

TASK #2: DECIMALS, FRACTIONS, PERCENTS

STUDENTS ARE ORGANIZED IN GROUPS, SITTING AT TABLES FACING EACH OTHER. THE TEACHER BRIEFLY REVIEWS PREVIOUS WORK THE STUDENTS HAVE DONE ON COMPUTING FRACTIONS, DECIMALS, AND PERCENTAGES. THE TEACHER DISTRIBUTES AN OVERHEAD TRANSPARENCY WITH A LIST OF SEVEN DIFFERENT TYPES OF VEGETABLES AND TEN-BY-TEN GRID. SHE EXPLAINS THAT STUDENTS SHOULD MAKE THEIR OWN DECISIONS ABOUT HOW THEY WOULD LIKE TO PLANT THEIR GARDENS, ASSIGNING ANY VEGETABLE THEY WOULD LIKE TO ANY NUMBER OF SQUARES ON THE GRID, BUT ONLY ONE VEGETABLE PER SQUARE. SHE ADDS THAT THEY MUST USE AT LEAST FOUR VEGETABLES. AFTER THEY HAVE THEY HAVE PLANTED THEIR GARDENS, THE TEACHER EXPLAINS THAT THEY SHOULD STATE, FOR EACH VEGETABLE THEY HAVE PLANTED, THE FRACTION OF THE GARDEN THAT THE VEGETABLE REPRESENTS, THE DECIMAL EXPRESSION OF THAT FRACTION, AND THE PERCENTAGE. SHE ASKS THEM TO WORK IN PAIRS, FIRST PREPARING AN INDIVIDUAL RESPONSE TO THE PROBLEM, AND THEN CHECKING THEIR RESPONSE WITH THE OTHER MEMBER OF THEIR PAIR.

THE TEACHER CIRCULATES THROUGH THE ROOM OBSERVING STUDENT WORK AND ASKING STUDENTS HOW THEY ARE THINKING ABOUT THE WORK THEY ARE PREPARING. SHE DELIBERATELY DOES NOT PROVIDE DIRECT ANSWERS TO STUDENT QUESTIONS ABOUT HOW THEY ARE SUPPOSED TO COMPUTE THE ANSWERS. HER TYPICAL RESPONSE TO STUDENT QUESTIONS IS, "ASK YOUR PARTNER FIRST, THEN DO YOUR BEST TO ANSWER THE QUESTIONS, AND WE WILL DISCUSS YOUR ANSWERS LATER."

WHEN STUDENTS HAVE FINISHED THEIR WORK, THE TEACHER SAYS, "I NOTICED SOMETHING REALLY INTERESTING ABOUT THE ANSWERS SOME OF YOU GOT. SOME PEOPLE GOT A TOTAL AMOUNT THAT WAS GREATER THAN 100%. WOULD SOME OF YOU WHO GOT MORE THAN 100% LIKE TO PRESENT YOUR WORK TO THE CLASS, SO WE CAN DISCUSS IT." THREE STUDENTS PRESENT, USING THEIR TRANSPARENCIES AND THE OVERHEAD PROJECTOR. THE CLASS DISCUSSES HOW THE STUDENTS GOT THE ANSWERS THEY GOT, AND COMPARES THEIR WORK TO THE WORK THE STUDENTS HAVE PRESENTED. THE TEACHER CONCLUDES BY ASKING THE STUDENTS, "SO WHAT HAVE WE LEARNED ABOUT HOW TO DO FRACTIONS, DECIMALS, AND PERCENTAGES?" THE STUDENTS OFFER VARIOUS EXPLANATIONS FOR HOW TO THINK ABOUT THE PROBLEM AND HOW TO DO THE WORK. THE TEACHER ASKS THEM TO WRITE DOWN WHAT THEY HAVE LEARNED FOR DISCUSSION THE FOLLOWING DAY.