

Keep It Positive. Keep It Simple. Keep It Real.

Un-Challenge Day Six

Critical Key #6: Discover Math

The saying "math is everywhere" is spot on! Math truly is everywhere, and the more real world connections that kids can make between the learning of math and the doing of math, the more likely they are to have confidence in their mathematical abilities. Drawing attention to and talking about the mathematics of a situation highlights how interwoven math is in our world.

20 MINUTE ACTIVITY

Movie Bracket

This 20 Minute Activity incorporates games of chance so you will be thinking about fairness and "how likely is it?"

Movie nights have had a recent surge in popularity. In order to decide which movies to watch, you can have a game night and a single elimination bracket to come to a decision. We went with movie trilogies. The kids had so much fun, they did it a second time with a losers bracket!

Basically, you play easy games of chance to eliminate choices. We played one hand of War, one Yahtzee roll, high roll on dice, low roll on dice, highest sum of two dice, and one round of corn hole.

Questions to promote thinking about probability would sound like:

- Which movie do you think will win? Do they all have the same chance of winning?
- Are the games we are playing "fair"? Why or why not?
- If you could change the games to your advantage, what rules might you use?

Parent Tip: Think about playing a game that isn't fair. Will your kids catch it?



Movie Marathon Bracket!

Losers Bracket



DAILY DOINGS

Everyday: Show Me the Math!

Take a quick minute to point out every day math to your child. Here are a couple ideas:

Getting gas: I just put 5 gallons of gas in my car and I drove 250 miles since the last time I put in gas. What was my mileage per gallon?

Price per Unit: Almost every price sticker in a grocery store shows the prices per unit. Have you kids figure out which size is the better deal. You may be surprised!

Common Parenting Challenge: I'm never going to use this!

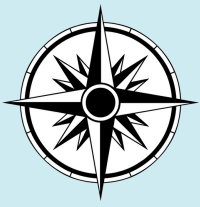
For this challenge, refer to the daily doing! The more your kids see how math is used, the more likely they are to make connections.

Cooking: Double, triple or 1.5 times recipes. How can you do that mathematically or with measuring tools?

Tips: Teach kids how to figure tipping mentally. I like to figure 10% then work from there.

Taxes: If your kids have a job, help them understand tax rates and how to estimate what amount will be on their next paycheck.

Around the World: This [website](http://www.compassadvantage.com/homelearningsupport) highlights math situations around the world - very cool!



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PRE K - 2 ACADEMIC CONNECTIONS

Academic Standard: Understand that the probability of a chance event is the likelihood of the event occurring.

Home Connection: With young students, we can use real life objects to demonstrate an equal likelihood. If I flip a coin, it is equally likely that I will get heads as tails. If I roll a die, I have just a good of a chance of rolling a one as a six. This will lead to an understanding of "fairness" in a game.

3RD - 5TH ACADEMIC CONNECTIONS

Academic Standard: Understand that the probability of a chance event is a number between 0 and 1 that expresses the likelihood of the event occurring.

Home Connection: At this grade band, we can start to add values to likelihood. "I have a 1 in 2 chance of getting heads when flipping a coin. That is the same as $\frac{1}{2}$ or 50%. This conversations build understandings around probability and its relationship to numeracy.

6TH - 8TH ACADEMIC CONNECTIONS

Academic Standard: Approximate the probability of a chance event by collecting data on the chance process that produces it and observing its long-run relative frequency, and predict the approximate relative frequency given the probability.

Home Connection: This is a perfect time to discuss what is *supposed* to happen versus what *actually* happens. In math terms this is theoretical probability versus experimental probability. Flip a coin 50 times. We would expect to get heads half the time and tails half the time. Find out what really happens!

Activity Extensions & Alternatives:

Take movie night to a new level with a "build your own" concession stand. The first time you run it, you can provide all of the goodies. The next time you can have the kids choose or make goodies and run the stand. We gave each kid fake money that we had printed with their faces on it. They thought it was hilarious! You could use Monopoly money or play money also. When we did this, I really thought the kids were going to roll their eyes, but they lined up, got out their "money", took time choosing their treats, handed over their tickets (home-made), and cozied up. I actually almost cried because they loved it so much. With little guys, you could work the money so they have to make change or tell their total amounts. You could team this up with your chore system so they earn "money" for treats. The options on this extension are endless!



Movie Night



Concession Stand