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| Diocese of Wheeling-Charleston  |
| CASE Unit Planner |
| Name of Teacher: Denise Basich | Grade Level: 4th |
| Subject Area: Math | Cross Curricular Opportunities: Language Arts, Character Education, Social Studies |
| Unit Title: Probability and Percentage | Estimated Duration of Unit (between 2-9 weeks): 10 days |
| Overview of Unit: Students will understand definition of probability, corresponding fraction to percentage, 0-1 probability, types of occurrences that could be likely-not likely to happen, sale prices and final cost, tithing at 10%. |
| Forms of Text (nonfiction/fiction): Saxon Math 4, internet research  | Teaching Strategies: modeling, whole group and small group instruction, manipulatives, technology |
| Catholic Identity Connections: Students will write how likely/unlikely it would be for them to break each of the Ten Commandments, probability of attending Mass weekly for a month, probability of doing a community service project in a month. |
| Assessment (authentic/published - summative/formative): Pretest, posttest |
| Standard Number | Standards | Description of Activity | Resources  | Date of Completion |
|   |  Probability | Pretest |  Pretest worksheet |  Day 1 |
|   |  Define probability | Teacher led instruction | Poster with definition | Day 2  |
|   |  Probability is between 0-1, scale | Impossible, unlikely, equally likely, likely, certain to happen scaleGive examples of events for each and have students do the same.  | Worksheet |  Day 3 |
|   |  Determining equal parts using spinners | Using different spinners divided equally in different parts, determine fractional parts | Spinners |  Day 4 |
|   |  Correspond fractional part of probability to percentages | Present fractions that equal percentages | Worksheet for student practice | Day 5  |
|  | Probability of landing on a particular spinner color if spin “x” amount of times | Giving several different situations pairs of students spin the spinners “X” amount of times to determine probability of certain color coming up.  | Spinners, worksheets | Day 6 |
|   |  Determining probability using number sentence | Explain the fractional part X Number of times we spin the spinner = Probability.Students do several examples. | Spinners, Paper |  Day 7 |
|   |  Finding 10% (1/10) of a take home pay | Working in small groups students write out paychecks for each other and determine what 10% of take home pay is to donate to the church. | Pretend paychecks, Paper, Calculators (to double check work.) |  Day 8 |
|   | Determining final sale price using percentages | Created classroom store with items having retail prices and a percentage off will be used. Students will purchase five items each and determine the final price of each item. | Classroom store items, paper, calculators |  Day 9 |
|  | Probability and Percentages |  Students will demonstrate understanding of all probability and percentage concepts taught in this unit by taking post test | Post test | Day 10 |
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| Differentiated Instruction Opportunities/Overview: Independent work, small group work, class discussion, work in pairs. Netbooks and spinners will be integrated as well as calculators. |
| Cross Curricular Opportunities level: |
| Standard Number | Standards | Description of Activity | Resources | Date |
|   |  Definition of probability |  Whole group discussion |   |  Day 4 |
|   | Social Studies world disasters, everyday natural happenings | Social situations and probability of certain occurrences – discussion, paragraph writing | Netbooks, paper |  Day 5 |
|   |  Tithing to the church |  Class discussion, figuring 10% of take home pay (using pretend figures) |  Pretend paychecks, paper, calculators |  Day 8 |
|   |  Determining sale price |  Creating classroom store, determine sale price by using percentages |  Items for classroom store, calculators, paper |  Day 9 |
| **Teaching Strategies Checklist** |
| Writing |
|  x | Paragraph |
|   | Essay (narratives, fairy tales, realistic fiction) |
|  x | Summary |
|  x | Research |
|   | Detailed answers (text supported) |
|   | Notes (note taking skills, outlines) |
|  x | Complete sentences |
| Reading |
|  x | Informational text |
|   | Lexile |
|   | Complex literature |   |   |   |
|  x | Speaking |
|  x | Listening |
|  x | Varied strategies and instructional methods |
|  x | Critical thinking in whole class discussion |
|  x | Student led activities |
|   | common core standards (literature circles) |
| Technology |
|  x | Smart board |
|  x | Computers |
|  x | iPads |
|   | PowerPoint, Elmo etc. |
| Differentiated Instruction |
|  x | Used multiple resources |
|   | Domain Vocabulary |
|  x | Cross-Curricular |
|   | Collaborative engagement (meaningful feedback) |
|   | Higher level learning and teaching |
| Assessment |
|   | Project based |
|  x | Writing prompt |
|   | Portfolio |
|  x | Observation |
|  x | Quiz |
|  x | Technology based |
|  x | Test |
|   | Student created test |
|   | Presentation |
|   | Journal |
|  x | Think, pair, share |
|  x | Summary |
|  x | Oral questioning |
|   | Analogy |
|   | PowerPoint, or movie maker |
| Authenticity |
|  x | Various activities |
|  x | Inquiry, research and evidence |
|  x | Evidence of time management and planning |
|  x | Problem solving strategies |
| Summary of unit upon completion: |
|  During this unit, students will identify probability of events, determine probability using spinners, calculate percentages using real circumstances and pretend paychecks and classroom store. |
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