**AP CSP CodeX**

| **LESSON: Create PT Code PDF and Video** | **Time: 45 minutes** |
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| **Project Goal:** Students will practice creating PDFs and videos of their code for Create PT submission.**Learning Targets*** I can discuss the requirements of the Create PT submissions Create PT PPR.
* I can create a PDF of Python code.
* I can record a video that meets the requirements for the Create PT submission.
 | **Key Concepts*** Students will submit three artifacts to their Digital Portfolio to meet the Create PT requirements.
* This lesson covers the first two artifacts.
* Any software can be used to create the PDF and the video. Students should practice in advance so they are prepared to do this on their own during the actual Create PT time.
* Teachers can help students with technical issues, like how to save as a PDF, or how to record or compress a video.
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| **Assessment Opportunities*** Create PT PDF and Video Activity Guide
* 3 PDFs created and submitted to teacher
* 2 Videos created and submitted to teacher
 | **Success Criteria*** Create a PDF of three of the PT Practice programs
* Create a video that meets the submission requirements for two PT Practice programs
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| **AP CSP Framework****Computational Thinking Practice 6.C** Acknowledge the intellectual property of others | **Materials*** Create PT PDF and Video slides
* Create PT PDF and Video Activity Guide / Answers
* Access to the four PT Practice programs (solutions for each are available)
* [CodePrint](https://bakerfranke.github.io/codePrint/) (printing code PDF with line numbers)
* AP CSP Student Handouts
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| **Teacher Notes*** This lesson will be completed on the computer, using CodeSpace, a text editor like Google Doc or Microsoft Word, and a video editor.
* The activity guide can be distributed digitally. Space is provided for students to take notes during the lesson.
* Students will use their PT Practice programs during this lesson. They should use their own code, but you can also give them code to practice with if needed.
* Follow the slides for instructions and guidance. Additional help is provided in the Teaching Guide below.
* NOTE: Students will create a PDF of their code. On the slides, instructions are given for CodePrint, Google Docs and Microsoft Word. If you know what text editor your students will use, you can modify the slides for your specific situation.
* NOTE: Students will create two videos for practice. Students can use any method available to record the CodeX running a program. You can modify the slides for your classroom if you have a specific way you want students to do the recording.
* NOTE: The biggest issue with recording will be making sure the video is below 30MB in size. Help students check the file size, and also give help in either recording less to make the size lower, or using video editing software to compress the video. If the video is compressed, check the quality and make sure the CodeX output is visible.
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**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. Hey, you can’t review this information too many times, right!?

* Slide 2
* Review the requirements for the Create Performance Task.

The first question in the Coding section of the Activity Guide can be included in the warm-up.

**Creating a PDF and Video (30-40 minutes)**

💻 Students can work individually or with a collaborative partner.

**IMPORTANT!:** Students will refer to all four PT Practice programs from earlier lessons. They need to have them completed and accessible. Alternatively, you can give students the code from the earlier lessons.

The activity guide is for guided notes during the lesson.

💡 **Teaching tip – Slide 3**

Students review what they will submit to the Digital Portfolio. First question on the Activity Guide.

💡 **Teaching tip – Slides 4-8**

Activity guide questions 2, 3 and 4. The slides cover information to include on the code PDF, specifically attribution. Also, things not to include, like their name. Emphasize that this part must be done independently, even if they work with a partner.

💡 **Teaching tip – Slides 9-10**

General instructions about creating a PDF.

💡 **Teaching tip – Slides 11-13**

Steps are given for creating a PDF of their code. Instructions are given for CodePrint, Google Docs and Microsoft Word. You can modify the sides or delete slides if you will have all students use a particular text editor.

💡 **Teaching tip – Slides 14-15**

Students practice creating a PDF file for three practice programs. Then they return to the Activity Guide and answer question 5.

💡 **Teaching tip – Slides 16-20**

General instructions for creating a video of the project. Students answer Activity Guide questions 6, 7, and 8.

💡 **Teaching tip – Slides 21-23**

When recording, students can’t just record their screen, because it doesn’t show the input and output, so they need something to record their physical device. A cell phone or document camera work great. Suggestions are given on the slides. If you have a specific way you want students to do the recording, modify the slides as needed. After the recordings, students go to the Activity Guide for questions 9 and 10.

💡 **Teaching tip – Slide 24**

Final slide that goes over information about the Digital Portfolio. This is a good time for students to log in and find the digital portfolio. They don’t need to upload anything at this time. But can they log in?

You can also use this slide again when students are working on their Create PT, and remind them about final submit.

Another note about uploading. Students can upload several drafts while they are working. They don’t have to, but they can. They will not be able to delete anything they upload, but when they click “Final Submit” only the last thing they uploaded will actually be submitted.

**Wrap-Up (5-10 minutes)**

The wrap-up gives students a chance to reflect on the lesson and write down anything they want to remember. If time permits, they can share their notes with other students.

Formative Assessment:

* Daily reflection or journal entry
* Wrap-up question
* Completed activity guide
* PDFs submitted
* Videos submitted
* Exit ticket