

Engineering Design Process Student Activity Sheet 2.5b

Student Name: _____

MSTEM Accel Car Chassis Design Checklist

Question for Analysis

Do my chassis designs allow for all of the necessary components to fit on the *Micro Kart* and function properly

Instructions

In your teams, evaluate your final designs by using your rapid prototype model for Checkpoint 1, your cardboard prototype for Checkpoint 2, and your final 3D printed prototype for Checkpoint 3. Compare each prototype against the checklist of final functional requirements. If your prototype meets the requirement, then check or initial the Student Signoff box next to the associated requirement. When you complete the needed checkpoint, pass your prototype and this worksheet to the teacher for the Teacher Sign-off portion. Any prototypes that do not meet all the requirements should be redesigned.

Items - Checkpoint 1	Student Signoff	Teacher Sign-off: _____
Do the axles spin freely?		Comments:
Do the wheels spin without rubbing against the chassis and/or topper?		
Do the axles show no more than .3" from the chassis and tire? (If yes, this will cause a lot of unnecessary sliding).		
Is there a place for the motor to be installed securely to the chassis near (approx. 1.4") the rear axle?		
Is there space (approx. 1.2" x .74") for the pulley system with gears near the rear axle?		
Can you fit a 16oz water bottle to the surface of the chassis without interfering with wheel and axle motion?		
Is there space for the batter box to be installed secure to the chassis?		
Is there attachment points for a future topper addition, that do not interfere with other attachments?		

