

# Royal Robotics

## Lesson Plan – Strategy

Definition: A plan, a method, a series of steps for achieving a specific goal.

### Concepts & Principles:

#### Powerpoint

Game challenges often have multiple tasks, each earning different point amounts. Usually, the higher point amounts mean a tougher task to achieve.

A game strategy is the plan teams come up with to increase the chance of success and limit the chance of failure. Game strategy is determined by analyzing the game tasks according to team strengths and weaknesses and team goals.

For example...

- If a team is largely made up of inexperienced members, it may be more important to keep designs simple, rather than trying for something innovative and complex. Or vice-versa, an experienced team may want to take a risk on something innovative.
- If a sensor (or other expensive part) is needed and the cost is more than the budget can handle, a team may choose to not do that task.
- If specific knowledge is missing (like programming) the team would have to decide if winning is more important or learning. When acquiring a new skill, it may mean lesser performance, so there is a risk.

Another thing to consider in choosing a strategy is to try and anticipate what other teams might do. Sometimes if you can see a task that fewer teams will choose and you fill that, you can become the robot every alliance wants. Being different can give you an edge.

Finally, look at strategic alternatives to widen the range of options. Look at the various combinations of tasks and see what makes good points. Rank tasks on how hard they are to do. Things that make high points and are fairly certain of success should go to the top of the strategy list, while things that are harder and less sure should drop down.

It is also important to look at both offensive and defensive strategies. Offense is essentially scoring points, there may be multiple offensive tasks in a game. Defense is essentially preventing opponents from scoring points.

Look at game challenge video (FTC if doing that task or an older FRC can be chosen) then analyze and strategize.

resources: <http://thesportjournal.org/article/using-business-s-word-strategy-sports>