## Ordered Pair Battleship Directions

First, let all of the students know that the battleship grid is the same as a regular grid paper, only the lines are just really thick. This way the students won't think that you graph whole numbers between the lines.

Objective: To sink all the other players' ships before they sink yours. The last one with any ships left on the board is the winner.

There are five types of ships: 1 Submarine $\underline{\mathbf{S}}, 2$ Cruisers $\underline{\mathbf{C}}$, 3 Destroyers $\underline{\mathbf{D}}, 4$ Battleships $\underline{\mathbf{B}}$, and 5 Aircraft Carriers A.

1) All players put their ships in the squares (where the really thick lines intersect). The players put them on the board by which type of ship, using the capitol letters assigned. Rules:
a. Each type of ship must be in a straight line, either horizontal, vertical, or diagonal.
b. Each type of ship must be touching each of the same type so there are no gaps. For example, all the D's must be in a straight line and touching the other D's, all the A's must be in a straight line and touching each other.
2) All players put each other's names on the individual's small grid below. This is where they keep track of who got sunk, what ships, and on what caller's number (for strategy).
3) Each player gets a turn calling shots. Each caller is assigned a number and the number increases every time a new caller calls out ordered pairs. The first caller is \#1, the second is \#2, increasing with each player. The players do not keep the same number but get a new one as the play keeps going round.
4) All players get five shots to start with. When a player has had a whole row or type of one ship sunk then they lose a shot. (Let's say all of a player's Cruisers are gone, that player only has four shots left and so on.)
5) So, the caller calls out ordered pair locations, remembering to call the $X$ axis first ( $x, y$ ), ex. ( 3,4 ), $(5,1)$ and continues to call out five ordered pairs.
6) Every single player, including the caller, writes down the caller's number in the boxes (really thick lines) where each of the ordered pairs intersect. (Keeping track of the numbers allows for keeping track of where a player's ship was sunk (strategy). So no X's to mark the spot.)
7) After the caller is done calling all his allotted ordered pairs, and everyone has marked them down, the caller asks if he hit anyone. One by one the other players say which ship got hit, but not where, just which ship. Each player then writes the number down on the person's small grid with their name, marking off whichever ship got sunk. (Now they can start to use strategy to sink the other players' ships by matching up their records with the big game square. So no X's to mark the spot.)
8) Continue on to the next player and round and round till only one person has any ships left.
