



Problem Solving and the Sports Page

Grade Level: 4
(adaptable)

OVERVIEW: Problem solving is a daily, lifetime skill. A goal of problem solving is to help students develop strategies in order to become independent problem solvers. To encourage my students to understand problem solving techniques and strategies, I designed an activity using box scores from the sports page.

PURPOSE: Realizing that my students knowledge of sports is limited, I decided to suit my purposes in problem solving yet also help them additionally in their understanding of the fundamentals of various sports. It is definitely a high interest area, and motivating the students to participate in the activity has been easily accomplished.

OBJECTIVE: The students will create and solve word problems.

RESOURCES/MATERIALS: scores from newspapers (or teacher generated scores), large index cards, glue, pencils, crayons

ACTIVITIES AND PROCEDURES:

Day 1: The first session of each new sport serves to explain the abbreviations used, what the terms mean, and fundamentals of scoring of the sport. Research skills are used to locate information concerning the history of the sport. Role playing enables us to act out the activity. Children are able to share their prior knowledge or experiences concerning the sport.

Day 2: Students are placed in groups of four. A copy of identical box scores are given each group. The same box score is displayed on an overhead projector. Questioning and thinking skills are modeled. Information is compared. For example, baseball information includes: at bats, runs batted in, hits, errors, innings pitched, outs, and walks. Attendance figures and length of time the game was played are even noted. Whole class participation is encouraged to create problems from the box score material. "What if ..." questions enable students to make up additional data and hypothesize situations.

Day 3: Using different box scores for each group of four, the students compose word problems. The box scores are glued to the front of an index card, and the problems are written there also. Answers are written on the back of the card. After illustrating the cards, they are exchanged with other groups. Eventually the cards are displayed in a learning center for students to work independently.

Day 4: In their group of four, the students plan a trip to the location where their game was played. They estimate mileage and expenses. Using maps they plan a travel route. We occasionally call a local travel agent who gives us the cost of airplane flights. In a whole class exchange, we compare which groups would travel the farthest or shortest distance. Using information booklets published by major hotel/motel chains, we compare accommodation costs.

TYING IT ALL TOGETHER: An interdisciplinary approach is fundamental in my classroom. Composing the word problems gives me the opportunity to reinforce what the students are learning in language class. Using correct capitalization in regard to beginning sentences and names of sports teams, using correct end punctuation, and identifying interrogative and imperative sentences are stressed. Map skills are also utilized in locating where many teams are based. This can be done, not only on a nationwide basis with the professional and college teams, but also on a state wide basis with high school teams. Writing their own problems, discussing strategies to solve problems, and eventually solving the problems independently have motivated my students to be problem solvers. The success of the activity, in addition to their problem solving abilities, has been seeing students reading an entire newspaper article about their favorite team and eager to work in the math-learning center during their free time.

SUGGESTIONS/MODIFICATIONS:

- This lesson may be adjusted to fit specific cultural practices and traditions.
- Materials may be substituted if necessary and the teacher could be responsible for creating model score sheets.
- The teacher may ask a local sports figure to visit and speak to the class about his/her experiences.

AUTHOR: Carylon Weldon, Madill Elem., OK