

## The Plight of the African Killer Bees

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### RATIONALE:

Social Studies should be a favorite subject for teacher and student. It deals with matters that have great impact on our lives, with ideas about people and their problems. Thus, it could provide an excellent opportunity for looking at the world and its problems in a variety of creative ways.

The factual components of learning are readily memorized and viewed with some enthusiasm by both teacher and pupil. An example of a factual component of learning is map symbols. In a sense through reading map symbols the pupil can "see" the facts.

What is thinking and in what kind of situations do students "learn to think"? Hilda Taba identifies three cognitive tasks involved in the thinking process: (1) concept formation, (2) interpretation of data, and (3) application. The Plight of the African Killer Bees game is a simulated learning situation which allows students to engage in all three of the cognitive tasks. More specifically it involves organizing information in route to solving a problem about what to do with the African Killer Bees. A description of the game is found below:

The first thinking task is concept formation. To form a concept the student must organize information into a system of classes or groups. Killer Bees provide an opportunity to organize information during the initial phase of the game, map making. For example, in the game there is only one symbol that represents mountains. This symbol differs from the one used to represent the rainfall or wind direction. It stands only for those things which possess those particular properties that can be labeled as mountains.

The second cognitive task described by Taba is interpretation of data. Interpretation involves relating various kinds of information to form generalizations and determine cause and effect relationships. This task is accomplished in the game by having each student reproduce on their own sheets of paper the given map symbols on each card.

The final step in these cognitive tasks is for the student to be able to apply what he knows, facts and generalizations, to problem solving. The students, each playing a role, work in their group with four others to solve a problem concerning the bees. They must use their knowledge of the map and the generalizations they have formed in the previous steps on the game to reach a decision upon which all members of the group can agree.

The Plight of the African Killer Bees concerns the United States and "what to do" about the African Killer Bees which are moving north from South Africa 200 miles per year. Pupils who take part in the simulation are asked first to learn the physical characteristics of South Africa and North America and then to apply this knowledge in solving the problem of the probable invasion by these bees into North America.

#### PHASE I

The simulation is implemented by dividing the class into groups of five persons each. A sociogram can be used to decide the best balance for each groups. The groups represent people who have been called to a meeting because of their knowledge and interest in the Bees. Children are assigned to play the roles of these people. The roles are described on separate cards.

The simulation starts with the group compiling factual knowledge about the area in which the Bees are located in South Africa. This knowledge is contained on five (5) cards - one card for each group member. Each person shows his card to the rest of the group (cards of this type

present rainfall, temperature, locations of streams, outline maps on their worksheet, etc.) and reads what is on it. Each group member then duplicates the knowledge presented on his master map.

Materials used in the game to create the maps are crayolas or colored pencils. All members of the group now have the same complete information.

#### PHASE II

The second part of the simulation involves the group deciding what to do about the Bees and deciding where they think is a good place to stop the bees by basing their decision on the information that they have on their maps. The discussion of the mountains, rainfall, and other hazards by the members of the group usually leads to valuable information being shared by all members.

#### PHASE III

In the third part of the game the problem to be resolved is encountered. The bees are a hazard to the life cycles. Taking into consideration the bees are going in a direction northwest through Columbia at a rate of 200 miles per year, the group decides where they think some good places are in order to stop the bees. It is known that Killer Bees produce more honey which make them an additional source of income.

Every member uses his role card to define who he represents at this meeting. Maximum time should be allowed for the discussion until a group decision is reached and the reasons are clearly set down for the decisions that are made.

At the end of this discussion, groups then report to the class-at-large.