TECHNOLOGY ENGINEERING E A M MATHEMATICS

## Write and Roll

## Materials Needed

O Dice with dots up to 6 or dot number cards 1-6
o Variety of writing tools: sand tray, white board, pencil/paper
o Counters (beans, marbles, toy cars, socks, etc.)

Grade Range
Pre-K

Topics/Skills
Math: Counting and
Representing Numbers;
Subitizing

Learning Standards
CCSS: Number Sense

## Duration

15-20 minutes

Prep Time
5 minutes

## Subitizing = Instantly Seeing How Many



Subi-what? Subitizing is to identify, without counting, the number of objects in a collection. In this activity, students will get to practice identifying and writing numbers 1 - 6 .

## Activity Challenge

Students practice subitizing and writing numbers

## Preparation

1. Review the Materials Needed list and gather all materials.
2. If a die is not available, dot number cards can be used. Make dot number cards for numbers 1-6 as seen here:


To Do

1. Model the activity by rolling a die, counting the number of dots or subitizing (recognize without counting), writing it and representing it with objects.
2. Students roll the die, subitize or count, write down the number, then use objects, called "counters", to represent the number.
3. Repeat the activity.

## Observations

- Do "counters" have to look the same as the dots on the die to represent the same number?
- Can the number of dots on a die be recognized just by looking and without having to count each?
- How do you know you have the same number of counters as dots on the die?


## Extensions

- Put several small snacks on a paper plate. Count the number of snacks and write that number on the plate. Eat the snacks (optional).


## The Content behind the Activity

When the total number of items in a group is instantly known without having to count each one individually that is called "perceptual subitizing". Finger patterns matched to numbers are often the first subitizing skill students will develop. They learn all the fingers on one hand means " 5 ", on two hands means " 10 ", instantly, without counting. Other examples: 1)using fingers to show the numbers two to nine, 2)recognizing the total number of things by looking at regular patterns on dice, dominoes, and on playing cards. The ability to see number patterns can create a strong foundation for developing a sense for numbers.

