



## 2016 Season 1 Weekly Sessions

### 1. Glow in the Dark Geometry

Make geometric shapes using glowsticks. Lay out the sticks to make mystical repeating patterns. Then flick off the lights to see it all glow.

*2-D geometric shapes*

*Pattern recognition: both shapes and numbers*

*Bonus: Ratios*

### 2. Let's Get Loud

Experiment with water and straws to create different sounds, then build a working flute out of milkshake straws. After all that, find out exactly how loud you are, down to the numbers!

*Measuring length*

*Comparing and sequencing lengths*

*Simple relationships between variables*

### 3. Time of Your Life

Find out what makes you tick. Race to do crazy stunts, "be" a clock, and see if you have a winning birthday.

*Units of time*

*Time Measurement*

*Time and estimation and accuracy*

*Bonus: calculating the mean*

### 4. Toilet Paper Olympics

Bet you never knew sports and toilet paper could go together, huh? Get on a roll with your Olympian skills in the shot put, the long jump, and the relay race.

*Counting*

*Measuring lengths*

*Estimation*

*Conversion of units of length*

*Single-digit multiplication and division*

*Bonus: 2 digit multiplication*

### 5. Spy Training

See if you have what it takes to be a spy, and break the codes to the clues to find the hidden treasure!

*Pattern recognition and completion*

*Association between sets*

*Probabilities: letter frequency*

### 6. Flying Marshmallows

Send marshmallows flying through the air using popsicle sticks and rubber bands. Figure out what positions work best, then measure the flight to prove it.

*Distance measurement*

*Comparison of numbers*

*Maximum and minimum*

*Bonus: Median and mean*

### 7. Zip Line Zoo

Build a zip line for brave stuffed animals, and race them across the room. Measure the distance and time their rides to see how fast they can go!

*Measuring time, distance and angles*

*Basic relationships between variables*

*Bonus: Slope of a line*

### 8. Bouncy Dice Explosion

Your big chance to throw things because you're supposed to. Find out your chances of rolling a 2 or a 5, then try to be the winning chip on a giant human Bingo board.

*Addition*

*Multiplication*

*Strategic thinking*

*Simple combinatorials*

*Simple probability (as fractions)*



## Season 2 Weekly Sessions

### 1. Glow-in-the-Dark City

Take geometry to the next level! Learn to recognize some important 3-D shapes, then build a giant skyscraper of glowsticks and styrofoam balls. Flick off the lights to see your creations!

*3-D shapes (polyhedrons)*

*Pattern Recognition: shapes and numbers*

*Single digit division*

*Bonus: ratios*

### 2. Crazy 8s Race

Play a brand new board game: roll die to travel around a figure 8, and bring on your teammates when numbers match up. See who makes it to 8 x 8 first.

*Addition*

*Subtraction*

*Factoring*

*Bonus: probability*

### 3. Funny Money

We'll bet money you'll love this one! Have fun comparing coins, buying prizes with them, and finally winning them in an extreme version of Rock, Paper, Scissors!

*Valuing and comparing units of money*

*Counting by 5s, 10s, and 25s*

*Addition*

*Simple Combinatorials*

*Bonus: fractions and probability*

### 4. Beach Ball Party

This is a party you won't want to miss! You'll use our star-studded beach ball to play volleyball, then go gaga chucking the ball against targets to score points.

*Addition and subtraction*

*Multiplication*

*The idea of optimization: trade-offs between time and points scored*

### 5. Funky Fractals

Get funky with patterns and mazes! Create crazy patterns with wax sticks, and connect them to make a giant version. Then design your own waxy maze to stump your friends.

*Geometry: shapes and scale*

*Perfect squares and cubes*

*Pattern recognition*

*Right angles*

### 6. Walk on the Wild Side

How do ladybugs, crabs and lizards run so fast with all those extra legs? They use math! We'll run, walk and gallop like animals to learn some fancy footwork.

*Addition*

*Simple Combinations*

*Patterns and series*

### 7. Super-Cube Shuffle

Math and art collide when you use special colored cubes to create cool designs. After a round of design copy mania, you'll be a super-cube pro!

*Pattern recognition*

*Spatial relations: orientation of triangles and slopes*

*Reflective and rotational symmetry*

### 8. Epic Air Traffic Control

Build your own airport, complete with finger-light airplanes and glowstick runways. Use your math skills to land all the planes without crashing.

*Understanding and comparing number series*

*Factoring*

*Mods*