PLACE VALUE DICE

In this lesson, which can be modified for classes of all ages, students learn to build numbers by making associations with the respective size of different place values.

Students will:

1. Understand that the value of digits vary depending on their 'place' in the number
2. Reinforce their ordering of the different place values, in both ascending and descending order.
3. Learn to *hold the place* for internal zeroes.

Materials:

- Place Value Twister
- 10 sided dice (0-9) *or* 9 sided dice (1-9).
- Recording device (book, whiteboard, tablet)

Preparation

To prepare for this lesson, make your decision about what the students will focus on. If students are still exploring the concepts of tens, two place value cups will be sufficient. Expand your use of the *Place Value Twister* as appropriate. Similarly, tailor this lesson to either include internal zeroes, or not, depending on the dice you choose.

Ensure that students are equipped with the materials and have a ready made space for them.

Lesson Procedure

1. Model this lesson for the students, reinforcing the different place values. This can be modelled either using the whiteboard, through a 'fishbowl' scenario where students gather around the teacher, or using the video available on placevalue.com.au
2. Allocate places for the students, either at their desks, in small groups or freely on the floor.
3. You may ask students to record the different answers you get, in expanded notation. This allows another level of detail. For example, if a student rolls 4561, ask them to record it in their book as 4561 = 4000 + 500 + 60 + 1. This also allows you to set a numerical goal for the students - eg that they each record ten different numbers. Many students require this goal to be set. Alternatively, use a timer and see how many students can record in their books.

Differentiation

Vary the different cups, as appropriate.

If students are struggling with internal zeroes, swap out some dice which start at 1, instead of 0.