**Numeron – Number Guessing Game - Explanation**

Let’s play a number guessing game.

First, choose three numbers from 0 to 9 and make your own three-digit number. You can’t use the same number twice in your three-digit number.

Take turns guessing the others number or asking a question. The person who gets the number correct first wins.

While guessing your partners number, follow these guidelines.

* If a stated digit is in the correct place, it’s "eat".
* If a stated digit is in the number, but in the wrong place, it’s "bite".

Let’s look at an example. In this case, the digits 1, 6, and 5 are not used in the number.

Next, since 5 is not included we know that 3 and 2 are used in the number. But we do not yet know which is in the correct place.

Now it is confirmed that 3 is in the hundreds place. Furthermore, we now know that in addition to 2, 8 or 9 is included in the number.

After calling 2 in the one’s place, BITE is replaced by EAT confirming that 2 is in the one’s place. At the same time, the final number is confirmed to be 8 in the tens place from the previous call.

Let’s practice. If this student’s number is 746, and the boy guesses 648, what should she answer? That’s right, she should answer 1EAT-1BITE. 4 is in the correct place, and there is a six in her number, but it is in the wrong place.

Next, the girl guesses his number is 205. He answers 0EAT-3BITE. Which of the following numbers is most likely the girls number: 204, 520, 502? That’s right, it is 520. Why? Because 3BITE means that all three numbers, 2, 0, and 5 are in his number, but they are all in the wrong place.

In addition to asking about a specific number, you may also ask these questions. But you can only ask each of these questions once. You also cannot guess the number after your question. You need to wait until your next turn.

Are you ready to play? Let’s begin!