ANSWER KEY

Activity and Lab Keys

Keys for every lab and activity sheet in this lesson, in day order.

How to grade: Use the sample answers below. Give full points when an answer has the sample's idea, in any words. Give part of the points when it is partly right.

A student's code doesn't have to match the sample code. Any code that does the same job earns the points.

Not sure a student's code works? Open the game link on the ONLINE sheet, type the student's code in place of the code there, and press Check.

Day 1 activity: Predict the Output

Points: Each program is worth 2 points. The last question is worth 2 points. The sheet is worth 18 points.

#	Sample answer
Q1	The sample output for Q1 is in the Output box below the table.
Q2	The sample output for Q2 is in the Output box below the table.
Q3	The sample output for Q3 is in the Output box below the table.
Q4	The sample output for Q4 is in the Output box below the table.
Q5	The sample output for Q5 is in the Output box below the table.
Q6	The sample output for Q6 is in the Output box below the table.
Q7	The sample output for Q7 is in the Output box below the table.
Q8	The sample output for Q8 is in the Output box below the table.

Sample output for Q1

Output

```
Good morning!
Welcome to class.
```

Sample output for Q2

Output

```
Python
is fun!
```

Sample output for Q3

Output

```
3
2
1
Blast off!
```

Sample output for Q4

Output

```
We are the
Oak Hill Owls!
Go, Owls, go!
```

Sample output for Q5

Output

```
Hi, Priya!
See you soon.
```

Sample output for Q6

Output

```
BOOK CLUB
Room 12
bring a book
```

Sample output for Q7

Output

```
Lunch is at 11:30.
Bring a fork!
```

Sample output for Q8

Output

```
Put on your socks.
Put on your shoes.
Tie your laces.
```

Last question. Darius says Program 3 prints Blast off! first, because it's the most exciting line. Is he right? Explain in 1 or 2 sentences.

Sample answer: No. Python runs the lines from top to bottom, so Blast off! prints last, after 3, 2 and 1.

Day 2 lab: First Words

The paper and online versions use the same tasks, the same points and this key.

Points: Each program is worth 4 points: 2 for the code the student writes and 2 for why it works. The sheet is worth 12 points.

Task 1: Hello, Python

1. (2 points) The lines do the same job, so the output matches the sample output exactly, with the same capital letters, spaces and punctuation.

```
# Say hello.
print("Hello, Python!")
print("I can write code.")
```

Output

```
Hello, Python!
I can write code.
```

2. (2 points) **Sample answer:** The quote marks show Python where the text starts and stops. Python prints only the text inside them, so the quotes don't show. **Look for** this idea in the student's own words.

Task 2: Morning News

3. (2 points) The lines do the same job, so the output matches the sample output exactly, with the same capital letters, spaces and punctuation.

```
# The morning news
print("Good morning, Oak Hill Middle School.")
print("Picture day is on Thursday.")
print("Have a great Tuesday.")
```

Output

```
Good morning, Oak Hill Middle School.
Picture day is on Thursday.
Have a great Tuesday.
```

4. (2 points) **Sample answer:** Python prints the text inside the quotes exactly as it's typed. If the code had a small s, the output would have a small s too, and it wouldn't match the Example. **Look for** an answer that says Python prints the text exactly as it's typed, letter for letter and a small s in the code would print a small s, so the output wouldn't match the Example.

Task 3: Steps in Order

5. (2 points) The program does the same job, so the output matches the sample output exactly, with the same capital letters, spaces and punctuation.

```
# How to plant a seed
print("First, fill a cup with soil.")
print("Next, push a seed into the soil.")
print("Then water the soil.")
print("Last, set the cup in a sunny window.")
```

Output

```
First, fill a cup with soil.
Next, push a seed into the soil.
Then water the soil.
Last, set the cup in a sunny window.
```

6. (2 points) **Sample answer:** Python runs the lines from top to bottom. Each `print()` prints its line when Python reaches it, so the order of the lines is the order of the output. **Look for** this idea in the student's own words.

Day 3 lab: Sign Maker

The paper and online versions use the same tasks, the same points and this key.

Points: Each program is worth 4 points: 2 for the code the student writes and 2 for why it works. The sheet is worth 12 points.

Task 1: Bake Sale Sign

1. (2 points) The lines do the same job, so the output matches the sample output exactly, with the same capital letters, spaces and punctuation.

```
# Bake sale sign
print("********")
print("BAKE SALE")
print()
print("Friday at noon")
print("********")
```

Output

```
********
BAKE SALE

Friday at noon
********
```

2. (2 points) **Sample answer:** The empty `print()` has nothing inside its parentheses, so it prints a blank line. The blank line splits the sign into parts, so it's easier to read. **Look for** this idea in the student's own words.

Task 2: Club Poster

3. (2 points) The lines do the same job, so the output matches the sample output exactly, with the same capital letters, spaces and punctuation.

```
# The club's name
print("GARDEN CLUB")
print()
# When and where it meets
print("Tuesdays after school")
print("Room 104")
print()
# Who can join
print("All grades are welcome!")
```

Output

```
GARDEN CLUB

Tuesdays after school
Room 104

All grades are welcome!
```

4. (2 points) **Sample answer:** A comment starts with #, and Python skips it. It's a note for the people who read the code, so it never prints. **Look for** this idea in the student's own words. A correct reason about the student's own working code counts too.

Task 3: Lunch Menu Board

5. (2 points) The program does the same job, so the output matches the sample output exactly, with the same capital letters, spaces and punctuation.

```
# Lunch menu board
print("LUNCH MENU")
print()
print("Main: Bean tacos")
print("Side: Corn salad")
print("Drink: Milk")
print()
print("Enjoy your lunch!")
```

Output

```
LUNCH MENU

Main: Bean tacos
Side: Corn salad
Drink: Milk

Enjoy your lunch!
```

6. (2 points) **Sample answer:** Python runs the lines from top to bottom. The Side line came first in the code, so it printed first. **Look for** an answer that says Python runs the lines from top to bottom and the Side line was above the Main line in the code, so it printed first.

Day 4 activity: Field Trip Flyer

The paper and online versions use the same tasks, the same points and this key.

Points: The sheet is worth 4 points: 2 for the code the student writes and 2 for why the apostrophe works.

Task 1: Field Trip Flyer

1. (2 points) The lines do the same job, so the output matches the sample output exactly, with the same capital letters, spaces and punctuation.

```
# Field trip flyer
print("SCIENCE MUSEUM TRIP")
print()
print("We leave at 8:30 on Thursday.")
print("Bring your permission slip.")
print("Don't forget your lunch!")
```

Output

```
SCIENCE MUSEUM TRIP

We leave at 8:30 on Thursday.
Bring your permission slip.
Don't forget your lunch!
```

2. (2 points) **Sample answer:** The apostrophe in Don't looks just like a single quote. Inside single quotes, it would end the text too soon, so double quotes keep the whole line together. **Look for** an answer that says the apostrophe looks just like a single quote and inside single quotes, the apostrophe would end the text too soon, so Python would stop.