

Aims

- Through this activity students will learn to use sparkles. They should be able to make them choose a random side of the dice. As they progress there are several variations and ways to make it more challenging (see bottom of page).

Basic Code

To make the dice continuously find different sides (and therefore numbers)

```

program start
do forever
  set sparkle random 0 to 5 to [ ]
  wait 2 seconds
  turn all sparkles off
loop
  
```



Resources

- Crumble board
- Battery pack
- Sparkles x 6
- Wires x
- USB cable
- Paper/card
- Switch (intermediate)

Construction Tips

Basic: make a cube and label each side with a number. Stick sparkles on the outside and make holes to poke the wires through.

Suggested Uses

- Create a net display based around dice. Do dice have to have six sides? What other shapes are there?

Challenge Questions

- Can you make the dice pick a random side – when each side has a designated colour?
- Can you make a dice with a different number of sides?

Basic Code

To make the dice find a random side of the dice, in a random colour

```

program start
do forever
  set sparkle random 0 to 5 to random 0 to 255 random 0 to 255 random 0 to 255
  wait 1 seconds
  turn all sparkles off
  wait 1 seconds
loop
  
```

Intermediate Code

To make the dice find a random number/side continuously after a switch is pressed

```

program start
wait until A is HI
do forever
  set sparkle random 0 to 5 to [ ]
  wait 1 seconds
  turn all sparkles off
  wait 1 seconds
loop
  
```

Intermediate Code

To make the dice find a random number/side after a switch is pressed, and not find one again until the switch is pressed again

```

program start
do forever
  wait until A is HI
  turn all sparkles off
  set sparkle random 0 to 5 to [ ]
loop
  
```