Sample code is provided if you want them to just practice the code segment part and they don't have access to their own program, or haven't completed the practices yet.

Teaching tip – Coding:

You as the teacher can guide the students through creating code segment images from one of the practice programs, or they can work through the slides themselves.

Slides 13-15 are for Practice #2


Slides 16-18 are for Practice #3

Slides 19-21 are for Practice #4

TIP:

If you or your students are not familiar with the snipping tool, another slide deck walks you through finding and using the snipping tool, step by step. You can go through it yourself to become familiar with the tool, or you can let students go through it on their own as needed. It uses Practice #2 and shows each step.

Final Note: These instructions are for a PC, not a Mac. If you are using a Mac, you will need to use its snipping tools to complete the lesson and create the images.

 Review the success criteria for completeness. Assignment is ready to turn in. If working in pairs, both students should include their names on the document.



Wrap-Up (none)

No wrap-up is planned for this lesson. Feel free to add your own wrap-up and go over any concepts that need review.

Formative Assessment:

- Daily reflection journal or Google form
- Wrap-up questions
- Completed assignment
- Exit ticket

SUCCESS CRITERIA:

- Download the code as a text file
- Create a PDF document from the text file
- Create functions for intro and ending
- Create an image of a code segment using a snipping tool
- Identify a function with a parameter that has sequencing, selection and iteration
- Identify code where the above function is called
- Identify a list that is being created, or has data stored in it
- Identify where the above list is being used in a meaningful way