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## Initial Stuff

### ***Target Audience***

People like me (who like fast-paced, short-session games that don't involve too much math)

### ***Blogging for Feedback***

Before starting my own brainstorming, I [blogged a bit about the assignment](#) and got some feedback from friends and internet acquaintances about dice games in general. I also did some reading in a community game design blog I frequent, [Dispatching the Dungeon Master](#), noting a particular dice game idea that had been brought up there.

Here are a few comments I took in mind when I began thinking about my own game.

- 1) "What about using dice as a variant on a standard game? Like a standard dartboard with a velcro surface. standard six sided dice also with velcro. The number that is stuck to the board could serve as a multiplier to the numbers on the board and if you hit the same number on both, your entire score is reset!"
- 2) "Which version of Dieslinger are you looking at? Marbles-with-dice or Mexican standoff or something else?"

I think the problem statement of the latter is "what motivates players to create or destroy alliances under pressure?" The dice-allocation is just a neat way to represent that. In the traditional Mexican standoff the motivation would be the stolen diamonds or whatever, and everybody wants a share, and you may be able to get a bigger share if you can

survive the confrontation with a smaller but mutually protective alliance. The real-world problem then becomes providing some in-game reason not to just ally with your two best friends every time.”

- 3) “Here's a problem: dice are gross. Think about it. Usually when people are playing a dice game, they're eating. And what are they eating? Chips, pretzels, and other "hands on" food. Pick up the dice, blow on it for good luck, and you've basically spit in the next player's mouth. As we all know from South Park, there's no better way to get chicken pox.”

## **Brainstorming**

<b>Technology</b>	<b>Story</b>	<b>Mechanics</b>	<b>Aesthetic</b>
1) Dice, duh	1) Mexican stand off with guns and such	1) Dart board/target, dice act as multiplier for where they land	1) Robot future land theme
2) Blank dice with my own custom stuff on there	2) Rolling dice = casting spells	2) Dice and Uno, scoring/turn colors based on color or number	2) Western theme
3) Magnetic dice	3) Something to do with the human body and medical stuff.	3) Magnet dice where you don't know which are magnets and which aren't, or something to do with how they connect and repel from one another.	3) Elaborate dart/score board, with color matching
4) Dart board	4) Dice are pills, maybe some dice are germs. Germs vs. Immune system!	4) A stand-offish game, where you can pit certain dice against other people, and move them around, until the "bang!" point when everybody shoots (rolls)	4) Black powder-coated bolts and nuts as one team, regular metal as the other team
5) Super magnets on the board and metal dice to throw	5) Fears and phobias and anxiety	5) Make magnet gloves, and have someone throw the magnet dice up in the air and you have to catch them.	5) color regular bolts with permanent markers to denote teams
6) Use my blank custom die for people to roll to determine what kind of nut or bolt they can throw	6) Feeding robot dogs with bolts and nuts	6) Reaching into a bag of dice and blindly grabbing a handful, throwing them all over	6) Make the 5 zones different colors so they are easily distinguished, and so the target areas are clearly marked
7) Use a larger piece of hardware as an attack die to try and knock off the other player's pieces	7) Hungry hungry robot dogs! One robot dog in each corner	7) Dice and marbles, having to flick your dice into another person's	7) Make a more elaborate score sheet to mimic the targets on the board
8) Use the ring to try and encircle pieces	8) Robot war, each zone is a particular area		8) Theme the scoring guide to make it look like the hardware dice are weapons
	9) Maybe throwing hardware in each zone denotes "fixing" something, or building something.		

dice, and do some kind of math

8) Use a special 4-sided die to indicate suit, and play some sort of card game

9) Roll a die to determine how many dice you roll

10) For magnets, have two sets of dice, something happens when you touch

11) Roll a 4-sided die to determine which of the special targets is worth points

12) Roll dice to award point values to the extra 4 targets

13) Whoever has a higher point value for a particular target area "owns" that area.

14) Make each zone have a base requirement before it can be counted as being owned (1 wingnut, 2 hangers, etc)

## ***Mechanic Analysis***



To test the mechanic of magnetic dice darts, I set up a tin paint tin with a magnet on the back of it, and threw nuts and bolts into it, recording how each one landed. I also had Rich and Betsy help me out with the data collection. I only did this 10 times, so it's far from scientifically significant, but it did give me an idea of how the dice tend to land on the magnet in general.

Betsy was delighted by the activity, and found it quite fun, so I guess that's a good head start. Both bolts and nuts landed on their side most of the time, but nuts were much more apt to land on an edge. It seems like clusters appear once a lot of stuff has been thrown at the magnet, things tend to stick to each other. It also decreases the chances of a miss if an object bounces, because it's likely to stick to another one on the way out.

## Tracking Landings

S = landed on broad side  
 E = landed on edge (for nuts) or broad end (for bolts)  
 T = landed on tip of bolt  
 B = was touching a bolt  
 N = was touching a nut

Try	Bolt 1	Bolt 2	Bolt 3	Nut 1	Nut 2	Nut 3	Nut 4	Nut 5	Nut 6	Nut 7
(Lisa)										
1	S	miss	S	miss	E	SB	miss	E	S/E N	S
2	S	miss	S	EB	E	miss	E	miss	SB	S/E B
3	S	S	S	miss	S	SB	S	EN	miss	S/E B
(Rich)										
4	E	miss	S	EB	SN	EB	E	S	S	S
(Betsy)										
5	miss	S	S	S	S	EB	EN	E	E	EB
6	miss	miss	miss	S	E	EB	E	EN	SN	miss
7	S	S	S	E	EB	E	EB	EB	miss	S
8	miss	S	S	E	S	EN	miss	EN	miss	S
9	S	S	S	S	E	EN	EN	EN	E	E
10	S	S	T	S	SB	SB	S	SB	S	S

## Some Photos of the Mechanic Analysis



## Ruleset 1

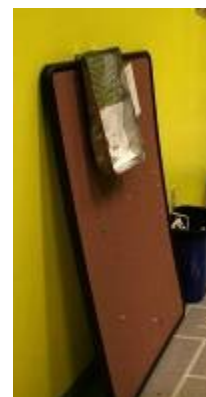
### Requires

- board (metal paint tin)
- super magnet
- 10 "dice" (7 nuts and 3 bolts)
- paper with magnet-sized square drawn on it, attached to board as shown in picture
- someplace to hang the board

### Summary

This is a dart-like game where people throw the dice at the board, scoring points based on what positions the dice are in when they land.

### Gameplay



- 1) Player stands 3 floor tiles away from the board and tosses the dice at the board, one at a time.
- 2) The dice must land in the square. A miss counts for 0 points
- 3) Scoring as follows based on the position the dice are in upon landing

Bolt or nut lands on its flat side - 10 points

nut lands on an edge - 20 points

bolt lands on its broad end - 20 points

bolt land on its narrow end - 50 points

die lands on another die, and both are touching the board - 0 points

die lands on another die, and only one is touching the board - double the combined point value

- 4) Proceed for 5 turns, whoever has the highest score wins

## ***Iteration 1***

**Playtesters:** Tracy and Lauren

### **The Good:**

Tracy and Lauren both really enjoyed themselves playing this, and there was much laughter. There was also much strife and cursing when points got nullified, which indicated to me that both were invested in the game from the start. Tracy thought that the touching nullification vs. the point doubling was a good balance and made a "high risk high reward" scenario for stacking dice.

However, we all agreed I should track this carefully in future playtests to make sure it is not too much of a reward. Though I mentioned my intention to use regular dice once I could get my hands on some magnetic paint, they both thought that using bolts and nuts as dice was well thought-out and worked well. Tracy gave me a 5 and Lauren gave me a 4.8

### **The Bad:**

I noticed during gameplay that there is some awkwardness with the tiny throwing area, which is only as big as the magnet itself. People have to stand close, crouch somewhat (due to the height of the thing I found to hang the board on) and throw these tiny dice into a tiny square.

Lauren suggested lining the tin with some kind of spongy material that would make it easier to bounce dice off the edge and onto the board, though she retracted this saying that the rim of the paint tray bounces nicely.

Tracy suggested experimenting with the sizes of the dice, trying bigger and smaller nuts and bolts, to see if there's some math about the size of the items thrown compared to the size of the square. Lauren also suggested searching for a different metal surface to use as the board that will magnetize and increase the size of the magnetic area.

### **Other things to try:**

This time I ended the game based on rounds, but I also want to try ending based on "first to reach 300 points," to see if that made things more exciting. We all thought it would be a good idea to keep track of broken-down point values and how things were scored, perhaps making a custom score pad, so people can see their exact score breakdown.

We also thought it would be fun to have a chance to throw all the dice at the board at once, which I may



try next iteration for the loser at the end of the turn in Cosmic Wimpout fashion. There were also a few points that needed clarification, which I'll include in the next ruleset.

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## Ruleset 2

Requires

- 2 players

- board (metal paint tin)
- super magnet
- 10 "dice" (7 nuts and 3 bolts)
- paper with magnet-sized square drawn on it
- someplace to hang the board

Summary

This is a dart-like game where people throw the dice at the board, scoring points based on what positions the dice are in when they land.

Gameplay

- 1) Player stands 3 floor tiles away from the board and tosses the dice at the board, one at a time.
- 2) The dice must land in the square. A miss counts for 0 points. *If any part of the die is outside the marked square, it counts for 0 points.*
- 3) Scoring as follows based on the position the dice are in upon landing

Bolt or nut lands on its flat side - 10 points

nut lands on an edge - 20 points

bolt lands on its broad end - 20 points

bolt land on its narrow end - 50 points

die lands on another die, and both are touching the board - 0 points

die lands on another die, and only one is touching the board - double the combined point value.

*The combined point value is always doubled, even if you land a stack of 3 or more dice.*

- 4) Proceed for until someone reaches 300 points

*Bonus Throw:*

5) *At 300 points, the loser has a chance to catch up by throwing all the dice at the board at once.*

6) *If the loser passes the winner during the bonus throw, the winner has a chance to catch up again with his own bonus throw.*

7) *This proceed until one player fails to surpass the other player, at which point the player with the highest score is the winner.*

## Iteration 2

**Playtesters:** Joe and Carlos

**The Good:**

Changing the winning condition to be score-based instead of turn-based definitely made the game more exciting, as Joe and Carlos kept a very close score to one another until the very end. Their game was over in 6 turns, so it was very



close to the length of my original game. Again, there was laughter and cheering and cursing based on how the dice fell, so I could tell that both were invested in the game. Both said they thought the game was fun, and that its length seemed very good (not too long, not too short).

#### **The Bad:**

The magnet at one point slipped out from behind the square of the board, but that can be stabilized with some tape. Carlos thought the game was difficult because of the small target area and the low position of the board. Joe thought that the fact that touching dice nullified both their scores was too much of a punishment, and deterred him from attempting riskier, high-scoring throws.

I noticed during play that when Joe got a few good-scoring dice, he purposefully missed with the remainder of the dice so as not to screw up his score. We discussed the possibility of keeping the point value of the base die, and just not counting the dice that touched it. Both Carlos and Joe suggested judging distance from the board not based on where you were standing, but based on arm length of the player.

#### **Other things:**

I found it interesting that in the previous playtest, Lauren frequently stacked her dice to get the double score, and even Tracy stacked a few times. In this game, however, there was only one case of stacking.

I also attempted to keep track of the point break-down with my scoresheets, but the game was too fast-paced, and I fell behind quickly.

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## ***Iteration 3***

**Playtesters:** Andy and Edmundo

I did another run-through with this ruleset with Andy and Edmundo, but it was cut short by the fact that Edmundo was totally frustrated with the game, and gave up on his second time. Most of this had to do with the fact that Edmundo is extremely tall, felt cramped, and subsequently threw the dice too hard so that they kept bouncing off the magnet.



We tried a couple of adjustments to try and fix this, the biggest one being to try and play the game horizontally instead of vertically. That is, we set the board flat on a table and tossed the dice into it cornhole-style. We all agreed that this method was nowhere near as pleasing as throwing at a vertical board. I think there is something inherently amusing about throwing the items at something hanging on the wall and having them stick.

Edmundo wondered if 10 throwing pieces per person per turn was too much, and if the bolts were too heavy. When I get my hands on that magnetic paint, I'll hopefully see if throwing lighter plastic dice is more or less pleasing than the bolts. There was a point of disagreement on the noisiness of the game: Edmundo thought the sound of the dice hitting the board was too loud and intimidating, whereas Andy really liked the loudness and thought it added to the power of the game.

I think my biggest concern with this is going to be finding a way to make the scoring target bigger (more magnets, a more easily magnetized surface, etc.) and to find a way to hang the board higher so that tall people don't feel cramped while playing.

## ***Iteration 4***

**Playtesters:** Lauren and Trent

For this run-through I hung the target on a higher board, putting it at about eye-level. Lauren, who'd played before, immediately stated that she liked the board lower after a few throws. The rim was very awkward with it hanging higher, and the dice kept bouncing off. After a few rounds, we returned the board to its previous height, and Trent (who was new to the game) agreed that the lower board was more enjoyable, and that it was probably easier for the majority of people.

Trent is also pretty tall, and was crouching a lot, so we went for a happy medium and propped the board up on an overturned garbage can. This made the target a little taller (which seemed to relieve Trent's crouching) but it wasn't such a drastic change as raising the target to eye level.

## ***Iteration 5***

**Playtesters:** Lauren and Zikun

Based on this run-through and the previous one, we figured out that while the added bonus throw for the loser at the end is fun (flinging a handful of dice at a wall, I think, is inherently fun), there isn't much opportunity to advance because of the touching-each-other-no-points rule. When all the dice hit the magnet at once, they seem to naturally cluster. It was suggested that for the bonus throw, I drop the touching-no-points rule and just count what dice made it into the target, regardless of if they were touching. With this change, Zikun still lost on his bonus throw, but was a little closer to Lauren's winning score.



Another thing that I noticed is that Lauren, who has played this game repeatedly, is REALLY good at getting a 50-point stack with an edge, meaning 140 points in one go. I worry that this possibility may be too much of a Quidditch factor, and if perhaps the doubling total score for stacks is too much of a reward, but everyone else that she's beaten has claimed that they do not feel cheated out of points, and that it is fair. Plus, it seems like Lauren is the only person able to do this so far! Still, I'm going to try a change in that only the second stacking die is doubled in point value instead of the total combined value.

Lauren suggested that I find a more magnetizable surface, and make it so that dice landing outside the target area would actually be worth more points.

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## **Ruleset 3**

Requires



- 2 players
- 1 paper and pen to keep score
- target board
- super magnet
- 10 "dice" (7 nuts and 3 bolts)
- paper with magnet-sized square drawn on it, attached to board
- someplace to hang the board

### Summary

This is a dart-like game where people throw the dice at the board, scoring points based on what positions the dice are in when they land.

### Gameplay

- 1) Player stands 3 floor tiles away from the board and tosses the dice at the board, one at a time.
- 2) The player should aim for the target square. *If a die sticks to the magnetic area outside the square, it is worth double points. The entire die must be outside the target square to get the bonus.*
- 3) Scoring as follows based on the position the dice are in upon landing

Bolt or nut lands on its flat side - 10 points

nut lands on an edge - 20 points

bolt lands on its broad end - 20 points

bolt land on its narrow end - 50 points

die lands on another die, and both are touching the board - 0 points for the thrown die (the original die retains its score value)

die lands on another die, and only one is touching the board - *double the point value of the thrown die (the original die retains its score value)*

- 4) Proceed for until someone reaches 300 points

### Bonus Throw:

5) At 300 points, the loser has a chance to catch up by throwing all the dice at the board at once. *Bonus throw dice are scored by their position regardless if they are touching one another or not.*

6) If the loser passes the winner during the bonus throw, the winner has a chance to catch up again with his own bonus throw.

7) This proceeds until one player fails to surpass the other player, at which point the player with the highest score is the winner.

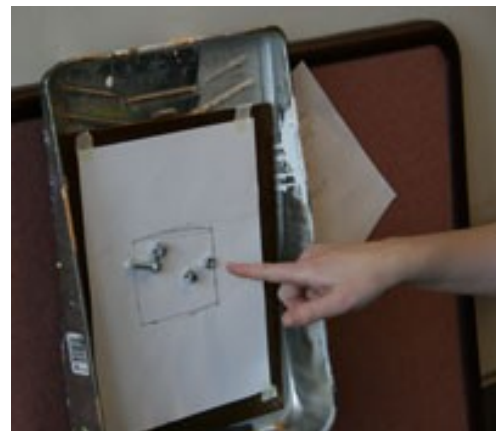
## Iteration 6

**Playtesters:** Alyson and Rich

For this run-through I made one change to the board. I added a flat metal sign to the target, which let me raise up the magnet (see photo). That let me raise the target area without having to prop up the board.

### The good:

The new flat board, besides being less messy aesthetically, also seems to make it easier for the player to



land the dice. Only doubling the point value of the second die on stacks did seem to even out scores a bit.

### The bad:

Interestingly enough, though I changed the rule about any part of a die landing outside the target getting no points with the intention of removing punishment on the player, it seemed to make the game less interesting. People didn't seem as invested, and if part of a die landed outside the target, it was no big deal at all. I think that, even though it is more of a punishment, I should bring that back to the game, because people seem to react with more interest and intensity when the target area is more restricted. Similarly, though the idea of only doubling the point value of the second die on stacks did even out the score, it seemed to make getting a stack less exciting overall.

### Suggestions from Alyson, Rich, and Jesse:

- 1) Try a version where each player has their own set of dice and throw in alternating turns. Perhaps the goal is to try and knock other players dice off
- 2) Figure out exact standing distance and height measurements, staying in the mindset of making this a sellable game.
- 3) Try a version with multiple magnet targets, perhaps thing of zones or bridge-building
- 4) Try out differently shaped objects beyond the nuts and bolts, or try creating forms with paperclips
- 5) Look at the rules for Bocce

## Ruleset 4

Requires

- 2 players
- *scoresheet*
- *score guide*
- *post-it notes with crowns drawn on them*
- *target board with magnets (see photo for new version)*
- *pile of "hardware dice"*
  - \* 4 nuts
  - \* 3 bolts
  - \* 7 wall hanger clips
  - \* 3 wing nuts
  - \* 4 bottle caps
- *dice scoring sheet*
- *6 sided die with throwing-dice types on sides*
- someplace to hang the board

Summary



1 - New board with 5 target areas



2 - Score keeping sheet

This is a dart-like game where people throw the dice at the board, scoring points based on what positions the dice are in when they land. *Whoever has the highest point value in a target area "owns" that area.*

### Gameplay

1) Choose someone randomly to go first. Player rolls the white die to see what kind of hardware he will throw

- a) If the die lands blank-side up, the player can choose any type of hardware he wants
- b) If the die lands on a type that has run out, the player may choose which piece to throw.

2) Player stands (measure distance) away from the board and tosses his hardware-die at the board. He may choose any of the 5 target areas.

3) Consult the score guide to determine how many points the player's throw was worth. If any part of the die is inside the target area, it counts.

4) Mark that throw's score on the score sheet. If one player's score in a target area is greater than the other player's, then he owns that area, and the little crown post-it should be next to his name.

5) Next player's turn, rinse and repeat

6) The game ends when there are no more hardware dice left to throw.

### Score Guide:

#### Bottlecaps

- lands on broad side: 1 point
- lands on edge: 2 points

#### Wall hangers

- lands on broad side: 1 point
- lands on narrow side: 2 points
- lands on squared off end: 3 points
- lands on curved end: 5 points

#### Wing nuts

- lands on narrow edge of wing: 1 point
- lands on bottom: 2 points
- lands on small edge of wing: 5 points

#### Nuts

- lands on side: 2 points
- lands on edge: 5 points

#### Bolts

- lands on side: 2 points
- lands on large end: 5 points

- lands on narrow end: 8 points

\* Stack Rule: If a hardware die lands on top of another without touching the board, it counts for double its point value.

## Iteration 7

**Playtesters:** Joe

Note: Due to my massive redesign, I stuck with the idea of dice partially out of a target still counting. I think the focus of the game has changed so much that that might be too distracting.

### **The good:**

The alternating turns really made the game have a much swifter pace, and it encouraged people to write down their own score, since each throw was isolated. It made things much easier to keep track of. Joe really liked the concept of "zones" and owning different zones. He thought that it balanced things out when playing against super-throwers (like Lauren), because even though a person may get many points, it only counts for them owning the one zone. He felt like it added more strategy to the game, and like he had more control of his own fate. He thought the game was quite fun.

### **The bad:**

Because of positioning changes caused by Jesse's rare earth magnets, it is much more difficult to stick the nuts and bolts to the board. They are too heavy and just tend to bounce off. I plan to find lighter versions of each. Joe thought the overall length of the game was good, but it got frustrating at the end when we just had nuts and bolts left, and neither of us could stick anything to the board.

### **Other stuff:**

We both pondered and liked the idea of being able to knock another person's die off the board to take away points from them, but thought it would be too cumbersome to try and track which die belonged to who throughout the whole game. Similarly, adding two sets of hardware dice, one for each player, would pull away from how the white die roll works for the common pool.

Our solution was to offer each person the option to forego their turn to throw an "attack" hardware at the board to knock off the other player's most recent throw. I would have to limit this in some way, perhaps by only giving people a certain number of counter attacks to use throughout the game (perhaps to encourage players to only use them on high-scoring throws.)

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## Ruleset 5

Requires

- 2 players
- scoresheet
- score guide
- post-it notes with crowns drawn on them
- target board with magnets (see photo for new version)
- pile of "hardware dice"
  - \* 4 nuts

- \* 3 bolts
  - \* 7 wall hanger clips
  - \* 3 wing nuts
  - \* 4 bottle caps
  - \* 1 "attack" nut
- dice scoring sheet
  - 6 sided die with throwing-dice types on sides
  - someplace to hang the board

#### Summary

This is a dart-like game where people throw the dice at the board, scoring points based on what positions the dice are in when they land. Whoever has the highest point value in a target area "owns" that area.

#### Gameplay

1) Choose someone randomly to go first. Player rolls the white die to see what kind of hardware he will throw

- a) If the die lands blank-side up, the player can choose any type of hardware he wants
- b) If the die lands on a type that has run out, the player may choose which piece to throw.

2) Player stands (measure distance) away from the board and tosses his hardware-die at the board. He may choose any of the 5 target areas.

3) Consult the score guide to determine how many points the player's throw was worth. If any part of the die is inside the target area, it counts. *If the player misses, he loses his turn, and the hardware die goes back in the pool to be used again.*

*4) Optional attack throw: at this point, the other player may decide to forfeit his turn to throw the Attack Nut, attempting to knock off his opponent's most recent throw, removing its points from the score sheet. The die must be knocked off the board completely, or knocked completely out of the target area. Each player has 3 attack throws they may use throughout the course of the game*

5) Mark that throw's score on the score sheet. If one player's score in a target area is greater than the other player's, then he owns that area, and the little crown post-it should be next to his name.

6) Next player's turn, rinse and repeat

7) The game ends when there are no more hardware dice left to throw.

#### Score Guide:

##### Bottlecaps

- lands on broad side: 1 point
- lands on edge: 2 points

##### Wall hangers

- lands on broad side: 1 point
- lands on narrow side: 2 points
- lands on squared off end: 3 points
- lands on curved end: 5 points

##### Wing nuts

- lands on narrow edge of wing: 1 point
- lands on bottom: 2 points

- lands on small edge of wing: 5 points

#### Nuts

- lands on side: 2 points
- lands on edge: 5 points

#### Bolts

- lands on side: 2 points
- lands on large end: 5 points
- lands on narrow end: 8 points

\* Stack Rule: If a hardware die lands on top of another without touching the board, it counts for double its point value.

## ***Iteration 8***

**Playtesters:** Joe and Andy

#### **The good:**

Andy also really liked the changes in the game regarding zones. He said it made the game much more interesting because it allowed more choices. I found lighter bolts to use, and they definitely stuck to the board loads better than the earlier bolts. Because the woodshop key was missing in action, I still had to use the heavier nuts for this round. Note that because I'm making these pieces lighter, I'll need to adjust their point values accordingly.

#### **The bad:**

Andy also lost hard core to Joe because he was not as skilled a thrower. He said not to worry about this, because it is obviously a skill-based game, but he looked so disheartened that it made me sad on the inside. I still want to find a way for a less-skilled player not to be totally stomped by someone who is better at throwing.

#### **Other things:**

We talked about the attack die option, and how it was not really used (Andy tried once and failed) and thought of ways to make the attack die more effective. One suggestion was to use the ring instead of the heavy nut, and try to encircle the last throw to nullify it. Another

suggestion was to use a small piece, like a paperclip, as the attack die and have it cancel whatever it touched. I also spread out the magnets more, to attempt to make the corner zones easier to stick to.



I pondered some other ways of letting less skilled people catch up. One was that if you miss 3 times in a row, you get to place your next throw. That would lend itself easily to griefing, however. Joe suggested having two standing distances, with the

farther one being worth double the points, and a closer one worth normal pointage. I fear this would just further boost a skilled player who may be able to stick a die from far away, where a

less skilled player may not even be able to make a throw at the closer distance.

Ponder ponder ponder.

### ***Audience Re-thinking:***

My game is turning out to favor the more skilled (as far as throwing the dice at the target). I need to decide now whether I want to attempt to level the playing field for less-skilled players, or focus on skilled players as my target audience. I choose.....skilled!

### ***Iteration 9***

**Playtesters:** Carlos

I made a few technical changes from the last ruleset:

- 1) I replaced the attack nut with the attack ring, and changed it so that if you even just touch the person's previous throw it nullifies it
- 2) I adjusted the magnets to attempt to make the corner targets bigger
- 3) I decided to suck it up and admit that this is a skill-based game.

#### **The good:**

Carlos, following the trend, much prefers the "zone-capturing" version to the earlier point-wracking version. He thinks it allows for more strategy, and allows a person to still win even if they don't have the most stuff on the board.

#### **The bad:**

One of my readjusted magnets slipped and messed up the board, doh! The attack ring, again, was not used very much. I think I need a way to draw more attention to it as an option.

#### **Other suggestions:**

Carlos thinks that my gameplay is in a pretty good place, and that I should focus on polishing up what I have. I will concur, as my targets and score sheets are messy and hand-drawn right now. I'm planning to color the targets and corresponding score sheet. Carlos also thought that the scoring guide paper was overwhelming and difficult to track. We thought about adding pictures, or even better, including a physical model of how things can land and what their point values would be. I like this idea a lot, though it will require another trip to the hardware store.

He also mentioned that, due to the sport-like nature of my game, it probably wouldn't benefit from tacking on any sort of story. I agree on this point, as the player is usually so focused on the throw, I think any story elements would be either distracting or ignored.

A few other things we thought of: The attack ring works if the player knows to throw it downwards at the board, I'll include this note in a future ruleset. Also, we thought it might be nice to suggest players take warmup throws at the beginning of the game, to get a feel for how to throw the hardware dice. I still need to get that measuring tape in here, too. Tomorrow I will focus on polishing this up.



## Ruleset 6

### Requires

- 2 players
- scoresheet
- score guide (*new physical model, see photo*)
- "Stand Here" card
- post-it notes with crowns drawn on them
- target board with magnets (*now in color! See photo*)
- pile of "hardware dice"
  - \* 4 nuts
  - \* 3 bolts
  - \* 7 wall hanger clips
  - \* 3 wing nuts
  - \* 4 bottle caps
  - \* 1 "attack" ring
- 6 sided die with throwing-dice types on sides
- someplace to hang the board



### Summary

This is a dart-like game where people throw the dice at the board, scoring points based on what positions the dice are in when they land. Whoever has the highest point value in a target area "owns" that area.

### Gameplay

*Optional: each player can take some warm-up throws before the game begins.*

- 1) Choose someone randomly to go first. Player rolls the white die to see what kind of hardware he will throw
  - a) If the die lands blank-side up, the player can choose any type of hardware he wants
  - b) If the die lands on a type that has run out, the player may choose which piece to throw.
- 2) Player stands (measure distance) away from the board and tosses his hardware-die at the board. He may choose any of the 5 target areas.
- 3) Consult the score guide to determine how many points the player's throw was worth. If any part of the die is inside the target area, it counts. If the player misses, he loses his turn, and the hardware die goes back in the pool to be used again.
- 4) Optional attack throw: at this point, the other player may decide to forfeit his turn to throw the Attack Ring, attempting to knock off his opponent's most recent throw, removing its points from the score sheet. The die must be knocked off the board completely, or knocked completely out of the target area. *Tip: Throw the ring downward for best knock-offage effect.* Each player has 3 attack throws they may use throughout the course of the game
- 5) Mark that throw's score on the score sheet. If one player's score in a target area is greater than the other player's, then he owns that area, and the little crown post-it should be next to his name.
- 6) Next player's turn, rinse and repeat
- 7) The game ends when there are no more hardware dice left to throw.



## ***Iteration 10***

**Playtesters:** Vimal and Carlos

**The good:**

As a new player (for both versions) Vimal thought the game was quite fun. Once again, he felt like the zone-capturing made it possible for him to catch up even if he didn't score high-point throws. Both Carlos and Vimal found the physical score guide model extremely helpful. Carlos felt like he was more skilled at the game even after just one try.

**The bad:**

Even with my changes to the attack throw, no one used it. Vimal said he would rather attempt to score points than take away a person's most recent points. I think I'm just going to take away the attack die rule altogether. Also, Carlos really didn't like having to write down names on the score sheet, he felt like it was tedious overhead. Since there are only two players, we thought it would be a good idea just to preset team names and have players pick what team they'll be on.

**Other suggestions:**

In trying to find a way to give less experienced players a leg up, we thought of a few things. One was to make throwing the ring a way for a less experienced player to gain points, but the ring is actually quite difficult to throw. Vimal suggested letting you have one free re-throw if you miss a shot. Carlos was not fond of that idea, but I'm going to try it with my next iteration. Also, I gave a lighter set of nuts to try throwing for both Vimal and Carlos, and both of them preferred the heavier nuts. I think moving to lighter bolts was good, but I'll stick with the heavier nuts.

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## **Ruleset 7**

Requires

- 2 players
- scoresheet
- score guide
- "Stand here" card
- post-it notes with crowns drawn on them
- target board with magnets
- pile of "hardware dice"
  - \* 4 nuts
  - \* 3 bolts
  - \* 7 wall hanger clips
  - \* 3 wing nuts
  - \* 4 bottle caps
- 6 sided die with throwing-dice types on sides
- someplace to hang the board, *about 4 feet off the ground*

Summary

This is a dart-like game where people throw the dice at the board, scoring points based on what positions the dice are in when they land. Whoever has the highest point value in a target area "owns" that area.

## Gameplay

Optional: each player can take some warm-up throws before the game begins.

1) Choose someone randomly to go first. Player rolls the white die to see what kind of hardware he will throw

- a) If the die lands blank-side up, the player can choose any type of hardware he wants
- b) If the die lands on a type that has run out, the player may choose which piece to throw.

2) Player stands *about 3 feet* away from the board and tosses his hardware-die at the board. He may choose any of the 5 target areas.

3) Consult the score guide to determine how many points the player's throw was worth. If any part of the die is inside the target area, it counts.

- a) If the player misses, he loses his turn, and the hardware die goes back in the pool to be used again.
- b) Optional: for less experienced players, you may choose to allow one free re-throw for each time he misses.
- c) If your hardware die lands on top of another die without touching the board, it counts for double its point value.

5) Mark that throw's score on the score sheet. If one player's score in a target area is greater than the other player's, then he owns that area, and the little crown post-it should be next to his name.

6) Next player's turn, rinse and repeat

7) The game ends when there are no more hardware dice left to throw. Whoever owns the most zones wins the game.

## ***Iteration 11***

**Playtesters:** Vimal and Oscar

I chose to have Vimal playtest again because I wanted to see what his perception of his own skill increase was after playing just one game.

### **The good:**

Oscar and Vimal chose to use the optional rethrow rule, and it really helped. Especially for Oscar, since he was new, even if he didn't make his rethrow, the fact that he got one made him feel more at ease in the game. Oscar liked it a lot, and said that the moving around of the crown post-it note was very psychologically pleasing. He also said that at the end of the game, seeing all the pieces stuck to the board was very gratifying.

Vimal said he felt like his skill increased noticeably after playing a second time, and perceived that he could play against Carlos again and have a much better chance. Oscar thought the point guide was very helpful and also "entertaining"...hmmm.... I also pre-set the team names, eventually settling on "North vs. South" in keep with the whole magnet theme. Of all my players thus far, Oscar and Vimal seemed the most enthusiastic, enough to draw a few spectators. It was most amusing.

### **The bad:**

Oscar suggested I make the objective extremely clear from the very beginning, because it took him a moment to realize that what mattered was how many zones you owned, not how many points you got. He also recommended making some sort of connection between the score

sheet and the board, perhaps with color and shape, to make it clear that the zones on the score sheet represented the targets on the board.

Both Vimal and Oscar suggested that I judge distance based on arm length rather than where you stand, as Vimal has much longer arms than Oscar, and thus can get closer to the board. I think I will address this by replacing the “Stand Here” card with a “No Arms Past This Point” card.



Vimal and Oscar introduced heckling into my game, it added a lot.



In spite of Vimal’s sweeping victory, Oscar still felt like he could have caught up, and did not despair.

**Other things:**

Because of their use in previous iteration, I’ve referred to the nuts and bolts as “hardware dice.” I think that has grown confusing, so I’m going to call them darts instead, even though I consider them “dice” due to the different point values calculated from different landing positions.

## Hardware Darts - Final Ruleset



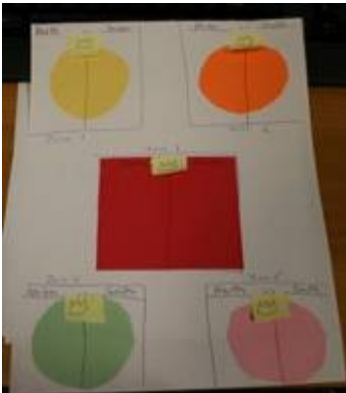
Special 6-sided die



Point guide model



Target board, each color is a magnet



Score sheet

### Requires

- 2 players
- score sheet
- score guide
- "No Hands Beyond This Point" card
- post-it notes with crowns drawn on them
- target board with magnets
- pile of "hardware darts"
  - \* 4 nuts
  - \* 3 bolts
  - \* 7 wall hanger clips

- \* 3 wing nuts
- \* 4 bottle caps
- 6 sided die with throwing-dice types on sides
- someplace to hang the board, about 4 feet off the ground

### Summary

This is a dart-like game where people throw the dice at the board, scoring points based on what positions the dice are in when they land. Whoever has the highest point value in a target area "owns" that area. *The goal of the game is to own the most target areas.*

### Gameplay

Optional: each player can take some warm-up throws before the game begins.

- 1) Place the "No Hands Beyond This Point" card on the floor about 2 feet in front of the target. Players should stand such that their hands do not go beyond the card when their arms are outstretched.
- 2) Choose someone randomly to go first. Player rolls the white die to see what kind of hardware he will throw
  - a) If the die lands blank-side up, the player can choose any type of hardware he wants
  - b) If the die lands on a type that has run out, the player may choose which piece to throw.
- 3) Player tosses his hardware-dart at the board. He may choose any of the 5 target areas. *Tip: Gentle, under-handed tosses tend to work the best.*
- 4) Consult the score guide to determine how many points the player's throw was worth. If any part of the dart is inside the target area, it counts.
  - a) If the player misses, he loses his turn, and the hardware dart goes back in the pool to be used again.
  - b) Optional: for less experienced players, you may choose to allow one free re-throw for each time he misses.
  - c) If your hardware dart lands on top of another dart without touching the board, it counts for double its point value.
- 5) Mark that throw's score on the score sheet. If one player's score in a target area is greater than the other player's, then he owns that area, and the little crown post-it should be next to his name.
- 6) Next player's turn to roll the white die, continue from step 2.
- 7) The game ends when there are no more hardware darts left to throw. Whoever owns the most zones wins the game.

### Leftover Thoughts

There were a few things I wish I'd had time to do, and a few final problems I wanted to address. Firstly, I wish I had had a chance to test my most recent version with the people who played it in the very beginning, namely Lauren and Tracy. Do to sickness and out-of-townness, this didn't happen, and I feel like I missed out on some good feedback from the major change in my game.

Also, though my game board is a rough prototype at best, there are some problems with it if it were to be a re-used game in any respect. The bolts and hardware scuff up my paper targets pretty good, and I'd have to find a way to make a durable target that didn't interfere with the magnets. A painted metal surface with a ton of sealer might do the trick.

Also, the super magnet I used for my center target was large, bulky, and heavy. It's the reason I still have it attached to the paint tin, so it can be hung up. If I got more rare earth magnets, I could create a flat board that could easily be hung on some nails on the wall.

In the end, I feel like I made a pretty fun game, even if it is skill-based enough for Carlos to call it a sport. It certainly holds the attention of both players throughout the whole game.

## Retail Estimate

### Material costs

- 1) Hardware – about \$10 for enough to play and enough to make the point guide
- 2) Custom die - \$1.25
- 3) Paint tin - \$5 is a high-end estimate on this, assuming I'd rather use a flat metal surface for the target board
- 4) Paper goods - \$5, there's not a lot of these, but it is needed for targets, score sheets, and the "no arms past this point" card
- 5) Rare Earth Magnets - \$9 for a package of 50. I thought this was going to be what killed me, price-wise, but it turns out they're cheap in bulk.

Still, that's almost \$30 in materials alone. Tacking on production, packaging, and something to make a profit would probably push it up in the \$40s range, and that feels awfully expensive for a simple dice/dart game. On the other hand, a simple dart board alone can cost in the \$50 range, though magnetic dart boards can be as cheap as \$12. I might be able to get away with charging \$40 for my game, but it would probably have to be EXTREMELY pretty.

## Dice Game Log

1/29/08 9:50pm: consulted the Dispatch and blogged about the new assignment. Brainstormed

1/30/08 11:30pm: read over responses to blog, brainstormed a bit

2/01/08 12:30pm: brainstormed at lunch about easy magnetic dice methods

2/01/08 2:00pm: played Cosmic Wimpout with Alyson and Carlos

2/01/08 2:30pm: brainstorming

2/01/08 9:45pm: played with throwing bolts at a paint roller tin with a magnet attached

2/01/08 10:30pm: wrote about results of test, created ruleset

2/03/08 2:00pm: playtests and new iterations

2/04/08 9:30pm: more playtesting and iterating. Found a new surface to add to the board

2/05/08 11:30am: playtesting in class, got some ideas for new directions

2/06/08 8:00pm: went to the hardware store to gather experimental bits to throw at the board

2/08/08 10:00pm: researched Bocce ball. brainstormed

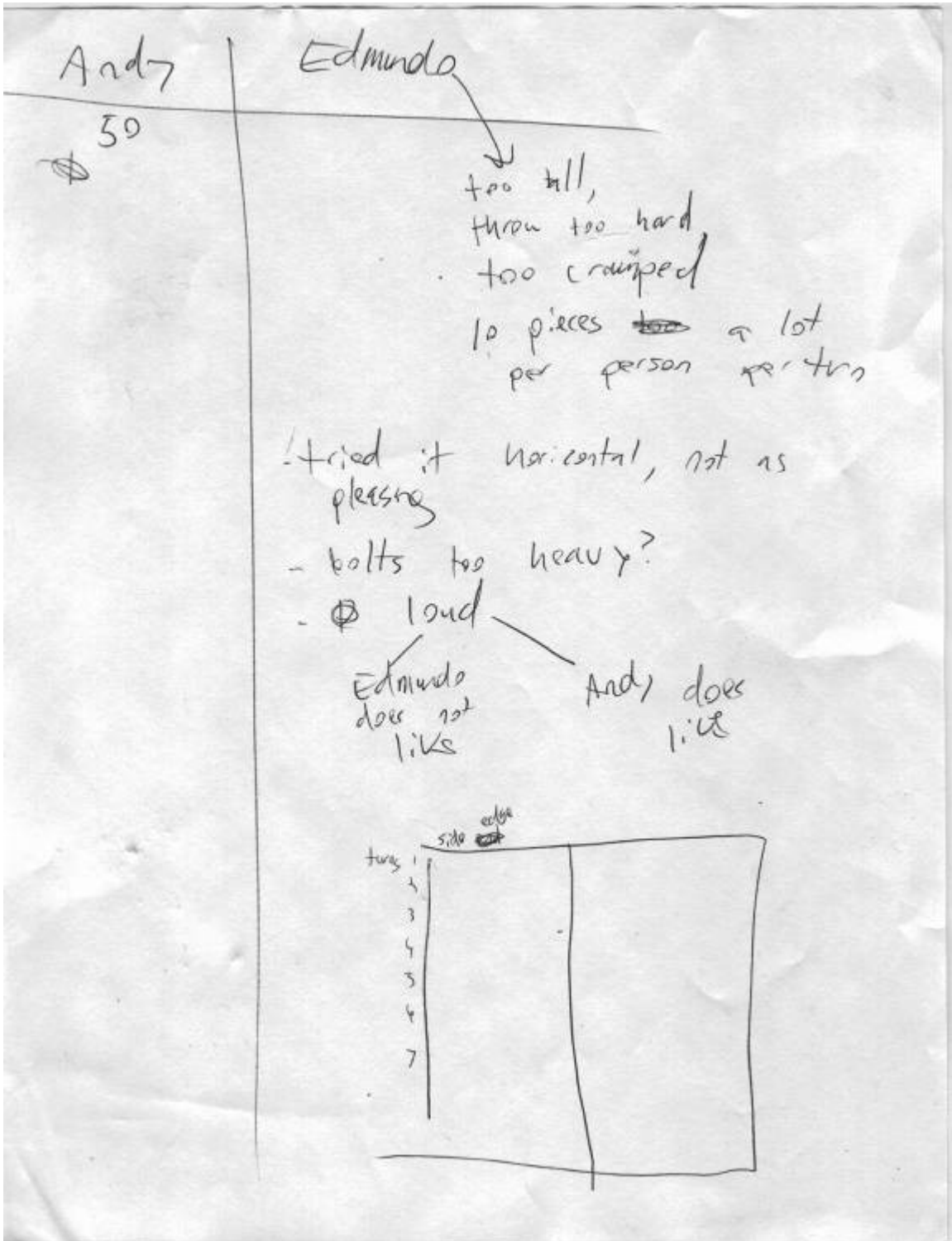
2/09/08 1:00pm: more research and brainstorming, created new iteration

2/09/08 7:00pm: playtested new iterations

2/10/08 11:30pm: playtested, started organizing my documents

2/11/08 7:00pm: final playtesting, more document organizing

# Scribbles





- math about size of items trying to throw in size of square  
 (experiment w/ sizes)

- math behind magnetic force field, find another material to make the board

- make ~~score~~ score pad to see score breakdown

mine  
 5  
4.8  
 9:30

	Carlos	Joe
1	20	40
2	30	50
	100	90
3	80	20
	180	110
4	40	20
	220	130
	30	60
5	250	190
	30	210 (50 + 20) 2
	280	400
	+ 10 boners	
	290	

- correct placement of magnet  
 - as long as base is out everything should be

- stabilize magnet

Carlos - really hard b/c area is so small

Joe - touching doesn't count is too b.s of detergent - part total to reach is more exciting

- fun

board is low, long arm, distance based on max arm length

Atyon		Lisa	
60	50		
60	40		
<hr/>		<hr/>	
120	90		
50	80		
<hr/>		<hr/>	
170	170		
190	50	100	
360	<del>360</del>		
	270		

Rich		Lisa	
		40	
		80	
<hr/>		<hr/>	
210		120	

test  
 no caught  
 only one count

- doubling total just double second
- color sets, turn at same time (a iterate) try and knock other people
- figure out exact distance

look at Beech

thinking someone else's, you take over

- not
- multiple magnet
- area, build a zone
- different sheep or limited by farm make own farms w/ magnets

Test	Lauren	Zhen	Lauren
1 30	20	160	180
2 50	120	250	40
3 80	<del>120</del>	110	220
30	150	3120	120
	20	230	340
110	220		
changed to	lower board		
50	130		
160	340		
170			
Bonus			

Taller

- Lauren doesn't like
- rim was awkward on taller
- Test: lower board for most

bonus throw, two automatically closer touching doesn't count?

still fun

Friday, February 08, 2008  
2:57 PM

