**Project A-Z**

This is a glossary of terms you may find in use at workshop and in the lab. Feel free to add more definitions in alphabetical order.

A

**Aerotech -** One of the two brands of rocket motors used. More difficult to assemble than Cesaroni motors.

**Agar -** One of the two media types we use. Less clear than [Phytagel](#s49qjfa6zpkk), but can be remelted once solid.

**Altimeter -** A device that uses air pressure to find the altitude of the rocket

**Ammonium Perchlorate Composite Propellant (APCP)** - a solid rocket propellant used in commercial motors class F and up.

**Aseptic** - Sterile, free of contamination from bacteria or other microorganisms

**Autoclave**- a machine that uses pressurized steam to sterilize contents or cook media. See [here](https://docs.google.com/document/d/1wdfuowrRGsAwny2qLxFeqAjW1A5wEcmRXNA-Eoa_ayI/edit?usp=sharing)

**Autoclave Bottle** - A thick glass bottle that is autoclave safe.

**Autoclave Tape**- tape that darkens after running through autoclave. Used to show something has been successfully Autoclaved.

**Average Thrust -** The average thrust of the rocket, measured in Newtons, is the number included in the motor designation (e.g J500 has 500 N avg. thrust)

B

**BSC (Biological Safety Cabinet)** - Also known as the “hood”, it keeps objects sterile while working with them. For more info, see [here](https://drive.google.com/open?id=1qZs2GS0wH85JVMnXy2t4CrEO7a2GxikeEwcOgO6lw5A)

**Beaker -** A glass container for holding liquids and other chemicals.

**Biohazard -** That's me!

**Blackpowder -**  An ~~explosive~~ energetic substance used to create separation in [Electronic Deployment](#dc5o04wa5380)

C

**Caliber (cal.)-** One body tube width. Stability is measured by the distance between the [CP](#on3wjd8s0u2f) and [CG](#7h8mtg319f3e) in calibers. 1-2 cal. is considered “stable”.

**CATO** - Stands for "Catastrophe at takeoff." Occurs when the motor malfunctions.

**Center of Gravity (CG) -**

**Center of Pressure (CP) -**

**Cesaroni (CTI) -** One of two rocket motor manufacturers we use.

**Charges -** Small vials of blackpowder that are used in [Electronic Deployment](#dc5o04wa5380) to separate the rocket.

**Core Sample** - A euphemism for describing the result of a flight were the rocket came in ballistic.

D

**Deionized Water (DI water) -**  see [water](#f6b52nsjqeip)

**Detectable Seismic Event (DSE)** - see [core sample](#oe1szpa1gmjx)

**Drogue -** In Dual Deployment, a small parachute deployed at apogee to slow the rocket down, but minimize drift.

**Dual Deployment -** Uses two parachutes, a small drogue (usually deployed at apogee), and a large main deployed at a certain altitude, both using [Electronic Deployment.](#dc5o04wa5380) Used to prevent rockets drifting far away...

E

**Electronic Bay (Ebay) -** A compartment that holds all of the rocket’s electronics, including the altimeter.

**Electronic Deployment -**

**Ethanol (EtOH)-** Your friendly neighborhood alcohol. Used at 70% concentration as a disinfectant. Bottles often labeled using chemistry abbreviation EtOH.

**Ethidium bromide-** don’t put it in the microwave?????

F

**Falcon Tube**- refers to the centrifuge tubes with purple lids. Comes in two sizes. The larger size is used to pour media.

G

**G10 -** The yellow fiberglass material used for fins.

**GitHub -** A program that helps manage your software projects and control versions.

**Graduated Cylinder -** A tall cylindrical container used to measure liquids

H

I

**Impulse -** An integral of force over time, or the total amount of thrust in a rocket, measured in Newton-seconds. Determines the impulse class (letter) designation.

**Impulse Class -** A one letter designation determined by the total impulse of a rocket engine. Each designation is twice as hClasses H and above are considered “high power” and require certification.

J

K

L

**Lab Coat -** A coat used to protect from chemical splashes and burns. An important piece of [PPE](#jrtcp4g5zi09)

**LS salts -** A formula containing all the nutrients plants desire. Unlikely to be used for slime molds, but may appear in some Gilroy lab protocols

M

**Magnetic stir bar -** A small magnet that is placed in a liquid, which can then be stirred by the magnetic stirrer

**Magnetic stirrer**- a device that creates a rotating magnetic field to spin a magnetic stir bar and mix contents.

**Maze -** A network of paths designed as a puzzle that the slime mold will be solving.

**Micropore tape -** Tape with small holes to allow air and water, but not contaminants, to enter. Can be used to seal petri dishes, but [Parafilm](#dvv81ygbr5n7) often works better.

N

**Newton -** A standard unit of force used to measure rocket thrust.

**Newton-second -**

**Nitrile Gloves -** Non-allergenic gloves that serve a dual purpose: to protect your hands, and to protect your samples. An important piece of [PPE.](#jrtcp4g5zi09)

**Nutrient Media -** A growth medium with food for the slime molds. Protocol [here](https://drive.google.com/open?id=1wPfdM4vD_3b_5CwyjAYJELYgKJxf-hC1Y6hnzeNOJ60).

**Nutrientless Media -** A growth medium without food for the slime molds. Protocol [here](https://drive.google.com/open?id=1xsgEe2sIGS3l2gpFvVHFVYOmhvPGjdWzODRILV_Eobs).

O

**Oven Mitts -** Bright orange gloves that help protect you when handling hot liquids. Used while [Autoclaving](#jm0wm1prkrru) media.

P

**Parafilm** - stretchable clear tape used to seal Petri Dishes.

**Payload -** The experiment or other equipment that the rocket is carrying.

**Petri Dish** - a sterile container used to grow organisms. Can be square or round.

**Personal Protective Equipment (PPE) -** Safety equipment used to protect us from chemicals and other dangerous things. EX: nitrile gloves, lab coat, etc...

**Physarum polycephalum -** The scientific name of slime mold we are using

**PLA -** Polylactic Acid. A plastic used in 3D printing.

**Plasmodium -**

**Phytagel** - One of the two media types we use. It is clearer and better for imaging, but cannot be remelted once hardened.

**Python** - A programming language known for its versatility and ease of use.

Q

R

**Rocket** - Why are you even looking at this, your in rocket club!

S

**Scoopula -** a small, grooved metal tool used to measure solids. Also called spatula.

**Slime Mold -**

**Spatula -**

**Sporulate -**

**Stability -**

**Statement of Work (SOW) -** The proposal written to NASA outlining the project.

**Sucrose -** Table sugar! Used as a nutrient in media.

T

U

**Ultraviolet (UV) radiation -**

V

W

**Water** - there are many types of water in the lab. The most important are:

* **Deionized (DI) -** Water that has had its ions removed. Used in making media. Found in the jugs by the sinks, and can be made using the deionizer. ~~Said to taste strange…~~
* **Distilled -** Water that is distilled. Comes from the white taps, and is used for cleaning dishes. Not the same as DI water
* **Tap -** Boring regular old tap water. Do not use for media or anything that must be sterile.
* **RNAse Free -** Water that is free of nucleases. Very expensive, so do not use unless directed.

X

Y

Z

**Zipper -** When the shock cord of the rocket pulls through the side of the rocket airframe. Indicates improper deployment timing.