MADLY PRODUCTIVE
PATHWAYS
PROJECT-BASED CTE CURRICULUM
FOR BUSINESS & TECH CLASSROOMS

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START HERE

Start Here

This lesson takes three 45-minute periods. The paper pages are all printable, the labs run ONLINE in CodeGrove, and every part has a key. You don't need a computer science background to teach it.

Students should already know: Students know comments, `.append()`, `while` loops and `import random`, and they can read an error message.

Every file, and when you use it

File	Folder	What it is	When you use it
Teacher Guide and Pacing	00 Start Here	The plan for each day, what to print and how to grade	Before you start
Skills map	00 Start Here	Which Florida standards each day teaches	When you plan
Slide deck	01 Present	One deck for all three days. Each day starts at its own dark Day slide, and the speaker notes say what to say.	Every day
Slide script	01 Present	The speaker notes, printed	If you want your notes on paper
Bell ringers	01 Present	A short warm-up for each day	At the start of each day
Google Slides	01 Present	A page with a link that makes your own Google Slides copy of the deck. It has the same slides and speaker notes.	If you teach from Google Slides
Guided notes	02 Student Handouts	One packet for all three days, in PDF and Word. Students fill in the blanks during the slides, with the word bank on the page.	During the slides, every day
Vocab slip	02 Student Handouts	The lesson's words and what they mean, on one page	Day 1. Students keep it.
Operator Relay	04 Activities	Students follow values through chains of update operators on paper with computers closed. Then they practice in CodeGrove.	Day 1, the middle of the period
Warm-Up Arcade, ONLINE only	03 Labs	Students turn off a test line, fix an error and finish two programs in CodeGrove. Then they write their lines, the output and a why answer on the lab sheet. It's ONLINE only. Students write code in CodeGrove on a computer or tablet and fill in the sheet as they go.	Day 2, the middle of the period
1.1 Quiz Task, ONLINE only	04 Activities	Students fix a bonus bug in CodeGrove, working alone, and then take the lesson quiz on paper. It's ONLINE only. Students write code in CodeGrove on a computer or tablet and fill in the sheet as they go.	Day 3, before the quiz

File	Folder	What it is	When you use it
1.1 Try It, the Day 1 try-it	CodeGrove (online)	About 10 minutes of practice in CodeGrove. Students type the link from the try-it slide (slide 11). Nothing is printed or turned in. Link: madlyproductivepathways.com/codegrove?course=python2&level=1.1	Day 1, before the exit ticket
Exit tickets	05 Assessment	Quick questions that show who needs more help	At the end of each day
Lesson quiz	05 Assessment	8 multiple-choice questions and 2 written answers about all three days	Day 3, after 1.1 Quiz Task
Google Forms	05 Assessment	A page with links that make your own Google Forms copies of the exit tickets and the quiz. The multiple choice grades itself. Never give students these links. Use a Form that asks students to read code only on school-managed Chromebooks, with locked mode turned on in the Form's Settings. On every other device, use the paper version.	If students answer online instead of on paper
Answer keys	06 Answer Keys	A key for each day (its bell ringer, notes and exit ticket) and the activity and lab keys, plus the quiz key	When you grade
CodeGrove	Online	Our online code lab, with its own levels for this lesson: 1.1 Try It on Day 1, Warm-Up Arcade on Day 2 and 1.1 Quiz Task on Day 3. It needs a computer or tablet.	Days 1, 2 and 3, ONLINE only

The fastest way to run it

1. Print one guided notes packet for each student. It covers all three days, with a header for each day.
2. Open the slide deck. Each day starts at its own dark Day slide, so you always know where today begins. The speaker notes under each slide say what to point to, what to say and which blanks to fill in. The same notes are printed in 01 Present/Slide_Script_and_Speaker_Notes.pdf.
3. Run the activity or lab in the middle of the period. That is where students practice the day's skill.
4. Collect the exit ticket on the way out. It takes a few minutes and shows you who needs more help.

The lesson quiz is on Day 3

Day 3, Find the Bonus Bug, teaches new material first, in its slides and notes. Then students do a short practice task and take the quiz. Keep the Day 3 slides, because the quiz covers them.

- **When:** Day 3, after 1.1 Quiz Task. Collect that sheet before the quiz.
- **What's on it:** 8 multiple-choice questions and 2 written answers. They cover all three days.
- **How long:** about 15 minutes. Students work alone.
- **Points:** 12 in all. Part A has 8 three-choice questions worth 1 point each. Part B has 2 written questions worth 2 points each. You grade the written answers by hand.
- **The key:** 06 Answer Keys/1.1_Lesson_Quiz_Answer_Key.pdf. It gives the right choice and the reason for each choice question, and for each written one, a sample answer and what to look for.

CodeGrove, the online code lab

CodeGrove is our online code lab that goes with this lesson. Students use it in a browser on a computer or tablet, with no account. It doesn't work on phones. Every lab in this course runs in it, ONLINE only.

This lesson uses 3 levels: **1.1 Try It** (Day 1), **Warm-Up Arcade** (Day 2) and **1.1 Quiz Task** (Day 3). Together they practice using update operators and the editor's tools to finish and fix short programs.

The lab gets 27 minutes: about 22 minutes of coding in CodeGrove, plus the handout, the setup and the wrap-up. Each link on a sheet opens its level, so there is nothing to set up.

Students write their lines, the exact output and one short why answer on the lab sheet as they work.

Students don't need an account, and there is nothing to install. The first time CodeGrove opens on a slow Chromebook, Python can take 10 to 20 seconds to start, so students read the task while it loads.

Day 1 try-it: 1.1 Try It, about 10 minutes of practice. Nothing is turned in. Link: madlyproductivepathways.com/codegrove?course=python2&level=1.1

Day 2, Warm-Up Arcade: madlyproductivepathways.com/codegrove?course=python2&level=1.1b

Day 3, 1.1 Quiz Task: madlyproductivepathways.com/codegrove?course=python2&level=1.1q

If you're short on time

Keep every day's slides and notes, because the quiz covers them. To save time, skip the Day 1 bell ringer and one exit ticket.

Safety and ethics

Every person and place in this lesson is invented.

Students code in CodeGrove. They never sign in or make an account, and the programs ask only for numbers.

WHAT'S REAL AND WHAT'S INVENTED

Every person and place in this lesson is invented, including Stonebridge Skate Park. Students code in CodeGrove, our online lab, so they never sign in or make an account.

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