

## DRAG RACING ... GETTING GEARED UP

### DETAILS

CREATE A DRAG RACER BOT USING GEARS AND OTHER MECHANICAL METHODS. THE ROBOT WILL COMPETE AGAINST ALL THE OTHER TEAM'S BOTS IN THE BASIC SPEED DIVISION, AS WELL AS UP TO TWO ADDITIONAL DIVISIONS OF YOUR CHOICE. THE GOALS OF EACH DIVISION ARE SHOWN BELOW.

ONE TEAM MEMBER WILL BE AT THE START LINE AND ONE AT THE FINISH LINE FOR EACH ROBOT BEING RUN. THE FIRST MEMBER WILL START THE PROGRAM AT THE COMMAND, THEN THE BOT WILL NEED TO WAIT 3 SECONDS BEFORE IT STARTS ANY MOTION. THE ROBOT WILL NEED TO BE STOPPED ONCE IT CROSSES THE FINISH LINE, AND MUST BE CAUGHT BY A TEAM MEMBER. BE SURE TO NOT HAVE ANY BRAKES SET ON THE MOTORS AFTER THEY CROSS THE WHITE FINISH LINE, BUT IT IS RECOMMENDED THAT YOU SET IT TO COAST AND USE THE LIGHT SENSOR TO DETECT THE FINISH LINE.

THERE WILL BE NO TRACKS TO KEEP THE BOTS STRAIGHT OR SEPARATED, SO IT IS UP TO YOU MAKE YOUR BOT STURDY.

### THINGS TO KEEP IN MIND

YOUR DRAG RACER NEEDS TO WAIT 3 SECONDS BEFORE IT STARTS MOVING

YOUR DRAG RACER SHOULD BE STURDY, AS COLLISIONS ARE A RISK

YOUR DRAG RACER SHOULD GO INTO A COAST WHEN IT CROSSES THE FINISH LINE.

### DIVISIONS AND GOALS

BASE DIVISION: FASTEST - CROSS THE FINISH LINE FIRST

1. STRAIGHTEST - STAY ON YOUR PATH THE MOST PRECISELY
2. MOST INVENTIVE DESIGN - BE THE MOST UNIQUE DESIGN
3. MOST GEARS USED - HAVE THE MOST GEARS USED ON YOUR ROBOT
4. JUDGES CHOICE - JUDGES PICK THEIR FAVORITE - ANYTHING GOES

### SCORING

(75) CROSSING THE FINISH LINE

(75) -SEE SECONDARY DIVISION SCORE SHEET-

(150) DESIGN AND PROGRAM ALGORITHM

(35) STABILITY

(35) ORIGINALITY

(35) IMPLEMENTED SENSORS AND ADAPTED TO SITUATION

(35) COMPLETED IN TIME FOR SCHEDULED JUDGING

### BONUS

TOP 3 TEAMS IN EACH DIVISION WILL GET BONUSES APPLIED TO THEIR OVERALL SCORE

1ST PLACE - 30PTS, 2ND PLACE - 20PTS, 3RD PLACE - 10PTS