

Name:

Functions, Parameters and Local Variables - Part 1

Go through the lesson on functions, parameters and local variables. Fill out the charts for each problem you complete.

Example	
What is the parameter?	topic
Why is it a parameter?	Used in a condition (if statement)
What are the local variables?	The_list1, the_list2, team, index
Why are they local variables?	Only used in this function: The_list1, the_list2 and team are assigned values Index used as counter in a loop
What will a function call look like?	slideshow(1) or slideshow(2) or slideshow(topic)

```
def slideshow(topic):
    if topic == 1:
        the_list1 = dbacks_pos
        the_list2 = dbacks_players
        team = "Diamondbacks"
    else:
        the_list1 = rangers_pos
        the_list2 = rangers_players
        team = "Rangers"
    for index in range(len(the_list1)):
        display.clear()
        display.print(team)
        display.print(the_list1[index])
        display.print(the_list2[index])
        sleep(2)
    display.clear()
    display.print("End of list")
```

A 🌶️	
What would you call the function?	def ending (answers can vary)
What are the variables needed?	count
What are the parameters?	count
What are the local variables?	none
Does it need a return?	no
What will a function call look like?	ending(count) or ending(3) or ending(4)

```
# Ending message
if count == 4:
    display.clear()
    display.draw_text("You WON", scale=4,
else:
    display.clear()
    display.draw_text("You LOST", scale=4,
```

B 🌶️	
What would you call the function?	def display_dice (answers vary)
What are the variables needed?	num
What are the parameters?	num
What are the local variables?	none
Does it need a return?	no
What will a function call look like?	display_dice(num) or display_dice(3) – or any number 1-6 for the argument

```

if buttons.was_pressed(BTN_B):
    # Reset the board for each game
    reset()
    # Select first random number
    num1 = random.randrange(6) + 1
    if num == 1:
        one_roll()
    elif num == 2:
        two_roll()
    elif num == 3:
        three_roll()
    elif num == 4:
        four_roll()
    elif num == 5:
        five_roll()
    else:
        six_roll()
    sleep(delay)

```

C 🌶️	
What would you call the function?	def instruction (answers vary)
What are the variables needed?	delay
What are the parameters?	delay
What are the local variables?	none
Does it need a return?	no
What will a function call look like?	instruction(delay)

```

pixels.set(3, BLACK)
if buttons.was_pressed(BTN_A):
    audio.mp3("sounds/welcome")
if buttons.was_pressed(BTN_B):
    display.show(pics.HAPPY)
    sleep(delay)
    display.fill(BLACK)
    display.show("Press a Button!")
    sleep(delay)

```

D 🌶️🌶️	
What would you call the function?	def turn_off (answers vary)
What are the variables needed?	lite, how_many
What are the parameters?	how_many
What are the local variables?	lite
Does it need a return?	no
What will a function call look like?	turn_off(3) or turn_off(how_many) – or any number 1-4 as the argument

```

red = random.randrange(0, 255)
green = random.randrange(0, 255)
blue = random.randrange(0, 255)
color = (red, green, blue)

pixels.set(1, color)

how_many = 4
# turn off pixel LEDs
for lite in range(how_many):
    pixels.set(lite, BLACK)

```

E 🌶️🌶️	
What would you call the function?	<code>def random_color (answers vary)</code>
What are the variables needed?	<code>red, green, blue, color</code>
What are the parameters?	<code>none</code>
What are the local variables?	<code>red, green, blue, color</code>
Does it need a return?	<code>Yes – color</code>
What will a function call look like?	<code>color = random_color()</code>

```
while True:
    red = random.randrange(0, 255)
    green = random.randrange(0, 255)
    blue = random.randrange(0, 255)
    color = (red, green, blue)

    pixels.set(0, color)

    red = random.randrange(0, 255)
    green = random.randrange(0, 255)
    blue = random.randrange(0, 255)
    color = (red, green, blue)
```

F 🌶️🌶️	
What would you call the function?	<code>def display_image (answers vary)</code>
What are the variables needed?	<code>my_image, choice</code> (<code>my_list</code> is a list and is automatically available throughout the program)
What are the parameters?	<code>choice</code>
What are the local variables?	<code>my_image</code>
Does it need a return?	<code>no</code>
What will a function call look like?	<code>display_image(choice)</code>

```
if buttons.was_pressed(BTN_L):
    choice = 4
if buttons.was_pressed(BTN_R):
    choice = 5

my_image = my_list[choice]

if type(my_image) == tuple:
    display.fill(my_image)
else:
    display.show(my_image)
```