## A Orew ofair Game <br> For your toy company



Dresentation by Toy Designers:
Diana
Chichael
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## -rossing the River

As game designers, we believe that the new game for your company should:

- Be equally likely, giving each player an equal chance of winning.
- Be a game of chance as well as a game of strategy.
- Appeal to kids 11-14 years old.
- Be fun.
- Provide a challenge.


## Orossing the River

Our proposed new game for ages 11-14, Crossing the River:


## -rossing the ®iver

- Object of the Game:
- To remove all of your markers from your side of the river.
- Summary of the Game:
- Place 12 markers on any numbers on your side of the river (including placing any number of markers on any number you choose). Roll the dice and find the difference (subtract the two numbers). The winner is the first person to have no markers left on his/her side of the river.



## -rossing the ®iver

- Rules of the Game:
- Put 12 markers on whatever numbers you choose on "your side" of the river.
- More than one marker can be placed on a number.
- Roll two dice.
- Remove a marker from your side of the river for the number showing the difference in the toss.
- Continue rolling removing markers that mark the difference of your dice.
- Play passes to the other player when the difference of the dice is a number for which you have no marker.
- The winner is the first person to remove all of the markers from his/her side of the river.


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- It is a fair game because:
- Each person can choose where to put his/her markers. This makes each person have an equal chance and equal choices in placing their markers.
- BUT...If they know which differences are most likely, they can put more markers on those numbers.
- The total possible outcomes are as follows:

|  | 1 | 2 | 3 | 4 | 5 | 6 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 1 | 0 | 1 | 2 | 3 | 4 | 5 |
| 2 | 1 | 0 | 1 | 2 | 3 | 4 |
| 3 | 2 | 1 | 0 | 1 | 2 | 3 |
| 4 | 3 | 2 | 1 | 0 | 1 | 2 |
| 5 | 4 | 3 | 2 | 1 | 0 | 1 |
| 6 | 5 | 4 | 3 | 2 | 1 | 0 |


| f you add up each possibility the kelihood of getting each difference is: | Difference: Likelthoom |  |
| :---: | :---: | :---: |
|  | 0 | 6 |
|  | 1 | 10 |
|  | 2 | 8 |
|  | 3 | 6 |
|  | 4 | 4 |
|  | 5 | 2 |

## -rossing the ®iver

How can it be fair if you have more chances of getting a difference of 1?

- Each person can choose where to place their markers at the beginning of the game.
- They can choose to put more markers on the 1,2 and o places.
- This allows both people equal opportunity to win the game if they know the possible outcomes and have a strategy for dealing with it.


## -rossing the 尺iver

Each person rolls the dice on his/her turn, allowing equal chance for getting any of the possible differences-Possible Outcomes


## -rossing the ®iver

Another way to represent the possible outcomes:
Crossing the River Probabilities


## -onclusion

We believe that you should choose our game because:

- It is fun and challenging.
- It involves both strategy and chance.
- It is a fair game if you can figure out the possible outcomes.
- It will be a game that 11-14 year olds will love.

In Conclusion:
It is our hope that we have not only met your criteria but exceeded your expectations and that the game we have designed will be selected to represent your company and that it will help boost your sales beyond your projections.

