#5 Drivetrain and Chassis Building Checklist

ENGINEERS: _____

	Make sure you take pictures and document your chassis processes.	✔
1	**Draw a scale 2D model of the chassis, sensors, and attachments.** EV3: 4.5" x 3" Large motor: 4.5" x 1.5" Medium motor: 3" x 1"	
2	**Optional: Draw a 3D model of the chassis using LDD.**	
3	**Add the 2D and 3D drawings to the team's engineering notebook.**	
4	**Build the drivetrain.** Attach the two motors. Stability test: ____ Sturdy test: ____ Add the picture and explanation to the engineering notebook.	
5	**Add the wheels.** Clearance: ____ Support test: ____ Stability test: ____ Wheels should be mounted close to supporting beam without touching. Add the picture and explanation to the engineering notebook.	
6	**Add the caster wheels.** Go straight: ____ Accurate turns: ____ Balance: ____ (skids, balls, 360 caster wheels, wheels without tires) Add the picture and explanation to the engineering notebook.	
7	**Build edges or walls for wall navigations.** Front: ____ Back: ____ Sides: _____ Add the picture and explanation to the engineering notebook.	
8	**Add the sensors.** Color sensors: ____ (Must be front of the driving wheels with a beam space from the field.) Gyro sensors: ____ Ultrasonic sensors: ____ Touch sensors: ____ Add the picture and explanation to the engineering notebook.	
9	**Add attachment motors.** Easy access: ____ Add the picture and explanation to the engineering notebook.	
10	**Attach EV3 brick – make sure the ports and charge port are open.** Charge port: ____ Output ports: ____ Input ports: ____ Add the picture and explanation to the engineering notebook.	
11	**Add the cables.** Tie and wrap all the cables. Add the picture and explanation to the engineering notebook.	
12	**Checklist:** ☐ **Center of gravity (mass should be centered.)** ☐ **Parallel to the ground** ☐ **Balanced front to back and side to side** ☐ **Compactness** ☐ **Ground clearance** ☐ **Two-point of attachment for every piece** ☐ **90° support** ☐ **Organized cables**	
13	**Add the picture of the completed chassis and explanation to the engineering notebook.**	