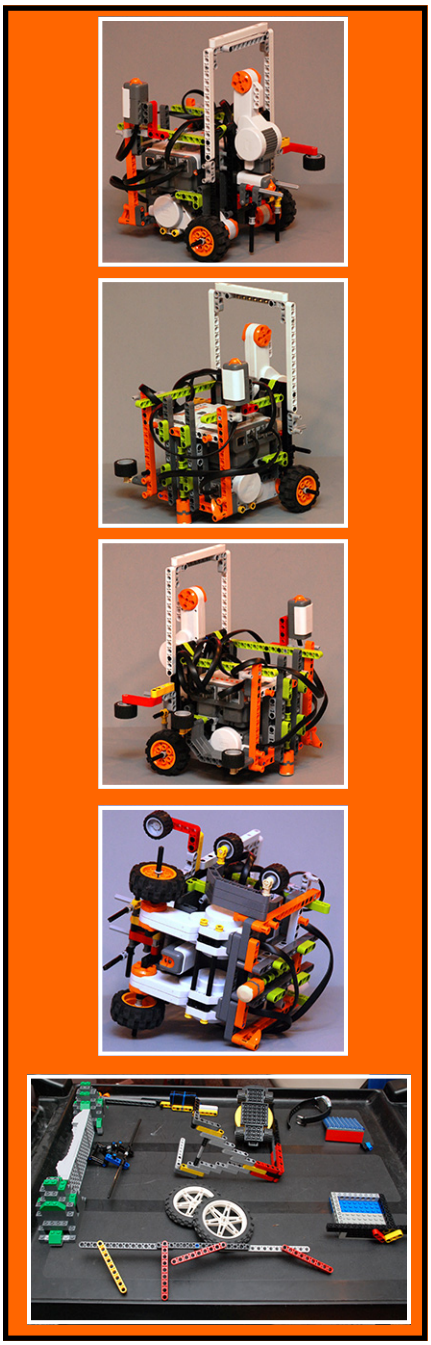
New Covenant Christian Academy
Home School Robotics Club
1603 Belvue Drive
Forest Hill, MD 21050
http://www.techbrick.com

TechBrick FLL Team 10, Bel Air, MD

MEET 'THE CUBE'



ROBOT DESIGN

- Strategists expressed need for a small, compact robot, able to make tight turns, and desire to use touch and light sensors
- Compact cube form
- Embedded light sensor
- Vertically mounted motor for attachments
- Two thick wheels
- Mounted cylindrical skid pad
- Sturdy, well-built frame
- Attachable plow connected to touch sensor
- Unique orange wheel hubs
- Multi-use attachments

PROGRAM DESIGN

- Strategists planned out mission combinations and object placement
- Light calibration program
- Light sensor detects black base line to help identify when robot leaves base
- One program uses a touch sensor to stop the robot
- Use of touch sensor to change robot direction
- Multi-mission program to deliver wave turbine and retrieve truck
- Rotation sensor measures in degrees to make robot travel very specific distances
- Speed lowered when turning sharply to increase accuracy
- Curve programming used to align power grid to black road in order to not loose contact with the power grid
- Programs loaded onto NXT in reverse order to minimize transition times during competition

MEET THE TECHBRICK TEAM

Builder Specialists: Jonathan Ciavolino, Cole Dininno and Caitlin McLanahan,
Program Specialists: KC McLanahan and Andy Rodriguez
Research Specialists: Alie Hruz, Nate Bero and Zach White
Strategists: Emily Klein and Jonathan Shulgach