# Sumo Fights (Simpler Way)

Here is a simpler way to conduct Robot Sumo Fights. Even beginner’s level kids can easily do it. They need not even program their robots for it as you can control your robots using Infrared Sensor and Beacon (Remote).

Advanced kids can actually program their remotes and add one or 2 medium motor attachments as Defensive or Attacking weapons. Beginners can construct passive attachments like a bumper or a flipper without a medium motor for their robot.

Good way to introduce Active and Passive attachments fundamentals to the kids. They can also learn a lot about basic Robot construction, stability and wire management when they see their Robots in battle arena. Good time to introduce available Brick Apps on EV3 brick as well.

For the battle arena, you can just use the painter’s tape and make a square anywhere safe. You can also get a big circle or a square (or any shape) printed on a vinyl banner if that suits you.

Here are simple instructions we pass on to the kids before the event.

**Construction:**

1. Compact, stable robot.
2. Size should not be bigger than A4 sheet of paper (this sheet is A4).
3. There should not be any hanging wires, wound them around your robot neatly for a good design.
4. Attach infra-red sensor facing up anywhere on robot. Insert it in PORT 4.
5. Plug in the motors in ports B and C (Medium motors in A and D)
6. You are not allowed to change the design of robot once submitted. You can just fix the robot if it falls apart during fight or otherwise.

**Execution:**

1. Go to Brick Apps tab on EV3 brick (3rd tab)
2. Go to IR control
3. One of the robot would be on CH 1+2, other on CH 3+4 in the fight. Same for IR Remotes. Referee will instruct about it.
4. Do not change the channels yourself, if you do, you would be disqualified.
5. Referee would have all remotes, only the 2 fighting teams would get the remotes to avoid manipulation by other remotes/ teams.
6. Remotes: upper 2 buttons control 2 motors to go forward, lower 2 buttons make the motors go in backwards direction. Pressing one button at a time would make the robot turn.
7. You should check your robot with the remote before the fight.

**Final Fight:**

1. 1-minute round.
2. The robot which pushes more than half of the other robot outside the ring would be the winner.
3. If your robot is pushed out because of your own fault, then too you lose.
4. In all cases, referee’s decision would be final.
5. **Scoring**: 2 for winner team, 1 each in case of a tie.
6. In case of Tie after all of the matches, tied teams would play each other to declare the winner team.
7. Do not step, hover over the mat.
8. Enjoy!! Support your team but be courteous to other teams.