**Math Workshop**

EXERCISE #1

WORD PROBLEM/DECISION TREE

Lead the large group through the decision tree. How will I know whether I should go or not – it’s like a pros and cons chart…but with math.

Each rung of decision, must equal 100%

Identify which of the scenarios ends with a good date, and which would be a bad date.

Have them complete the worksheet.

What percentage of dates are good?

what percentage are bad?

should I go on this date?

Now break into smaller groups.

Have each group create a scenario, with five steps of determining probability.   
They should invent their own probability percentages – but remind them that each rung of decision, must equal 100%

They will multiply the probability of independent events, and add them to determine probability.

Have the class vote on the most creative – for a prize.

I’ve been asked on a date. They are acting very weird and may be a zombie…should I go on this date? teacher copy

This person is not a zombie. 90%

Zombies are always in a bad mood. 70%

We go to a zombie movie and my date loves it! 35%

My date thinks the zombie is cute and runs off with him. ☹ 70%

I heroically defend my date from killer zombies! Best date ever!! 30%

We go to a zombie movie. My date hates zombie moves. 40%

We get attacked by zombies! 25%

I am terrified of zombies. 90%

This person is totally a zombie! 10%

I’m also a zombie!! 10%

Let’s eat some brains! 30%

You are victorious in a zombie battle, and your date thinks you’re cool: 6.75%

You and your date go to a zombie movie and she likes it: 31.5%

As a zombie, you and your zombie date have a lovely time eating brains: 0.3%

Good date: 38.55

You go to a zombie movie, and your date thinks it’s stupid and lame. (Urgh!): 36%

You get attacked by zombies, and your date runs off with them: 15.75%

As a zombie, your date is moody and lethargic: 0.7%

My date is a zombie! I’m not a zombie?! That’s just weird! I don’t like this: 9%

Bad date: 61.45

SHOULD I GO ON THIS DATE?\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

I’ve been asked on a date. They are acting very weird and may be a zombie…should I go on this date?

This person is not a zombie. 90%

Zombies are always in a bad mood. 70%

We go to a zombie movie and my date loves it! 35%

My date thinks the zombie is cute and runs off with him. ☹ 70%

I heroically defend my date from killer zombies! Best date ever!! 30%

We go to a zombie movie. My date hates zombie moves. 40%

We get attacked by zombies! 25%

I am terrified of zombies. 90%

This person is totally a zombie! 10%

I’m also a zombie!! 10%

Let’s eat some brains! 30%

You are victorious in a zombie battle, and your date thinks you’re cool: \_\_\_\_\_\_\_%

You and your date go to a zombie movie and she likes it: \_\_\_\_\_\_%

As a zombie, you and your zombie date have a lovely time eating brains: \_\_\_\_\_\_%

Good date: \_\_\_\_\_\_\_%

You go to a zombie movie, and your date thinks it’s stupid and lame. (Urgh!): \_\_\_\_\_%

You get attacked by zombies, and your date runs off with them: \_\_\_\_\_%

As a zombie, your date is moody and lethargic: \_\_\_\_\_%

My date is a zombie! I’m not a zombie?! That’s just weird! I don’t like this:\_\_\_\_\_%

Bad date: \_\_\_\_\_\_\_%

SHOULD I GO ON THIS DATE? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

EXERCISE #2: **DICE**

Divide the class into groups.

Have each group come to a consensus about what the odds are that you would land on double sixes:

(answer: 1/36)

Have each group provide reasoning for their guess.

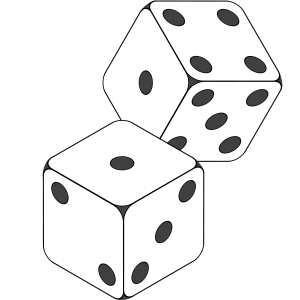
Explain how we get to this conclusion.

The sample space is 36…6 possible outcomes of each dice, multiplied together to get 36.

Now – what are the odds that you would land on a seven if you are counting the numbers from both dice?

There are 6 possible ways to land on a 7…so you have 6/36 or 1/12 chance of landing on a 7 when rolling two die.

Give each of the groups a set of dice, and have them roll the dice 12 times, recording what they rolled. Discuss why there may be a variation.

When you have 2 die…

How can I roll a 2? 1-1

How can I roll a 3? 2-1 or 1-2

How can I roll a 4? 1-3 or 2-2 or 3-1

How can I roll a 5? 1-4 or 2-3 or 3-2 or 4-1

How can I roll a 6? 1-5 or 2-4 or 3-3 or 4-2 or 5-1

How can I roll a 7? 1-6 or 2-5 or 3-4 or 4-3 or 5-2 or 6-1

How can I roll a 8? 2-6 or 3-5 or 4-4 or 5-3 or 6-2

How can I roll a 9? 3-6 or 4-5 or 5-4 or 6-3

How can I roll a 10? 4-6 or 5-5 or 6-4

How can I roll an 11? 5-6 or 6-5

How can I roll a 12? 6-6