

BUILDING A SOLAR CAR TEAM

SO... YOU WANT TO START A SOLAR CAR TEAM?

- ADMINISTRATION GIVES THE APPROVAL
- MANY QUESTIONS TO BE ANSWERED BEFORE TAKING STEPS TO FIND STUDENTS
- **FUNDING** – PRIMARY QUESTION TO BE ANSWERED
 - BUDGET- SCHOOL, DEPARTMENT, CLASS, PARENTS, COMMUNITY
 - DECIDE ON **YOUR LEVEL OF PARTICIPATION**
 - NOBODY WILL PAY YOU WHAT YOU ARE WORTH...HOW MUCH DO YOU LOVE IT?
 - ARE YOU A FACILITATOR, AN OVERSEER, OR A FABRICATOR????????
 - HOW MANY ASSISTANTS DO YOU GET?



Expense has NOTHING to do with ability to win

48 Volt



\$5000 total
267 miles
6th place

2015



120 Volt

2016



96 Volt



\$100K
Solar array





CHARLIE DUKE WALKED ON THE MOON

Let your administrators drive the car

WHEN SHOULD YOU MEET??

- BEFORE SCHOOL
 - OVERCOMMITMENT?
- DURING SCHOOL
 - MAKE IT A CLASS?
- AFTER SCHOOL
 - SPORTS/EXTRACURRICULARS?
- NIGHTS
- WEEKENDS
- SHAKE AND BAKES

A solid 4 hour stretch Saturday morning was worth way more than everyday after school

FINDING WHAT KIND OF STUDENTS

- **MATH/PHYSICS** CLASS IS YOUR BREEDING GROUND
 - DO NOT COUNT OUT OTHER CLASSES
 - ECONOMICS, POLISCI,
- **MECHANICAL** TYPES
 - SOLIDWORKS CAD DESIGN
 - DO'ERS – GET IT DONE TYPES
 - TRAILER GUY – LOGISTICS HELPER
- **ELECTRICAL** TYPES
 - SOLIDWORKS/CAD DESIGN

BUSINESS TYPES

FUNDRAISING, PUBLICITY, EVENT PLANNING

SOCIAL MEDIA - PARAMOUNT

BE INCLUSIVE – KIDS LEARN FROM EACH OTHER BETTER THAN THEY LEARN FROM
TEACHERS

STUDENTS NEED AVAILABLE TIME

OVERCOMMITTED STUDENTS ARE **NOT** HELPFUL – ULTIMATELY KILLED MY
PROGRAM

WHAT YOU ARE ULTIMATELY LOOKING FOR: **STUDENTS WITH VISION** **THEIR FUTURE/YOUR FUTURE/CARS FUTURE**

- 3DIMENSIONAL SPATIAL ABILITY IS PARAMOUNT
- VISION – ABILITY TO “SEE IT”
 - RUBICK’S CUBES LAYING AROUND MY CLASSROOM
 - METAL PUZZLES EVERYWHERE

BE THIS GUY



ONCE YOU'VE FOUND STUDENTS

- **TEST OR NOT TO TEST**
 - ENTIRELY DEPENDENT UPON NUMBERS OF STUDENTS AVAILABLE
 - APPLICATION CAN BE TIED TO TEST SCORE (LARGER ESTABLISHED PROGRAMS)
Insert number here
- **“MEMBERSHIP” FEE** - \$_____ OR **NOT** (EXCITED TO HAVE YOU)
 - STUDENTS HAVE SKIN IN THE GAME

ONCE YOUR TEAM IS TAKING SHAPE

- IDENTIFY ASSISTANTS – YOU WILL NEED HELP, **CAN'T BE DONE WITH JUST ONE PERSON**
- **THINK JV TEAM – NEWBIES START OUT AS HELPERS, GOPHERS, LEARN TOOLS AND LOCATIONS**
- IDENTIFY ALLIES IN YOUR SCHOOL – **SCIENCE DEPT, MATH DEPT, ART DEPT**
 - **FIND OTHER TEACHERS ON CAMPUS THAT SUPPORT YOU AND YOUR TEAM MEMBERS**

HOW MANY DO I NEED TO FIND?

- **8 – 15 STUDENTS** (OPTIMAL NUMBER FOR TEAM COHESIVENESS)
- 21 STUDENTS LARGEST TEAM I'VE EVER SEEN – A LOT OF DISENGAGED AND STANDING AROUND
- RAN 2019 RACE WITH 5 GUYS - NOT ADVISABLE
 - STILL FINISHED 5TH OVERALL



WHERE ARE YOU GOING TO WORK

At Larry Meyer's Shop
NHRA Racing Legend



My program started in a classroom, built a car and had to tear down the wall to get it out

MAINTENANCE/SECURITY NEEDS TO BE YOUR FRIEND

- LOADING DOCK
- 240 AMP SERVICE
- AIR COMPRESSOR FOR TOOLS
- STORAGE
- SHOP SPACE
- ACCESSIBLE PARKING LOT FOR TESTING AND SOLAR

WHAT ARE YOU STARTING WITH????????????

TOOLSTOOLSTOOLSTOOLSTOOLSTOOLSTOOLS

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- Swap Meets
- Facebook
- Estate Sales
- Other Schools

SOLAR CAR ATTENDANCE DECIDES ON WHETHER THEY TRAVEL WITH THE TEAM

There is more to building a team than just brains

- ATTENDANCE
 - **WORK ETHIC** – I HAVE ASKED STUDENTS TO NOT COME BACK
 - **INITIATIVE** – I CAN'T TELL YOU EVERYTHING
 - **HOURS ON THE CAR**
 - **ATTENDANCE AT EVENTS** – HOME DEPOT SHAKE N BAKE (COMMUNITY EVENTS)

FOSTER STUDENTS PASSIONS

- LET STUDENTS TRY MULTIPLE THINGS
 - BATTERIES
 - MECHANICAL
 - TRAILER TEAM – INVALUABLE (TRUCK, HITCHES, TRAVEL SUPPLIES, ORGANIZATION)
 - TELEMETRY TEAM
 - STRATEGY
 - BUSINESS/MARKETING/SOCIAL MEDIA
- THEY WILL LET YOU KNOW WHEN SOMETHING HITS – RUN WITH IT

START AN ALUMNI ASSOCIATION (KIND OF)

- STAY IN TOUCH WITH YOUR GRADUATES
 - TEXT IS EASY
- LET THEM SPEAK AT WORKDAY WHEN THEY COME HOME FOR BREAK
 - GEORGIA TECH
 - CAL POLY
 - MICHIGAN
 - TEXAS A&M
 - AIR FORCE ACADEMY
 - RICE
 - DARTMOUTH
 - COLORADO SCHOOL OF MINES
- LEARN FROM THEIR COLLEGE PROGRAMS
- LET THEM SPEAK ADULTING (JOBS, FAMILIES, ETC)