SCOPE & SEOUENCE
GR. 11 – MATH 20P

Student Task

GRADE 11: Math 20P
STRAND: Statistics
TASK: Venn Diagrams
PRODUCTIVITY TOOLS: Word Processor with Drawing Tools OR Word Processor and Paint
TIMELINE: Intro to Activity, 1 Class Analyzing Results
LEVEL OF DIFFICULTY: Average

Students will be given historical information regarding home acquisition of various pieces of technology: computer, cell phone and DVD player. Of 100 students surveyed in 1991/92,

- 7 students had a computer at home
- 2 students had a cell phone in their household
- 0 students had a DVD player

Of the two students who had a cell phone in their household, one had a computer, one did not. The students will be asked to create a Venn diagram of the 1991/92 results. Then, students will be asked to conduct a survey of 100 individuals then create a Venn diagram indicative of current results. The students will then analyze the results with respect to connecting words AND, OR and NOT.

1. How many families have a computer in their homes?
2. How many families have a DVD player in their homes?
3. How many families have a cell phone in their household?
4. How many families have a DVD player and a cell phone?
5. How many families have a DVD player and a computer?
6. How many families have a computer and a DVD player?
7. How many families have a cell phone, but not a DVD player?
8. What is the fraction of families that have a computer, but not a DVD player?
9. What is the fraction of families that have a computer or a cell phone?
10. What is the fraction of families that have a cell phone or a DVD player?

Finally, the students will be asked to use spreadsheet to do a comparative analysis of the results over time. The students should conclude their study with some generalization regarding technology acquisition in the home and a prediction of future trends.

ICT Outcomes

The learner will:

C1 4.2 select information from appropriate sources, including primary and secondary sources

C6 4.1 investigate and solve problems of prediction, calculation and inference
4.2 investigate and solve problems of organization and manipulation of information
4.3 manipulate data by using charting and graphing technologies in order to test inferences and probabilities
4.5 evaluate the appropriateness of the technology used to investigate or solve a problem

C7 4.1 use appropriate strategies to locate information to meet personal needs
4.2 analyze and synthesize information to determine patterns and links among ideas
4.3 use appropriate presentation software to demonstrate personal understandings

F1 4.2 solve mathematical and scientific problems by selecting appropriate technology to perform calculations and experiments
4.3 apply terminology appropriate to technology in all forms of communication

F2 4.2 analyze how technological innovations and creativity affect the economy
4.3 demonstrate an understanding of new and emerging communication systems
4.8 analyze and assess the impact of technology on the global community

P2 4.1 manipulate and present data through the selection of appropriate tools, such as scientific instrumentation, calculators, databases and/or spreadsheets

P4 4.2 apply principles of graphic design to enhance meaning and audience appeal
4.3 use integrated software effectively and efficiently to reproduce work that incorporates data, graphics and text

Curriculum Outcomes

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General Outcome

- Apply the principles of mathematical reasoning to solve problems and to justify solutions.

Specific Outcomes

P5-2 Explain and apply connecting words, such as “and”, “or” and “not”, to solve problems.