Lesson 8 Guess the Number

Worksheet

K-W-L Chart

What I Know	What I Wonder	What I Learnt

New Commands: make a list of all the new Python commands you learn throughout the lesson

Activity 1:

Read the program.

```
1.  import random
2.
3.  num = random.randint(1, 100)
4.
5.  t = 7
6.
7.  print("Guess a number between 1 and 100. You have 7 attempts.")
8.  print("Let's start.")
9.
10. while True:
11.     guess = int(input("Guess the number: "))
12.     if guess == num:
13.         print("BINGO!")
14.         break
15.
16.     elif guess > num:
17.         t -= 1
18.         print("High! You have", t, "attempts left.")
19.
20.     elif guess < num:
21.         t -= 1
22.         print("Low! You have", t, "attempts left.")
23.
24.     if t == 0:
25.         print("The correct number is", num)
26.         print("Game Over!")
27.         break
```

Run the example program and test your guessing methods.

Round	1st Try	2nd Try	3rd Try	4th Try	5th Try	6th Try	7th Try	Number
Example	*7*	*85*	*60*	*40*	*20*	*11*	*9*	***9***

Answer:

- Explain the use of the random module in the guessing game.
- Explain the use of conditional constructs.
- Explain how to reduce the number of attempts.
- Interpret the meaning of 'while True'.

The 33 **reserved words** in Python:

and	**as**	**assert**	**break**	**class**	**continue**
def	**del**	**elif**	**else**	**except**	**finally**
for	**from**	**False**	**global**	**if**	**import**
in	**is**	**lambda**	**nonlocal**	**not**	**None**
or	**pass**	**raise**	**return**	**try**	**True**
while	**with**	**yield**			

Draw a Flowchart for the example program:

Activity 2:

Suppose you are now the designer of the guessing game. If the user needs to find a number from 1 to 1,000, how many attempts can the user have? Modify the example program and explain your reasons.

Extension:

Just like if statements, while loops can hold and condition. This condition will always be checked every time the loop starts over. Once the condition is no longer satisfied, the loop will terminate. Ask students to replace "True" in Activity 2 with a conditional statement. This will also remove the need to use "break".