

# *Mechanisms*

The Bionic Tigers - 10464



# *Game Process*

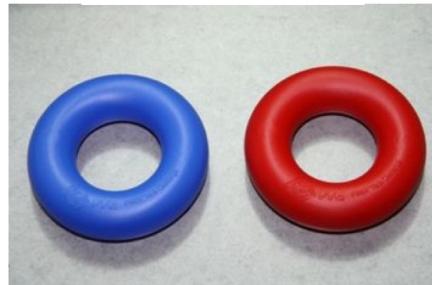


# *Obtaining Elements*

- Historically common FTC element obtaining methods:
  - Element Types
  - Grabbers
  - Overhead Spinning
  - Dual Side Spinning
  - Passive

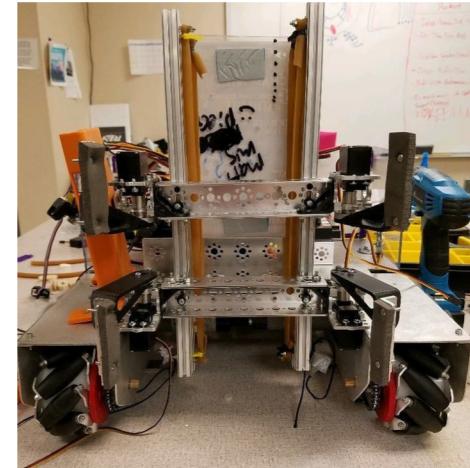
# *Element Types*

- Sphere
- Cube
- Unorthodox



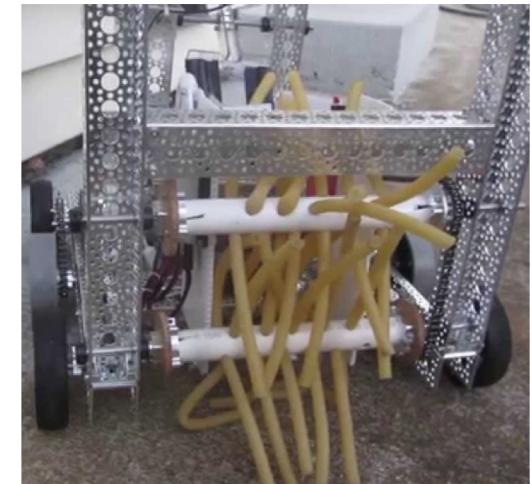
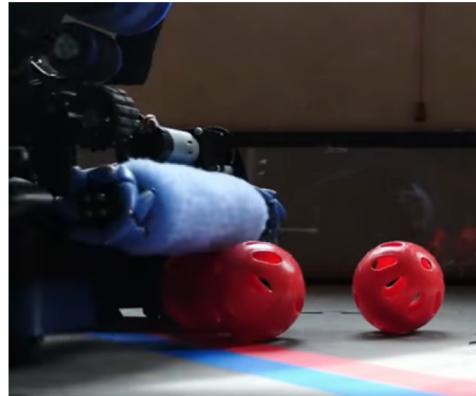
# *Grabbers*

- Limited range of motion
- Versatile for element shape
- Time consuming collection
- Limited number of elements
- Requires precise lineup



# *Overhead Spinning*

- Fast collection
- Minimal lineup required
- Reliable for cubes and spheres
- Space consuming



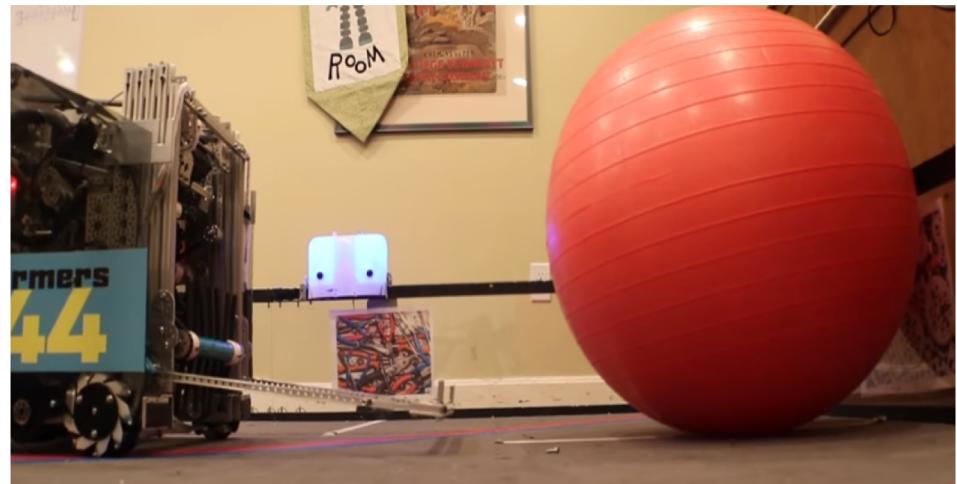
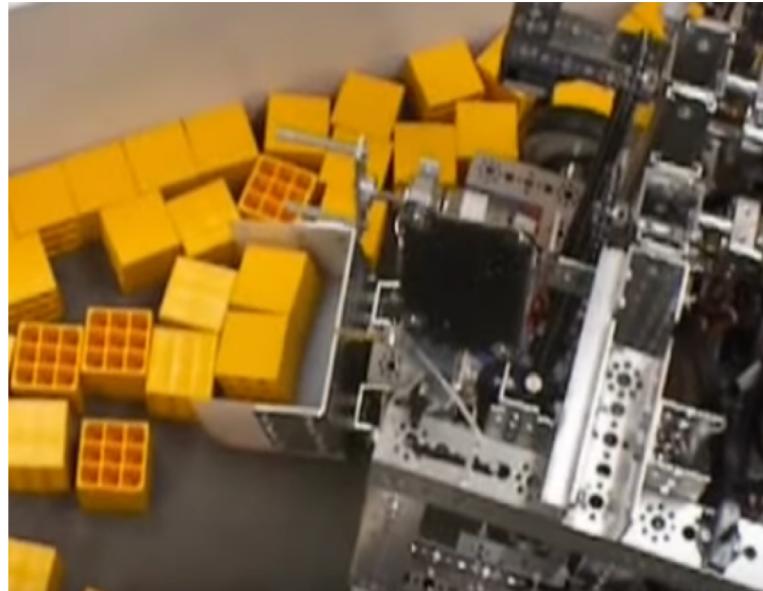
# *Dual Side Spinning*

- Useful for unorthodox shapes and cubes
- Fast
- Reliable
- Requires some lineup
- Not very versatile



# *Passive*

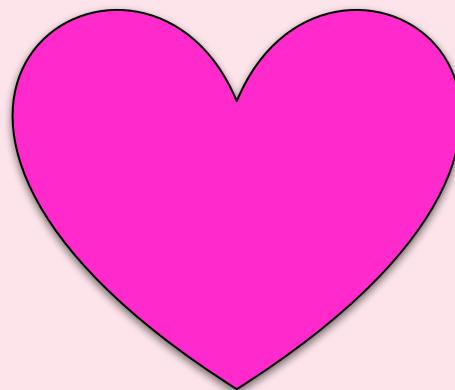
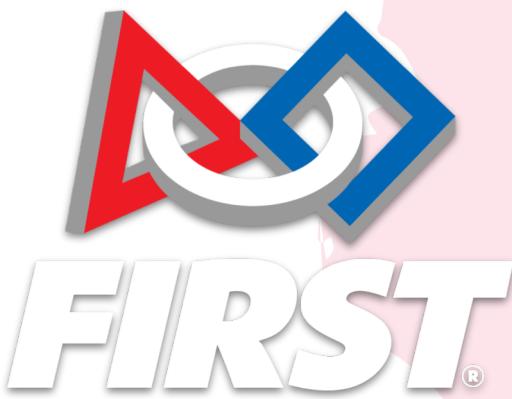
- Scoops
- Forks
- Cups
- Simple
- Requires lineup
- Not very versatile



# *Transferring Elements*

- Moving from obtaining position to scoring position
- Single Bar
- Chain Bar
- 4 Bar Linkage
- Linear Slides

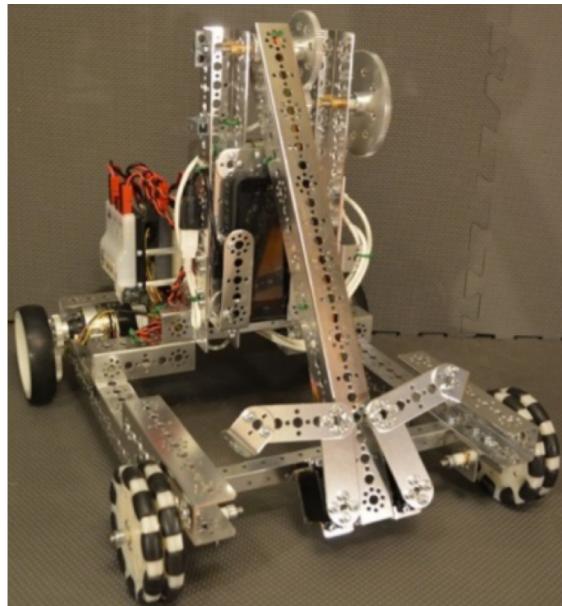
# *The Unspoken Truth*



*Lifting  
Things*

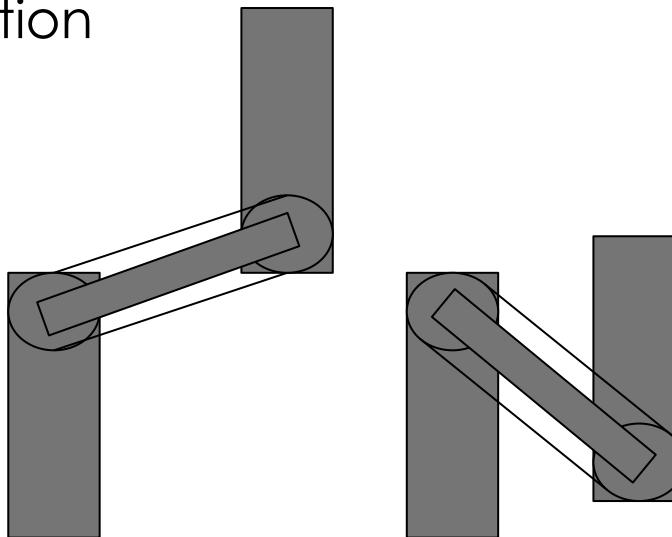
# *Single Bar*

- Simple
- Changes Orientation
- Limited Reach



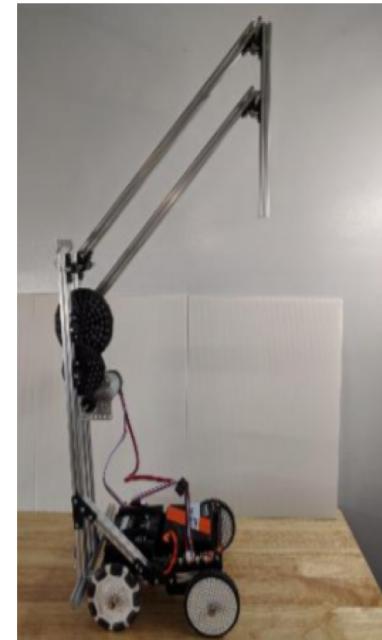
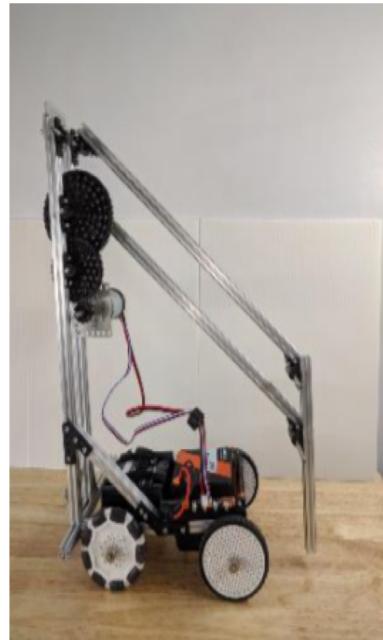
# *Chain Bar*

- Simple
- Maintains Orientation
- Limited reach



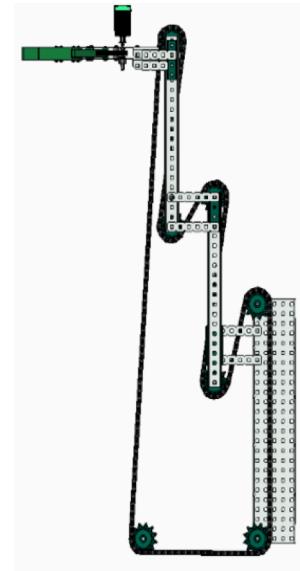
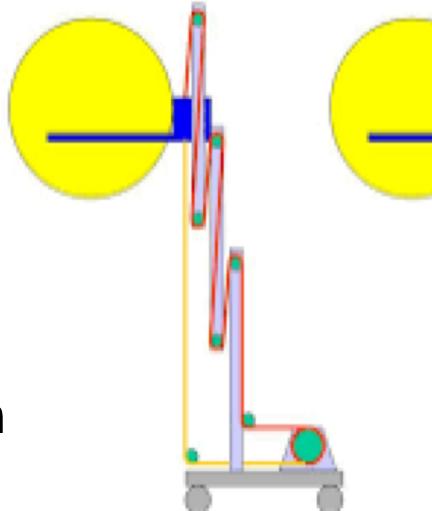
# *4 Bar Linkages*

- Semi-complex
- Maintains Orientation
- Limited Range
- Opportunities for complexity
- 6 Bar
- Double Reverse 4 Bar



# *Linear Slides*

- Semi-complex
- Single Direction extension
- Multi-stage increases range
- Extremely common in FTC
- Strings (Cascade and Snake)
- Belts/Chain
- Lead Screws



# *Scoring Elements*

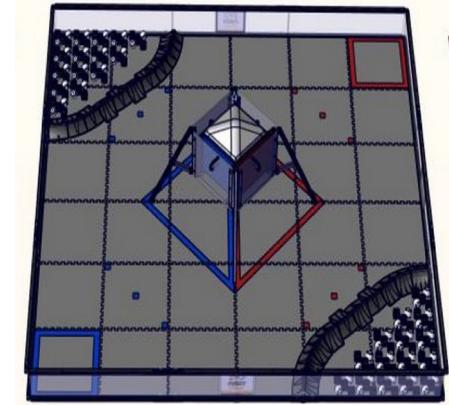
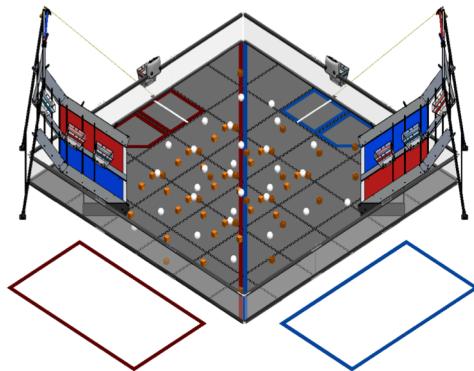
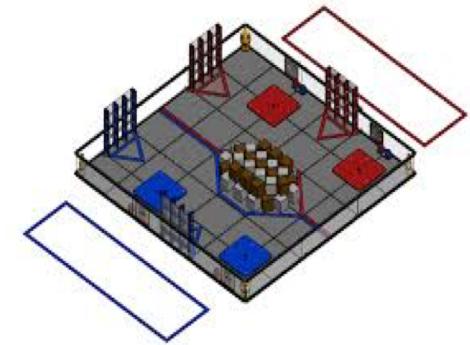
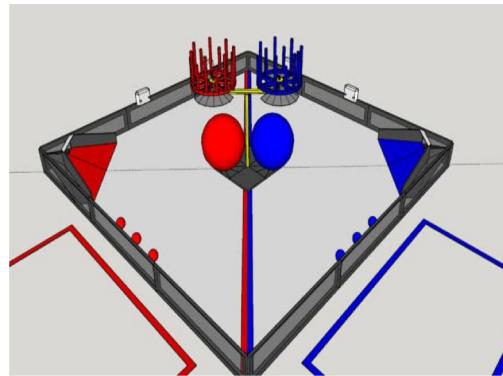
How to get the points

Scoring Zone Type

Tips and Tricks

# *Scoring Zone Type*

- Launching
- Dropping
- Pushing
- Balancing
- Lifting

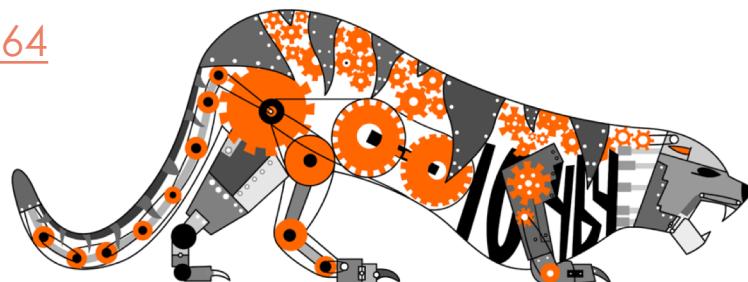


# *Tips and Tricks for Scoring Elements*

- Keep It Simple
- Focus On Reliability
- Is It Easy For The Drivers?
- Research Past Games
- Look At Other Teams

# Credits

- This lesson was written by The Bionic Tigers 10464 for FTCTutorials.com
- You can contact the author at:
  - Website:
    - <http://lovelandrobotics.com/team10464>
  - Twitter:
    - @BionicTigersFTC
  - Email:
    - [BionicTigers10464@gmail.com](mailto:BionicTigers10464@gmail.com)
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