

CO2 DRAGSTER GRADING RUBRIC

TOTAL 250 PTS.

	3D MODELING (40 pts)	SIX STEPS DOCUMENTATION (30 pts)	THUMBNAIL SKETCHES (20 PTS)	COMPLETED DRAGSTER (70 PTS)	CONCEPT SKETCHES (20 PTS)	DSGN. PROCESS GUIDES (70 PTS)
60 - 70	HIGH SCORES WILL SHOW PROFFICIENCY WITH CADD SOFTWARE. DRAGSTER DESIGN IS ORIGINAL, HIGHLY DETAILED, SHOWS NOTES AND DIMENSIONS, AND MEETS SIZE SPECIFICATIONS.	STUDENT SHOWS HIGH LEVEL OF UNDERSTANDING THE ENGINEERING DESIGN PROCESS THROUGH ALL SIX STEPS WITH HIGHLY DETALIED DOCUMENTION, STUDENT CAN APPLY AND INNOVATE WITH THIS PROCESS.		DRAGSTERS IS A COMPLETE WORKING PROTOTYPE THAT CAN BE TESTED. THE DRAGSTER MEETS ALL MASS AND SIZE. SPECIFICATIONS. IT SHOWS HIGH PERFORMANCE ON THE TEST TRACK <u>OR</u> ORIGINALTY AND HIGH LEVEL CRAFTSMANSHIP. THE DRAGSTER SHOWS CONSIDERATION OF SCIENCE AND ENGINEERING DESIGN AT A VERY HIGH LEVEL.		DOCUMENTATION IN DESIGN PROCESS GUIDES IS COMPLETE AND SHOWS HIGH LEVEL OF UNDERSTANDING OF ALL SCIENCE /TECHNOLOGY VOCABULARY & CONCEPTS. STUDENT CAN TRANSFER UNDERSTANDING OF THESE CONCEPTS TO THE DESIGN.
40 - 60				DRAGSTERS IS A COMPLETE WORKING PROTOTYPE THAT CAN BE TESTED, MEETING 90% OF THE SPECIFICATIONS. IT SHOWS AVERAGE PERFORMANCE ON THE TEST TRACK <u>OR</u> AVERAGE CREATIVITY AND AN AVERAGE LEVEL OF CRAFTSMANSHIP. THE DRAGSTER SHOWS SOME CONSIDERATION OF SCIENCE AND ENGINEERING DESIGN.		DOCUMENTATION IN DESIGN PROCESS GUIDES IS COMPLETE AND SHOWS AMPLE LEVEL OF UNDERSTANDING OF ALL SCIENCE /TECHNOLOGY TO IMPACT THE DRAGSTER DESIGN.
30-40				DRAGSTERS IS A COMPLETE WORKING PROTOTYPE THAT CAN BE TESTED. IT SHOWS BELOW AVERAGE PERFORMANCE ON THE TEST TRACK OR LACK OF ORIGINALTY AND CREATIVITY. CRAFTSMANSHIP IS BELOW AVERAGE. DOES NOT COMPLY WITH NUMEROUS SPECIFICATIONS. THE DRAGSTER SHOWS LITTLE CONSIDERATION OF SCIENCE AND ENGINEERING DESIGN.		DOCUMENTATION IN DESIGN PROCESS GUIDES IS COMPLETE BUT LACKS DETAIL TO SHOW UNDERSTANDING OF ALL SCIENCE /TECHNOLOGY TO IMPACT THE DRAGSTER DESIGN. STUDENT DOES NOT SHOW A CONNECTION OF SCIENCE AND TECHNOLGY CONCEPTS TO A DRAGSTER DESIGN.
20-30				DRAGSTERS IS NOT COMPLETE AND CAN NOT BE TESTED. THE DRAGSTER SHOWS LITTLE OR NO CONSIDERATION OF SCIENCE AND ENGINEERING DESIGN STEPS.		DOCUMENTATION IN DESIGN PROCESS GUIDES IS NOT COMPLETE . LACKS DETAIL TO SHOW UNDERSTANDING OF ALL SCIENCE /TECHNOLOGY TO IMPACT THE DRAGSTER DESIGN. STUDENT DOES NOT SHOW A CONNECTION OF SCIENCE AND TECHNOLOGY CONCEPTS TO A DRAGSTER DESIGN.
0-20	LOW PROFFICIENCY WITH CADD SOFTWARE. DRAGSTER IS DESIGNED SHOWING LITTLE UNDERSTANDING OF CRITERIA AND CONSTRAINTS, MEETING LESS THAN 80% OF SIZE SPECIFICATIONS. SHOWS SOME NOTES AND DIMENSIONS.	STUDENT SHOWS LITTLE OR NO UNDERSTANDING OF THE DESIGN PROCESS. STUDENT SHOWS LITTLE OR NO DOCUMENTATION OF THE PROCESS.	THUMBNAIL SKETCHES SHOW UNDERSTANDING OF THEIR IMPORTANCE IN THE BRAINSTORMING PROCESS. ENOUGH DETAIL IS SHOWN TO EXPRESS IDEAS AND CAN TIE THEIR IDEAS TO PHYSICAL SCIENCE CONCEPTS. LOW SCORES SHOW LITTLE OR NO EFFORT AND DO NOT DEMONSTRATE UNDERSTANDING OF PROBLEM THROUGH BRAINSTORMING.	CONCEPT SKETCHES SHOW UNDERSTANDING OF THEIR IMPORTANCE IN THE DESIGN PROCESS. ENOUGH DETAIL IS SHOWN TO EXPRESS IDEAS SO THEY CAN BE DEVELOPED INTO A 3D MODEL. DETAIL IS ENOUGH TO SHOW CONNECTION TO PHYSICAL SCIENCE CONCEPTS. LOW SCORES LACK EVIDENCE OF THESE STANDARDS.		