# Unit Plan Template



Note: Type in the gray areas. Click on any descriptive text, then type your own.

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| Unit Author | |
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| Course Name(s) | Effective Use of Advanced Computer-Based Technology: An Integrated Approach for the Classroom, Level II |
| Course Number(s) | 111EDCC09 |
| Course Section(s) | Summer 2011 |
| Instructor(s) Name(s) | Constance Castro |

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| Unit Overview | | |
| Unit Plan Title | | Fantasy Football And Mathematics |
| Curriculum-Framing Questions | | |
|  | Essential Question | How Is math important in everyday life? |
|  | Unit Questions | How is math important in sports?  How does algebra help us in games such as fantasy sports?  How is data useful in making decisions? |
| Unit Summary | | |
| This unit teaches algebra I and other basic math concepts by having students create a fanatsy football team. Each week as the students compute their fantasy points the students must solve algebraic equations and work with fractions (if you choose) and decimals. The lesson incorporates computers by having the students upload teams to a website and work with excel. | | |

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| Subject Area(s) (List all subjects that apply) |
| Statistics, Algebra I, Basic Skills Math, Computer Science |

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| Grade Level [Click box(es) of all grade level(s) that your Unit targets] | |
| K-2  6-8  ESL  Gifted and Talented | 3-5  9-12  Resource  Other: |

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| Targeted State Frameworks/Content Standards/Benchmarks |
| NJCCCS: 4.1, 4.3.12, number and numerical operations, solving linear equations |

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| Student Objectives/Learning Outcomes |
| Students will be able to write and solve basic equations using substitution. Add and subtract positive and negative integrers. |

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| Procedures |
| Students begin by drafting a team of 12 players. The draft occurs by giving students the simple instructions that they have a 40 million dollar payroll to select whichever players they both want and can afford. Players are given a player value sheet which gives a price for each player (the best players cost around 11 million). They then have a few days to but together a team with some of the best players and some that are undervalued or young. (Note: there is an option to do an actual draft, but using the player values and salary cap is much simpler. Plus some of the students get very upset if they can’t get their favorite player).  Once students have selected their players they enter them into an excel spreadsheet and upload it onto a moodle site we have set up, or save it on a USB drive. The excel spreadsheet sums up the teams payroll in order to check that they are under 40 million. They can then set their roster for each week using this excel spreadsheet (since only 7 of the 12 players will start each week).  In our school we do not allow trades until the 8th week, in order to simplify things. Each week the students can download the stats from the moodle site and update their excel spreadsheet. The more advanced students can calculate the points themselves using the algebraic formulas and then check their work using the spreadsheet.  Once a score is calculated for that week we put the teams in order on the moodle site for everyone to see. This sounds pretty complicated, but the book by Dan Flockhart is great, and gives you many options to adapt the lesson to your classroom (incase my procedure isn’t making sense!). |

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| Approximate Time Needed |
| Between 1 and 3 hour long class periods per week for 5 months. |
| Prerequisite Skills |
| Students should be able to open and save files on a computer. Students should be able to add and subtract numbers in the millions, and be familiar with tens, hundreds, thousands, hundred thousands, and millions place. Students should be familiar performing operations with fractions and decimals. Students should also be somewhat familiar with the concept of variables. A knowledge of football terminology (fumble, interception, sack, yard, etc) is helpful but not required. |

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| Materials and Resources | | |
| Technology – Hardware (Click boxes of all equipment needed) | | |
| Camera  Computer(s)  Digital Camera  DVD Player  Internet Connection | Laser Disk  Printer  Projection System  Scanner  Television | VCR  Video Camera  Video Conferencing Equip.  Other: Moodle site to store student teams |
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| Technology – Software (Click boxes of all software needed.) | | |
| Database/Spreadsheet  Desktop Publishing  E-mail Software  Encyclopedia on CD-ROM | Image Processing  Internet Web Browser  Multimedia | Web Page Development  Word Processing  Other: |

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| Printed Materials | Print outs from the book “Fantasy Football and Mathematics” by Dan Flockhart |
| Supplies | Fantasy Football and Mathematics Book  Player values  Website/USBs to store student teams |
| Internet Resources | Weekly stats - <http://nytimes.stats.com/fb/scoreboard.asp>  Player values -http://www.fantasysportsmath.com/PlayerValuesList.htm |
| Others | N/A |

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| Accommodations for Differentiated Instruction | | |
|  | Resource Student | There are algebraic formulas and basic math formulas for computing weekly points. A resource student might compute fewer of their player’s points each week, or use a simpler algebraic formula just to get the idea for how points are calculated. Another option is to have students work in groups and calculate points together. A student that really struggles might solely on excel to calculate the points, whereas other students typically compute the points first using algebra and then double check using excel. |
|  | Non-Native English Speaker | Work in groups to help ESL students understand directions. Most of the information is presented as numbers and data, so once they grasp the concept they should be okay. If not try methods provided to resource students. |
|  | Gifted Student | Have students try more complex formulas for points. Have students enter formulas into excel. |

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| Student Assessment |
| Students are assessed through teacher observation and through content that is uploaded to the moodle site. Students can be assessed through quizzes and worksheets that come with the book. |