|  |  |
| --- | --- |
| **Activity** |  Capture the Area |
|  |  |
| **Objective** |  To capture as much of the “land” as possible |
|  |  |
| **Time** | 20-25 minutes |
|  |  |
| **Players** | 2-4 players |
|  |  |
| **Materials** | * A pair of dice (1 pair for each group)
* Centimeter Graph Paper
* Colored Pencils (crayons and markers will also work)
 |
|  |  |
| **Problem** | Neighboring farmers trying to acquire unclaimed farmland. The land can only be acquired in rectangular pieces. Instead of fighting for the land, the farmers have decided to take turns claiming pieces of land as determined by rolling dice. Each square plot of land is one square meter. Each farmer wants to get as much land as possible. |
|  |  |
| **Directions** | 1. Each player starts in a different corner and uses a different color colored pencil.
2. Players will roll a die to determine who will go first. (Highest roll goes first and game play continues clockwise).
3. Players roll the dice to find the dimensions of a rectangle that they will draw using their assigned color. Players assign one number to the width and the other number to the length of the rectangle. In addition to drawing the rectangle, players must write inside the rectangle the dimensions and the total area. Players start with the first rectangle in their own corner.
4. Each rectangle that follows must be drawn so that it is touching one of the sides of that player’s previous rectangles.
5. Game play ends when all players have met in the center or when no more rectangles can be drawn or at a specified time. To make games quicker use centimeter graph paper.
6. Players then find the total amount of area they have acquired.
7. The player with the greatest total area is the winner.
 |
|  |  |

**Discussion Questions**

These questions are given to students in their groups or pairs to discuss. Students should be encouraged to use academic language (i.e. area, dimensions, square units) when answering the questions. Once students have discussed the questions in their groups, the teacher should initiate a whole class discussion.

1. As a farmer, why would you want all of your land together? Why would you want rectangular plots of land?
2. Who won?
3. Why did they win?
4. What kind of dimensions do you want to role? Larger numbers or smaller numbers? Why?
5. What is the largest area that you can get from rolling the dice? What is the smallest area you can get?
6. How does the area formula work? Why do we multiple the length and the width?