

Key Concepts:

Warning: this list is not comprehensive!

- **Dictionary Methods:** `clear()`, `get(key, default)`, `pop(key, default)`
- **View Objects:** `dict.items()`, `dict.keys()`, `dict.values()`
- **Recursion:** base case, progression to base case



Questions of the Week:

This week, we will be practicing using the Python documentation with the random module: <https://docs.python.org/3/library/random.html>.

1. Write a function, `coinFlip()`, which has an equally likely chance of returning "Heads" or "Tails".
2. Write a function, `diceRoll()`, which has an equally likely chance of returning any integer between 1 and 6, inclusive.
3. It costs \$5 to play a carnival game which allows you to flip a coin until you land on 1 tail. You win \$5 per head you land on. Write a recursive function to simulate this game.
4. After playing Catan, you suspect that the dice are rigged because you had a wheat shortage despite being housed next to a 5-Wheat. Write a function to display a plot of n rolls, where each of the n rolls is the sum of two 6-sided dice.

Example: $n = 50$

```
>>> plot(50)
----- PLOT -----
 2 |
 3 | *
 4 | *****
 5 | *
 6 | *****
 7 | *****
 8 | *****
 9 | *****
10 | *****
11 | ***
12 | **
----- END PLOT -----
```

5. In Survivor, when there is a tie vote, a sudden death rock draw will occur. Each player will draw a rock at random and the person with the odd colored rock will be eliminated. Given a list of players and rocks, simulate everyone drawing a rock and determine who is eliminated.

#Example Inputs

```
players = ['Adam', 'Bret', 'David', 'Jessica', 'Sunday', 'Will']
```

```
rocks = ['White', 'White', 'White', 'White', 'White', 'Purple']
```

#Example Output

Adam drew a white rock.

Bret drew a white rock.

David drew a white rock.

Jessica drew a purple rock.

Sunday drew a white rock.

Will drew a white rock.

Jessica has been eliminated.

6. You want to sharpen your Yahtzee skills by implementing a program to help you practice. Follow the specifications below to implement the required functionalities of the program.

- You start each round by rolling 5 regular, 6-sided dice.
- You then select which dice you want to keep and which ones you want to reroll.
- You can reroll up to 2 times per round.
- You win the game if you have 5 dice with the same value by the end of the round. You lose the game otherwise.

7. Implement the game of Hangman. The official rules can be found here:

[https://en.wikipedia.org/wiki/Hangman_\(game\)](https://en.wikipedia.org/wiki/Hangman_(game))