

Video Project

Names. 1. _____
2. _____

Responsibility Matrix:

- The matrix below is the tool your team will use to divide the points for the responsibilities for the tasks shown below.
- Each team members column must add up to exactly **140** points for the project.
- Make sure the students labeled “1” and “2” above match the similarly labeled columns below.
- The work may be divided between team members as the members agree.
- Point allocations may be changed **only with the approval of your instructor.**
- Students may select their own partners for this project.
- Indicate who will lead in each task with a yellow highlighter
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Task	Due	Value	1	2			
Watch the You Tube video entitled “Mr. D’s Marbles”.		6	3	3			
Watch the triangular number video.		4	2	2			
Read the First Light (Part I) handout by Richard Preston		12	6	6			
Listen to the podcast of the Ed Thorpe Interview		6	3	3			
Complete the Mr D’s Marbles calculation worksheet. Including getting an outside expert to sign off on your work.		20					
Complete the quick rough draft worksheet		6					
Complete the game of chance design worksheet.		20					
Complete the calculation worksheet.		20					
Produce the webcast		60					
Get the parental permission form signed for online posting. either yes or no is ok, but you must get the form signed.		6					
		154					

Gambling disclaimer. It is not the intent of this assignment to teach students to gamble. Also, students are specifically prohibited from modeling games that are played for money in casinos.

Listen to the fresh air podcast at (this is the Ed Thorpe interview)
 Who is Ed Thorpe and why is your instructor tremendously impressed with him.
 (Bonus points are available for getting an actual email from Thorpe.)
<http://www.npr.org/templates/archives/archive.php?thingId=13>

I don’t have this posted on my site yet, but I will soon.

Mr D's Marbles
worksheet.

This is for some general questions about the game Mr D's marbles.

We'll do the probability and expect value calculations for Mr D's marbles together on this sheet.

Just for MrD's information. Please answer the following yes/no questions:

_____ 1. I have used Flip video before and am familiar with it.

_____ 2. I have posted vides online before.

_____ 3. I have edited video and posted it online before.

_____ 4. I own or have easy access to a digital video camera.

_____ 5. I produce my own regular podcasts.

Quick Rough Draft worksheet.

Names _____

The example game I demonstrated in class (Mr D's marbles) was a marble game, I want to encourage students to also consider games with cards, spinners, etc.

Brainstorm some game ideas in the space below, especially be clear about what equipment you will need. Students must provide their own equipment.

On this page, give a quick outline of the design of your game, perhaps a name for the game, and tell what equipment you'll need to build or provide to play the game. Please note that you are not allowed to use a game of chance which already exists and which is played for money (no poker, no blackjack, no craps, no roulette, etc)

Game of chance design worksheet:

- Players may use dice, cards, counters, coins, marbles, spinners, or other devices.
- Players are specifically prohibited from analyzing any existing game of chance which is customarily played for money in a casino.
- Players may not play the game on video using US currency, only
- Choose a name for the game, catchy names are encouraged, put the name in the blank below.
- Summarize the rules of your game in the box below.
- Use expected value to calculate the payout and clearly state whether the game is in favor of the player, the house, or is exactly 50/50. Remember that as the game designer, you are playing the house role, but are trying to make the game tempting enough to attract players.
- Design and build any equipment necessary to play your game. [I

The name of our game is _____.

The rules of our game are

Calculate the payout using expected value.

Calculation worksheet. Briefly state the rules of your game and then calculate the likelihood of each possible outcome. Show your work clearly. Use the box below to have two outside experts sign off on your calculations. An outside expert is defined as anyone other than Mr. Dilsaver, but it is suggested that the student attempt to choose outside experts who have some mathematical insight.

Outside expert.

The student has shown me their probability calculations for the game of chance called _____ and they seem reasonable to me.

1. _____

2. _____

Webcast hints tips and ideas.

- Be complete, but keep it short.
- Do not include any identifying info in the webcast. I hope to post these online. I'd either post them on Youtube, or Teachertube, and would be receptive to your wishes on where to post. Or, on my website as a file to download for an ipod.
- I will not post these without the parental permission form being signed, and you and your parents are welcome to say no to posting.
- I would like to have some videos posted online to use as examples in a workshop for teachers that I will be participating in next summer. You are perfectly welcome to decline to have video posted online, and/or to instruct me not to use it in my workshop.
- Shoot all the video you think you need, and then edit it later on your home computer or laptop. I'm curious to learn how much success we have editing video on the school computers.
- Use catchy music, but don't overwhelm the viewer, the mathematics is the main point.
- The mathematics must be correct. I will not post video where the math is incorrect or unclear. Please select outside expert to check you work who actually understand mathematics!!
- The video equipment provided is the Flip video camera. These must stay within the classroom. (Or at least within the Ozark H.S. campus).
- Students may use video equipment they own (yes, you can work at home on this).
- The document camera may be connected to a computer (I use my laptop) and used to input digital video, say of a student working at a white board or using pencil and paper.
- You can show your faces on the video and use first names if you wish, or if you prefer, you could certainly also not show faces, and just show the dice, or cards, or spinners, or marbles, or whatever the equipment in your game might be, and have your voice narrate the action.

The podcast must address the following points:

- The group members may introduce themselves (first names only, please). Or use a catchy nom de plume. You could call yourself "ExtremeMathguy" or some other catchy math-name.
- The name of the game must be clear (use titles and credits).
- The game must be demonstrated. **Play the game.**
- The game must be analyzed mathematically. Show the probabilities of the various possible outcomes.
- Use the concept of expected value to calculate how much the player can expect to receive in return for each (monopoly) dollar they pay to play. See the Mr D's Marbles worksheet.
- There's not an exact length "requirement", but your instructor has the opinion that 3 minutes of video could convey a tremendous amount of information. Less than 3 minutes would be ok. Think somewhere in the three minute time frame. Less is ok.

Parental Permission Form
Analysis Webcast Project
Mr Dilsaver. Spring, 2010

Dear Parents:

The Analysis classes here at OHS are working on a webcast (maybe it's a podcast, I'm not sure). Students are analyzing games of chance which they have created. The goal for the project is two-fold: our main goal is to gain skill in the mathematical areas of counting and probability. Also, learning how to put some information together

Expected value worksheet:

Use this page to make give some info about expected value

Kludge Page. (alternate spelling Kluge).

Read the handout (I posted it online) from *First Light*, by Richard Preston. A kludge is a “work around” or a creative method to get something electronic or digital to do what you want, even though perhaps it’s not designed to do exactly what you want. The first light handout gives a little insight into what some of the world’s best astronomers using one of the world’s best telescopes. A kludge is like a hack, although a hack is often software, or perhaps a bit more devious than a kludge. Your instructor loves a good kludge.

Use this page to list creative methods you try (especially ones that work) to get your project to work.

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