

Hex Game

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Rules

Game board 1 – Traditional Hex Board (3 players)

-Goal: get to other side by creating a path of your color.

-Four colored corners: Black, Blue, and Red

-Each player is assigned a color

-Order of play determined by solving cipher

Cipher message: Martin Gardner was a cool guy who wrote about many puzzles and games that many love today.

-Once order is determined first player will go

-Must roll die to determine what move can be made

If 1 is rolled, current player can mark one space.

If 2 is rolled, player to the left can mark one space

If 3 is rolled, player to the right can mark two spaces by the current players marks (AKA block them)

If 4 is rolled, current player must close eyes and point to spot, whatever spot is chosen, that space is marked.

-if spot chosen is already marked, player chooses another spot

-To avoid “cheating” player to the left will move the hand around in circles a few times to disorient the current player

If 5 is rolled, current player loses their current turn and the next turn.

If 6 is rolled, current player gets to mark two spaces in any location

-If same number is rolled twice (I.e. two consecutive turns for one player): player gets to roll again and if even number is rolled, other players get to play an additional space.

-If same number is rolled two times in a row (I.e. two players roll same number): Both players lose a turn and roll the die one time for the other players. Whatever the number lands on is what the players get to do.

The two in a row rule resets after certain punishment/reward is received (I.e. cannot roll three in a row)

-Gameplay ends when 2 of 3 players reach end. 3 points (MAR) rewarded to first place, 2 (MA) for second, 1 (M) for third

-Each point represents a letter

-To completely win game, Martin Gardner must be spelled out

M M M M M M

A A A A A A

R R R R R R

T T T T T T

I I I I I I

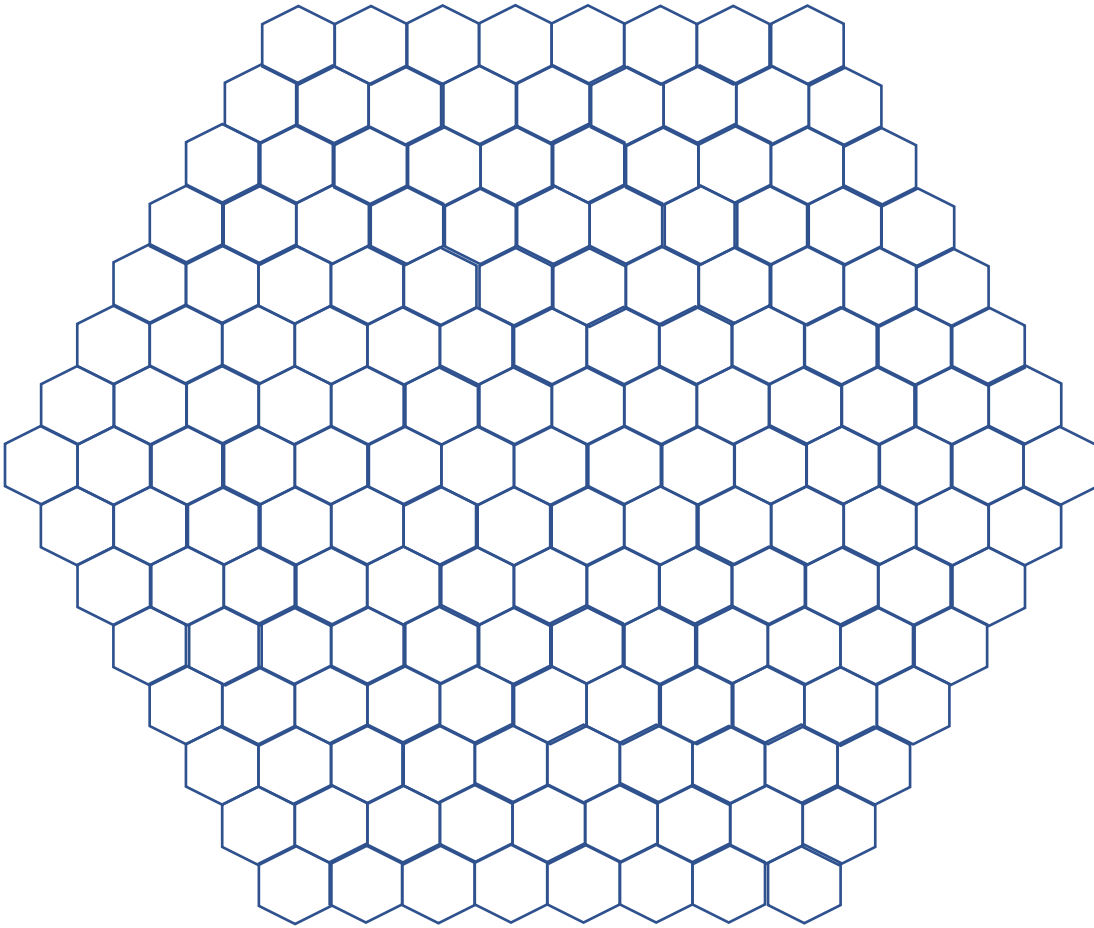
N N N N N N

G G G G G G

A A A A A A

R R R R R R

| | | | | | |
|---|---|---|---|---|---|
| D | D | D | D | D | D |
| N | N | N | N | N | N |
| E | E | E | E | E | E |
| R | R | R | R | R | R |



Butler Cipher Code Key

-Words either associated with our campus via direct naming of certain locations, words associated with Butler or classes offered on campus

A: Atherton

B: Bulldog

C: C-club

D: Dawgs

E: Efroymsen

F: Fairview

G: Gallahue

H: Holcomb

I: Irwin

J: Jordan

K: Kind

L: Lilly

M: Midwest

N: Norris (plaza)

O: Opportunity

P: Pulse

Q: Quality

R: Resco

S: Schwitzer

T: Trip

U: Union

V: Varsity (field)

W: Win

X: Xavier (sucks)

Y: Youth

Z: Zoology

Butler Cipher Code

Martin Gardner was a cool guy who wrote about many puzzles and games that many love today.

Midwest-Atherton-Resco-Trip-Irwin-Norris Gallahue-Atherton-Dawgs-Norris-Efroymson-Resco
Win-Atherton-Schwitzer Atherton C-club-Opportunity-Opportunity-Lilly
Gallahue-Union-Youth Win-Holcomb-Opportunity Win-Resco-Opportunity-Trip-Efroymson
Atherton-Bulldog-Opportunity-Union-Trip Midwest-About-Norris-Youth
Pulse-Union-Zoology-Zoology-Lilly-Efroymson-Schwitzer Atherton-Norris-Dawgs
Gallahue-Atherton-Midwest-Efroymson-Schwitzer Trip-Holcomb-Atherton-Trip
Midwest-About-Norris-Youth Lilly-Opportunity-Varsity-Efroymson
Trip-Opportunity-Dawgs-Atherton-Youth.

Write-up on Final Project

For my final project, I decided to create a game using a cipher and the HEX game. This is different than a typical HEX game, which allows for more than the original two players to play. The game can be played with up to 3 players now. It begins by having the players compete for who gets to begin first. This is done by having the players race to decode the cipher given at the start of the game. The game is also slightly different from an original hex in that it uses a die and introduces new scenarios not presented in the original game. For example, the die can allow for players to move multiple spaces or lose their turn. By introducing this, it creates a more random winner. Also, at the end of the game, each player receives a certain number of letters allowing for the potential to play multiple rounds. Overall, the game has a full description included, allowing for easy gameplay.

This project was something that I had come up with on my own account. I was inspired by presentations given in our class regarding hexes and ciphers. I felt that it would be interesting to find a way to merge the two. Also, while we were trying out the original hex game, I found myself wishing there was more excitement to the game. By adding more players and more gameplay interactions, it allows for non-repetitive games.

This project relates to Martin Gardner in a few ways. First off, Martin Gardner wrote about various ciphers in the *Scientific American* in 1977. He also wrote about the game of HEX in the *Scientific American*. In both of his writings, Martin Gardner expressed interest for the games/puzzles. My project builds on this by combining the two and expanding it in a way to create a new game. Also, my project includes Martin Gardner in the cipher code and is a part of the letters won after each hex to fully win the game.

In terms of the Butler honors program goals, my project follows a few of the goals. First, it is interactive because the final project is a game that student can play. If wanted, they can time to try out the game for themselves. This project also satisfies the research and creativity category because I used preliminary research about ciphers and the game of HEX to develop an understanding for my game. Then, I used creativity to take it a step further by developing a new game from what I had learned from my research. This is also related to the willingness to explore new knowledge because I did not have any knowledge of HEX or ciphers prior to beginning this class. I have also never had the opportunity to create a game before and this allowed me to explore this new area of learning. Finally, this works with the innovative methods of learning because I plan on presenting the game by showing them how to play and presenting my knowledge through a game rather than a simple PowerPoint presentation.

Finally, this project was of interest to me because I have never had the opportunity to create my own game. I really enjoyed getting to learn more about ciphers and HEX by creating this game rather than making a presentation. This was a good break from the traditional way of learning.