

Design		
Team Number	4016	Div 2
Team Name	Running with Nano Scissors	
Strategy, Process, Problem Solving		Score (1-20) 17

- Basic Understanding of design process.
- Evidence of conceptual planning, building, testing, refining of robot, manipulators and programs.
- Effective strategic planning, combining missions tasks, plotting routes, using manipulators and/or program slots.

Dual diff. drive is a good way to get around the RCX drift problem.

2nd drive motor was good way to get around the power problem. Too bad you lose a motor this way.

Locomotion and Navigation	Score (1-20) 15
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- Goes defined distances most of the time.
- Not too fast for accuracy or too slow to accomplish mission.
- Turns, and moves between points, reasonably accurate and consistent
- May use sensors to improve accuracy and consistency

Pretty accurate. Sounds like speed was a bit of a problem.

How About bigger wheels?

What would be the downside?

More sensor usage.

Kids Did the Work	Score (1-20) 20
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- Knowledge of programming show moderate understanding of design, science and technology behind (age specific expectations).
- Building/programming mostly directed by team members, with help from coach.

Kids know what they are talking about.

Structural	Score (1-20) 16
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- Robot assembled with no errors, but slowly.
- Robot base stable but not robust.
- Attachments, if used, modular, function most of the time, and/or take some time to assemble
- Attachments, if used, somewhat precise and/or repeatable
- Robot designed by team

Very rugged cube. Good use of reinforcement.

A couple of attachments are not securely attached but were good enough.

Overall Design	Score (1-20) 16
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- Robot lacks some critical design components: works, stays together, efficient parts use, attachments easy to add/remove, simpler than comparable robots.
- Most components work together
- Most components look like they belong together.
- Robot completes 70% of missions

Robot does all missions except molecular motor.

Atom table and self assembly could be more robust. That's a long drive to depend on odometry and alignment.

Comments	Final Score 84
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Would be nice to see more sensor usage. Look at lines, bump into things. Don't always count on rotations alone.

Judge's initials DH