

BRAIN FUCKS #1

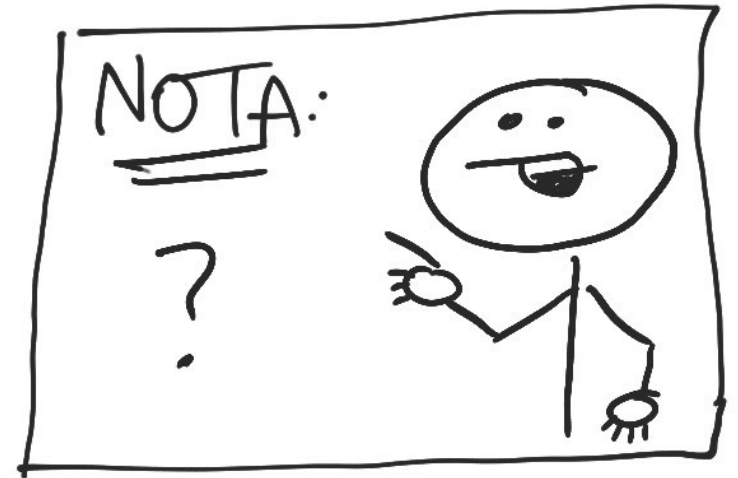
"ALIENÍGENAS"



{ JUAN C.  
INOSTROZA  
jci@  
codemonkey.cl

PREGUNTA:

Hay vida fuera de la  
Tierra?



AW, SNAP!!

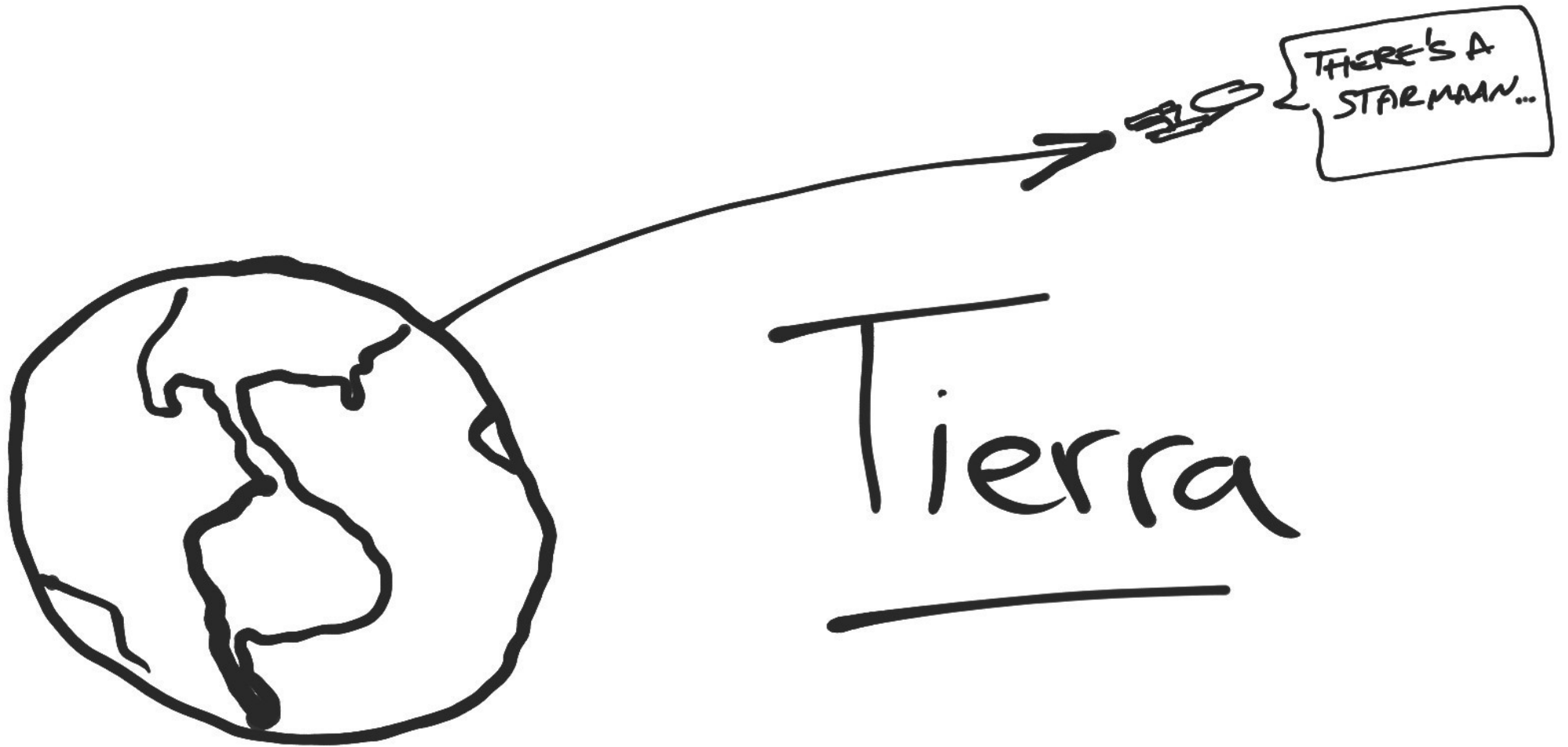
R

?

NOTA:

ESTA ES MI LETRA.

BAJO LOS EFECTOS  
DE VARIAS CHELAS



Tierra

"Problemas" [\*]

---

[\*] y no es chiste ....

1

"Gravedad"

$\vec{g}$

Yay  
Vectors!

NEWTON!

$$\vec{g} = G \cdot \frac{M_1 \cdot M_2}{r^2}$$

masa

distancia

Units:  
meters  
kilograms  
seconds  
(MKS)



$m \times a$



$$\vec{g} = 9.8 \text{ m/s}^2$$

WOW!

THIS SHIT IS GALILEO LEVEL



$$0 = 0$$

$$1 = 9.8 \text{ m/s}$$

$$2 = 19.6 \text{ m/s}$$

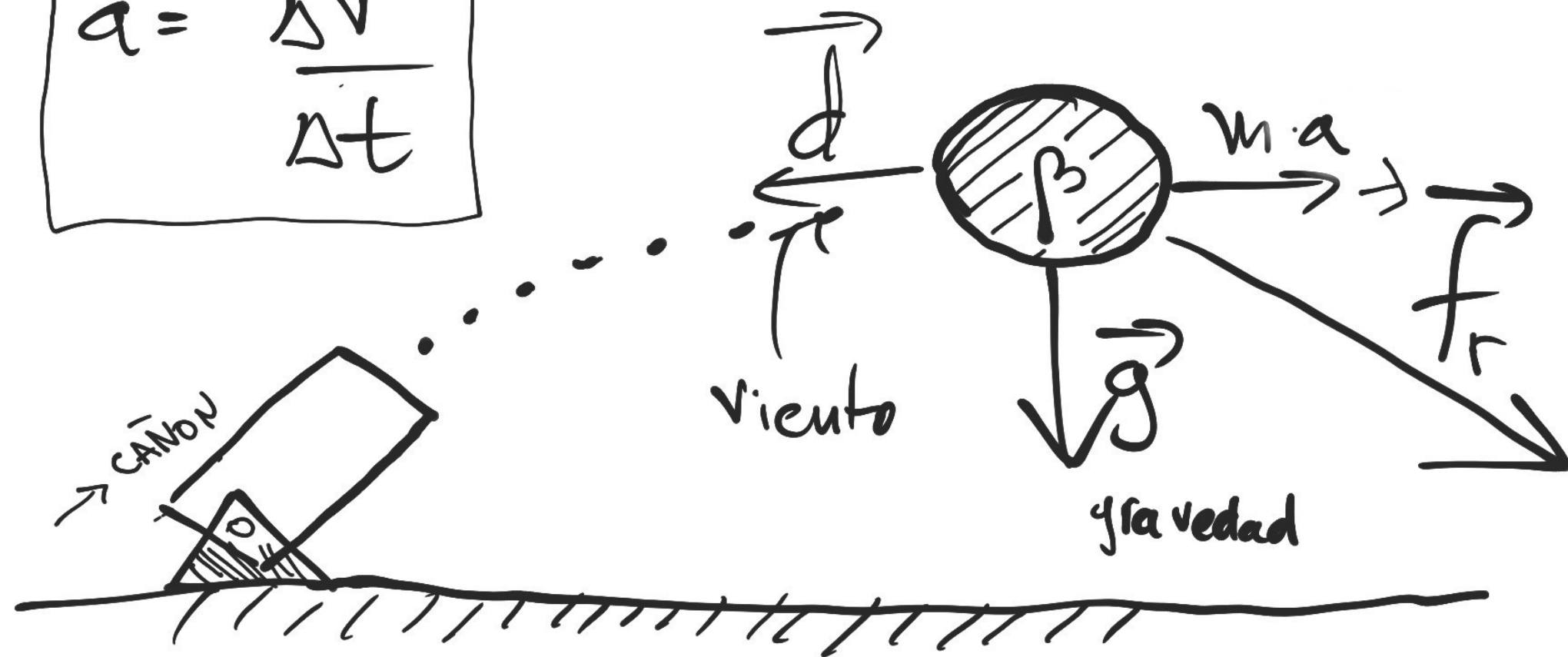
⋮

$$\therefore d = \frac{1}{2} v_0 t + (v_1 - v_0) t^2$$

Tierra



$$a = \frac{\Delta v}{\Delta t}$$



(it's a shitload of  $\frac{\text{kms}}{\text{h}}$ )

la  
vuelta  
al  
mundo  
en  
4  
horas

$$V_f = 17.000 \text{ km/h}$$



2

"Rocket Science"

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Newton

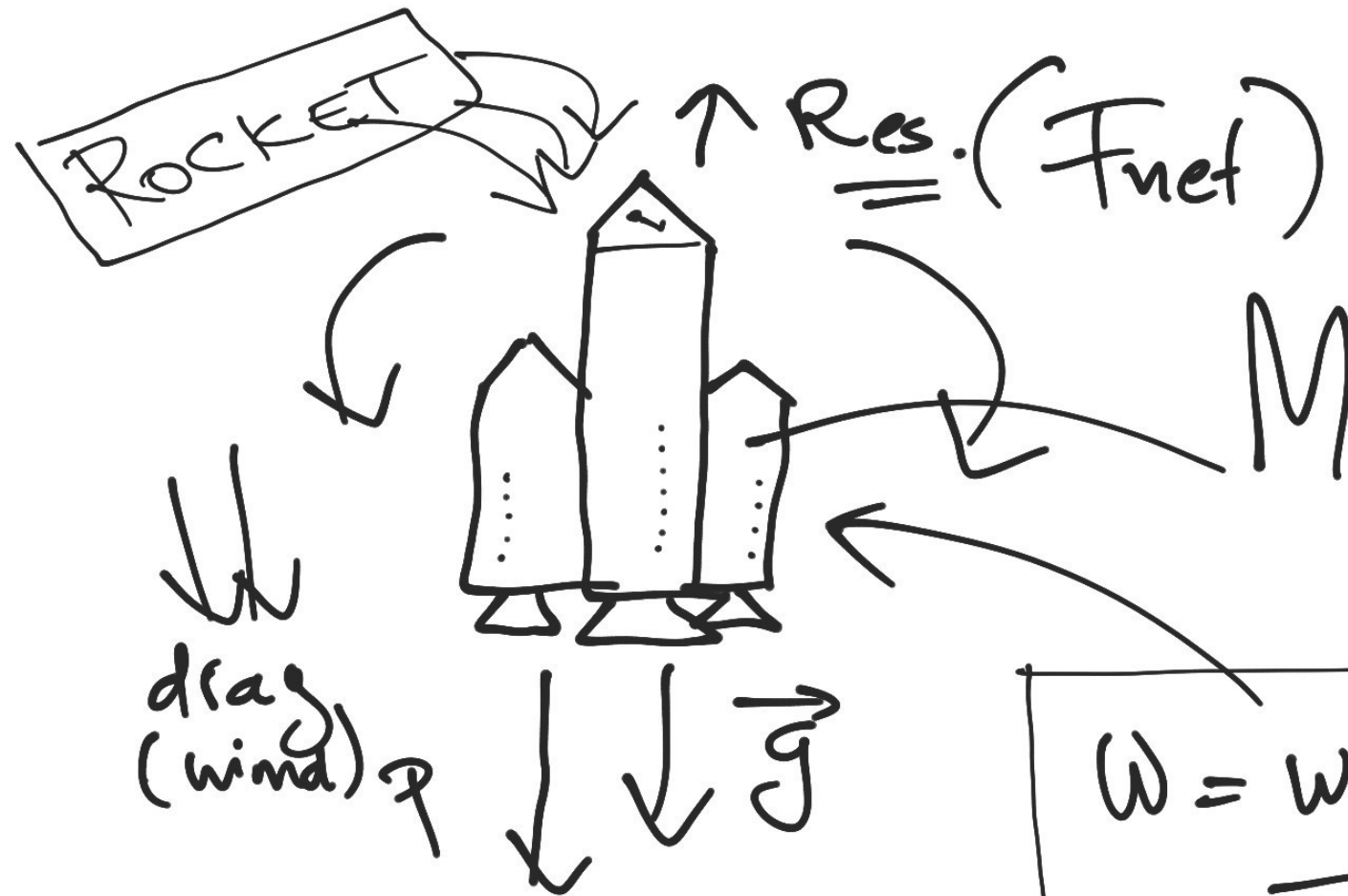
(masa)  
 $m$

$$u = V_{\text{rocket}} \frac{d(Mu)}{dt}$$

$\rightarrow dt$   
tiempo

$= F_{\text{net}}$   
(fuerza neta)

$\rightarrow f$



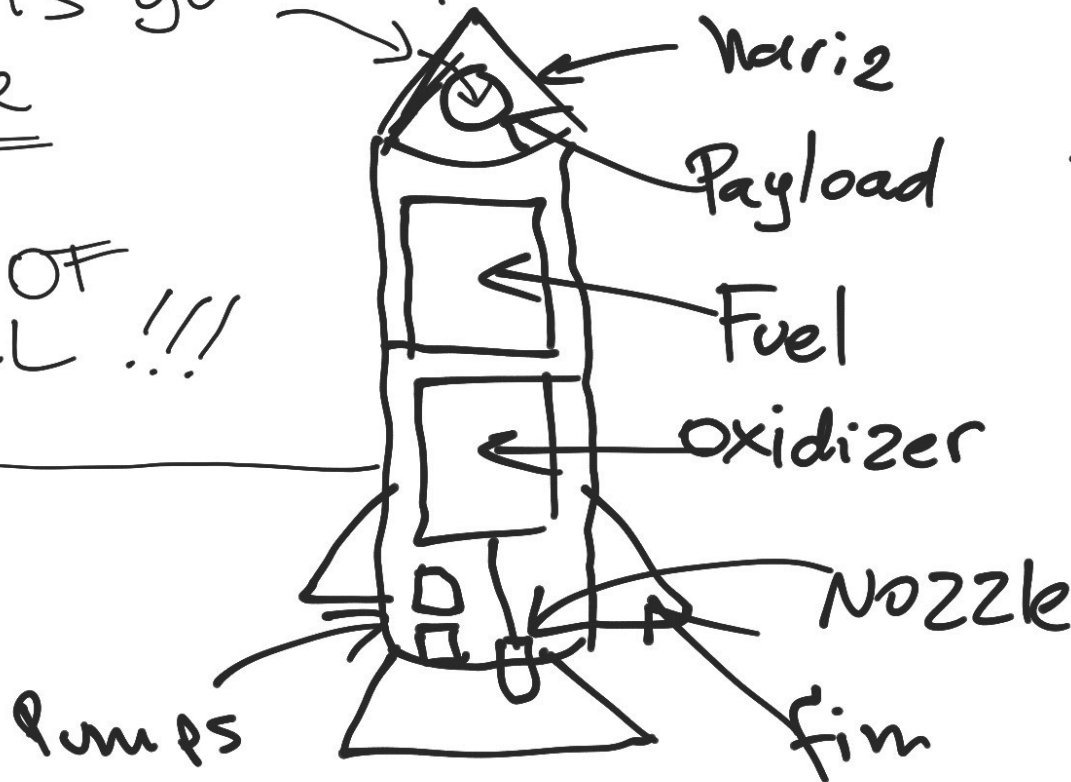
### Rocket

- 89 TONS
- la forma no es por azar
- US \$16K por kilo
- se pierde casi el 90% del cohete

$$W = W_0 + \text{Payload}$$

Astronauts go  
here

~~BALLS OF~~  
STEEL !!!



Cost:  
\$ 1.7 bil  
(a shitload)  
Source:  
NASA

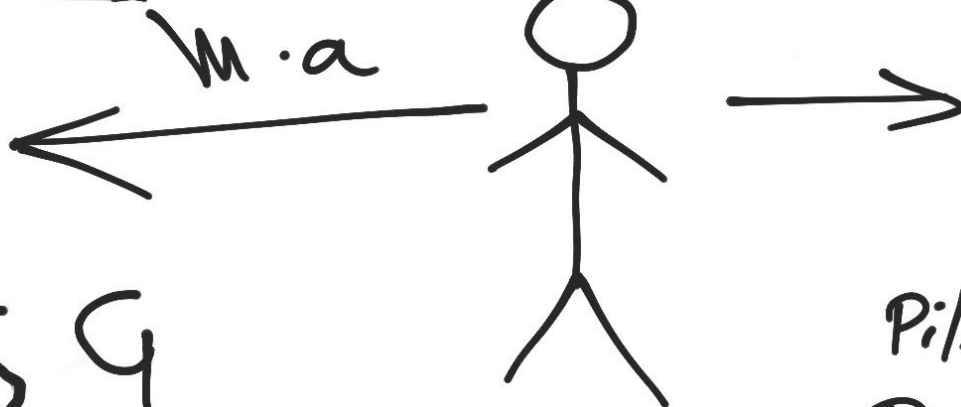
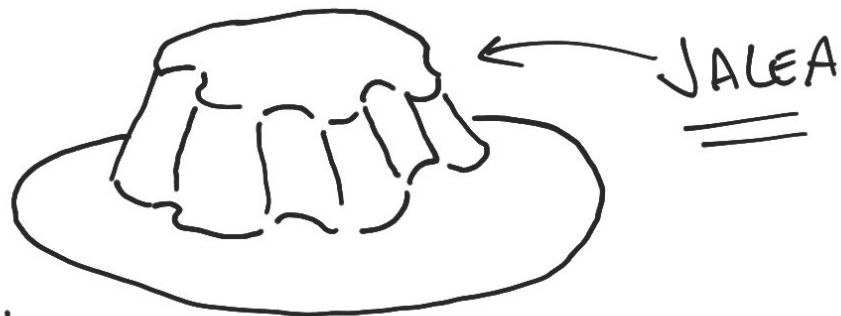
3

"Pony

He mans

"

Dato freak:  
la jalea es  
"casi" puro  
calcio



$\Gamma \Rightarrow 5G$

$(\approx 4g \text{ m/s}^2)$  (70%  $H_2O$ )

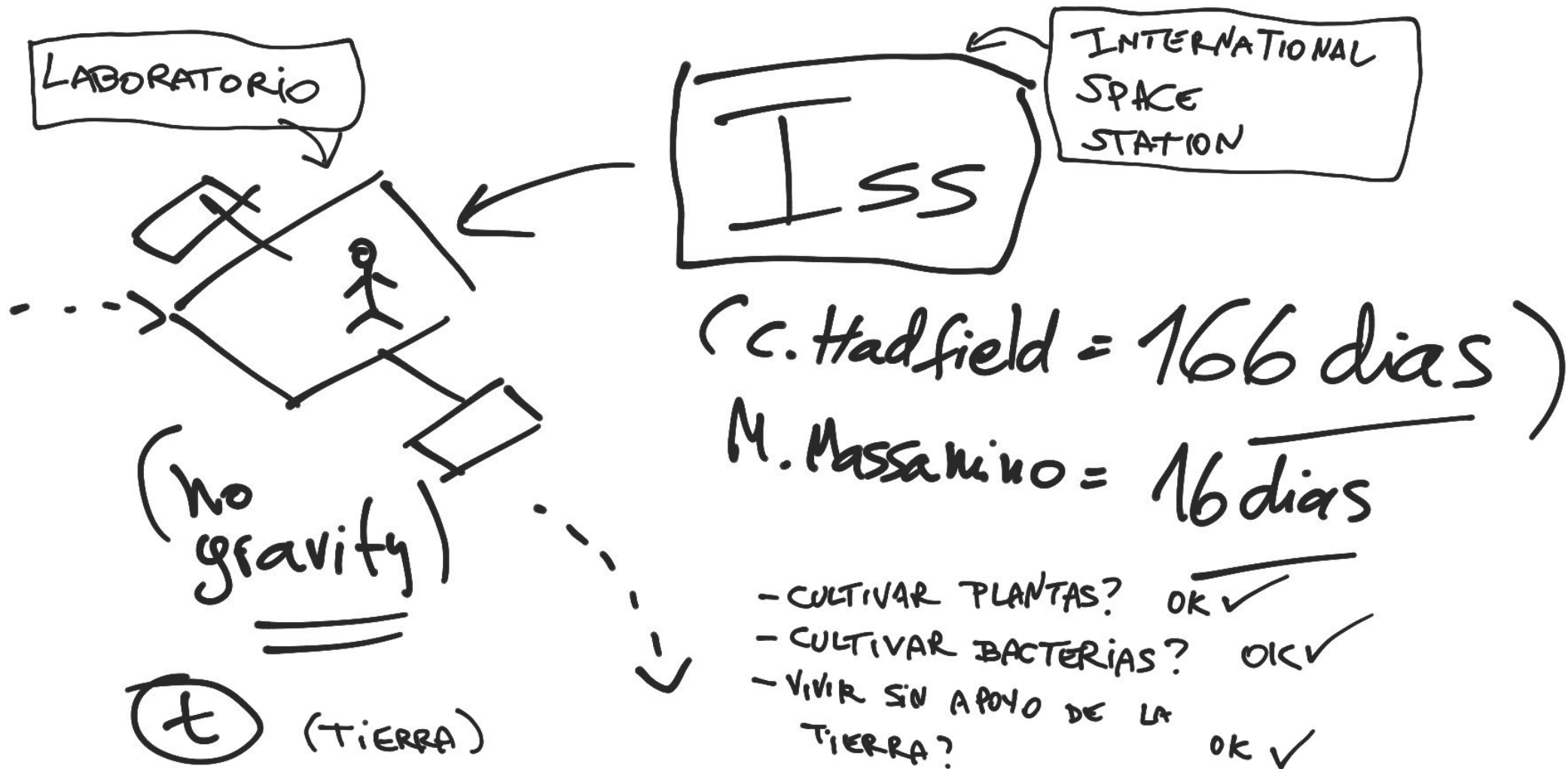
Pilotos:  
Record  
9Gs  
 $(\approx 8g \text{ m/s}^2)$

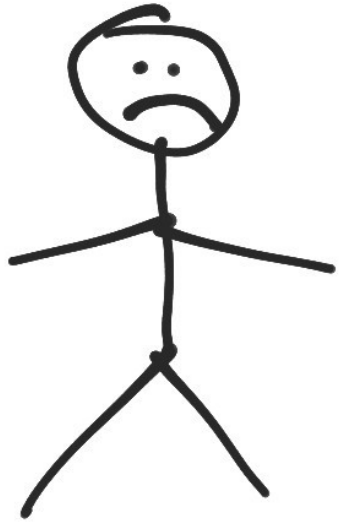
→ You Jelly?



4

ISS



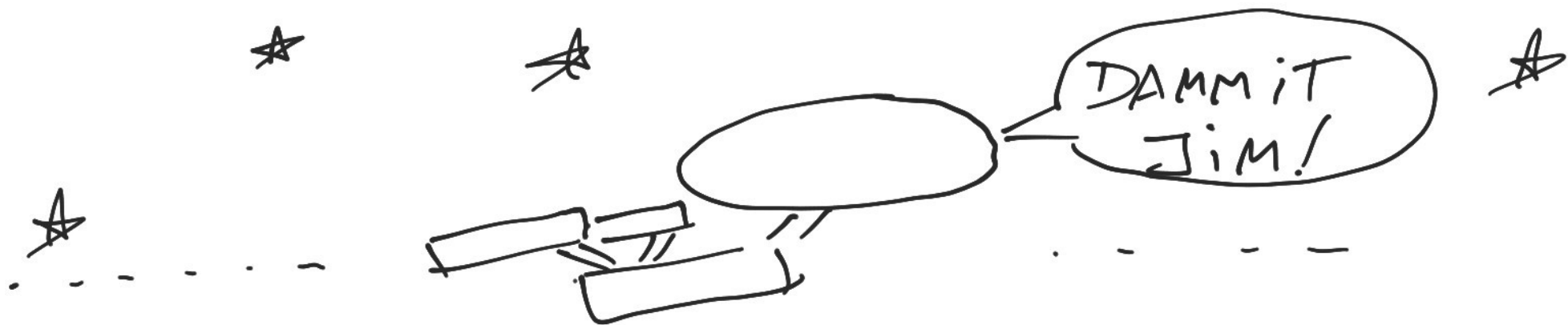


## EFFECTOS GRAVEDAD

- 5 cms. +
- Pérdida masa ósea  
→ Calcio acumulado  
en riñones
- Pérdida masa muscular

5

"EL VIAJE"



---

" STAR TREK "

---

(Sci Fi)

ly = light years



Distancia

- alpha Centauri = 4.36 ly
- Luhman 16 = 6.59 ly
- Tau Ceti = 11.90 ly

$$1 \text{ ly} = 9.461 \cdot 10^{15} \text{ m}$$

9.000.000.000.000.000  
mts  
😊



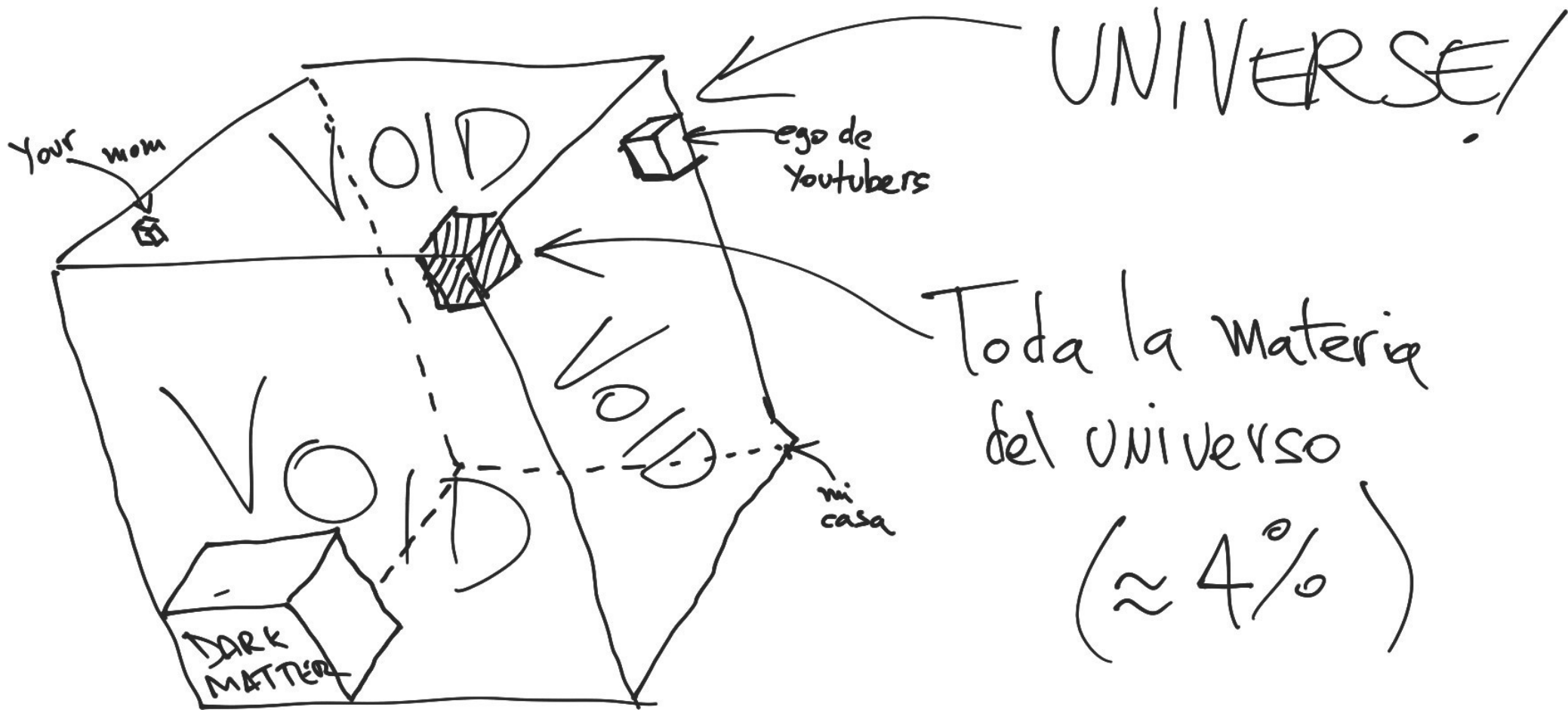
¿qué hay de por  
medio?





NADA

(quizas algo, pero no mucho...)

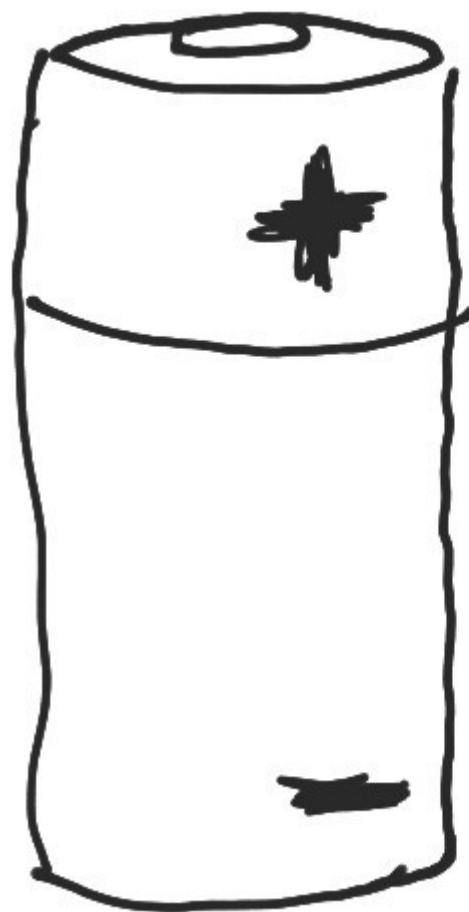


[where's my  
holodeck?]



← BORING!!!

- Alien trilogy
  - Solaris
  - Interstellar
  - etc ...
- {
- no internet (twitter, facebook, youtube)
  - low energy consumption (see: Aliens)
  - low rocket provision (less failure rate)



6

" NO SEX "

\_\_\_\_\_



NSFW  
JOKES



"SHOOTING  
GALLERY"

# JPOs

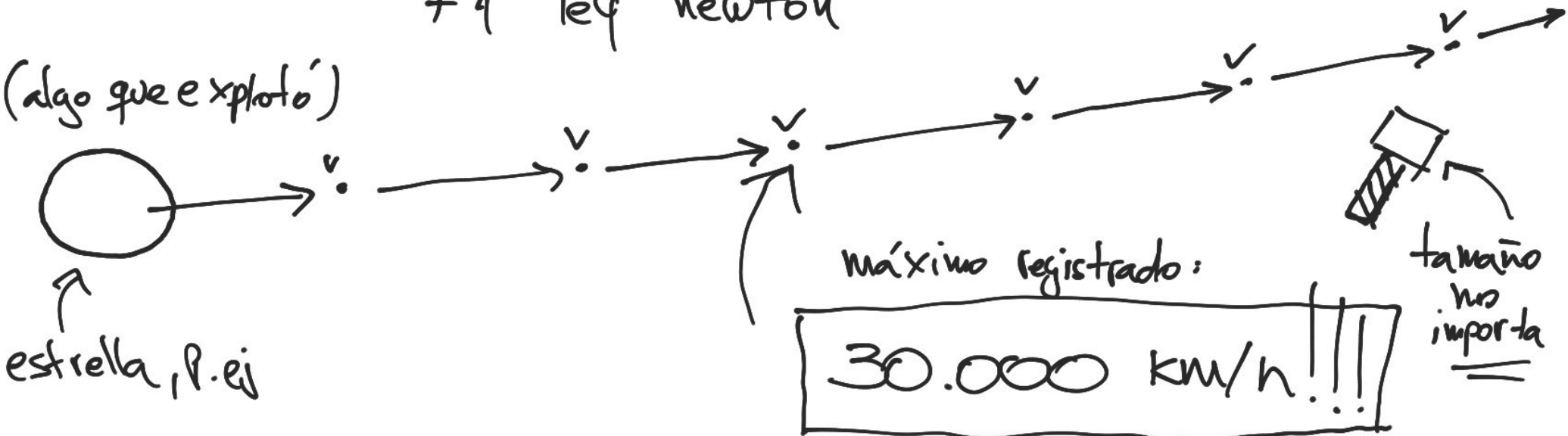
(JET PROPELLED OBJECTS)

- bullet size
- Velocidad absurda

+ 1ª ley Newton

(algo que explota)

estrella, p.ej





la vuelta  
al  
mundo  
en  
62.1  
minutos



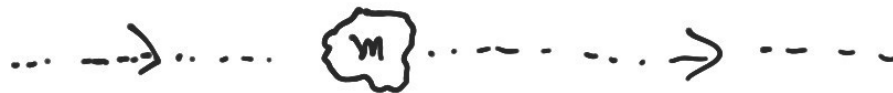
algunos ...  
números ...

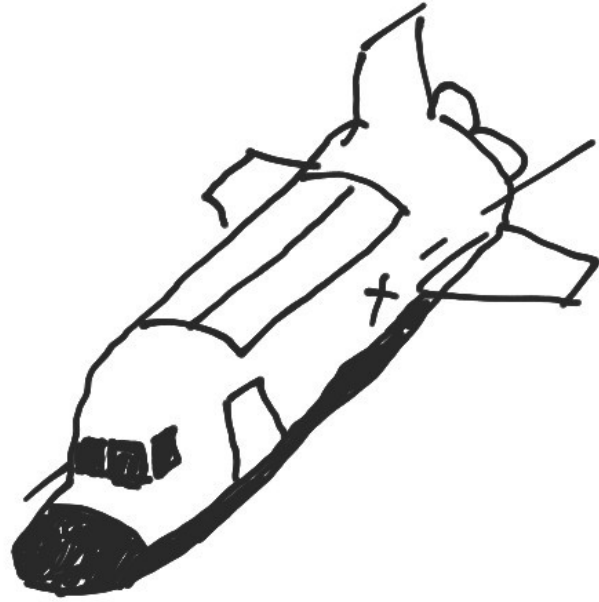
10

KM/S

Stgo-talca  
en  
28 segs

Stgo - Miami  
en  
12 mins





Peñ REFERIDA

- DEEP IMPACT
- ARMAGEDDON

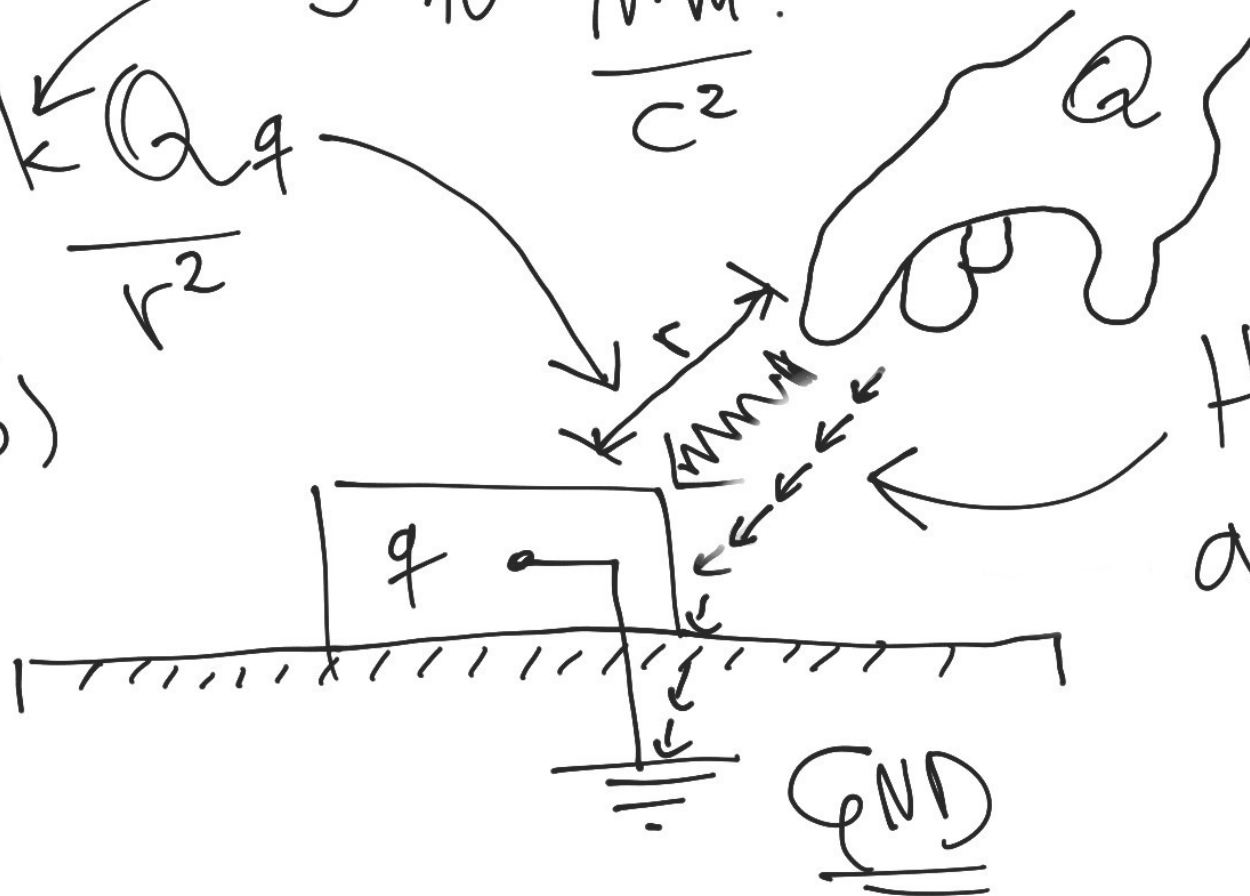
8

"Estática"

$$F = k \frac{Qq}{r^2}$$

$9 \cdot 10^9 \frac{\text{N} \cdot \text{m}^2}{\text{C}^2}$

ley de  
(Coulomb)



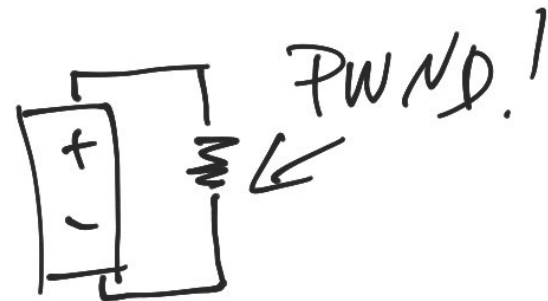
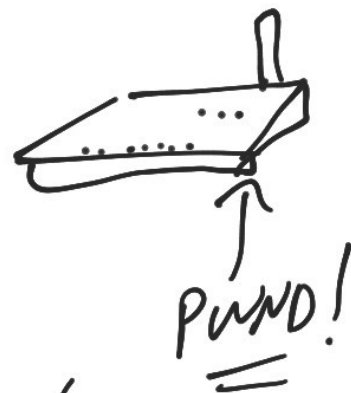
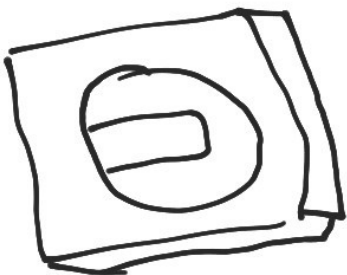
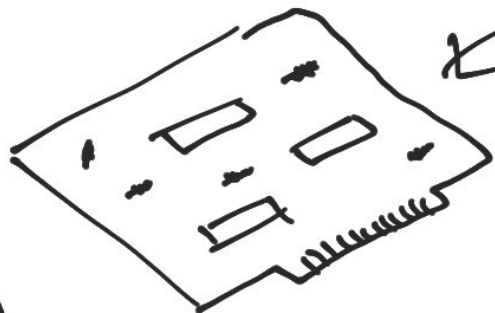
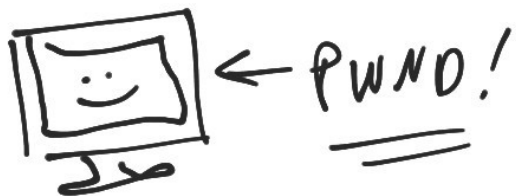
Humedad  
ambiental

IN SPACE,

THERE IS NO GND

(ALSO, NO ONE CAN HEAR YOU SCREAM)





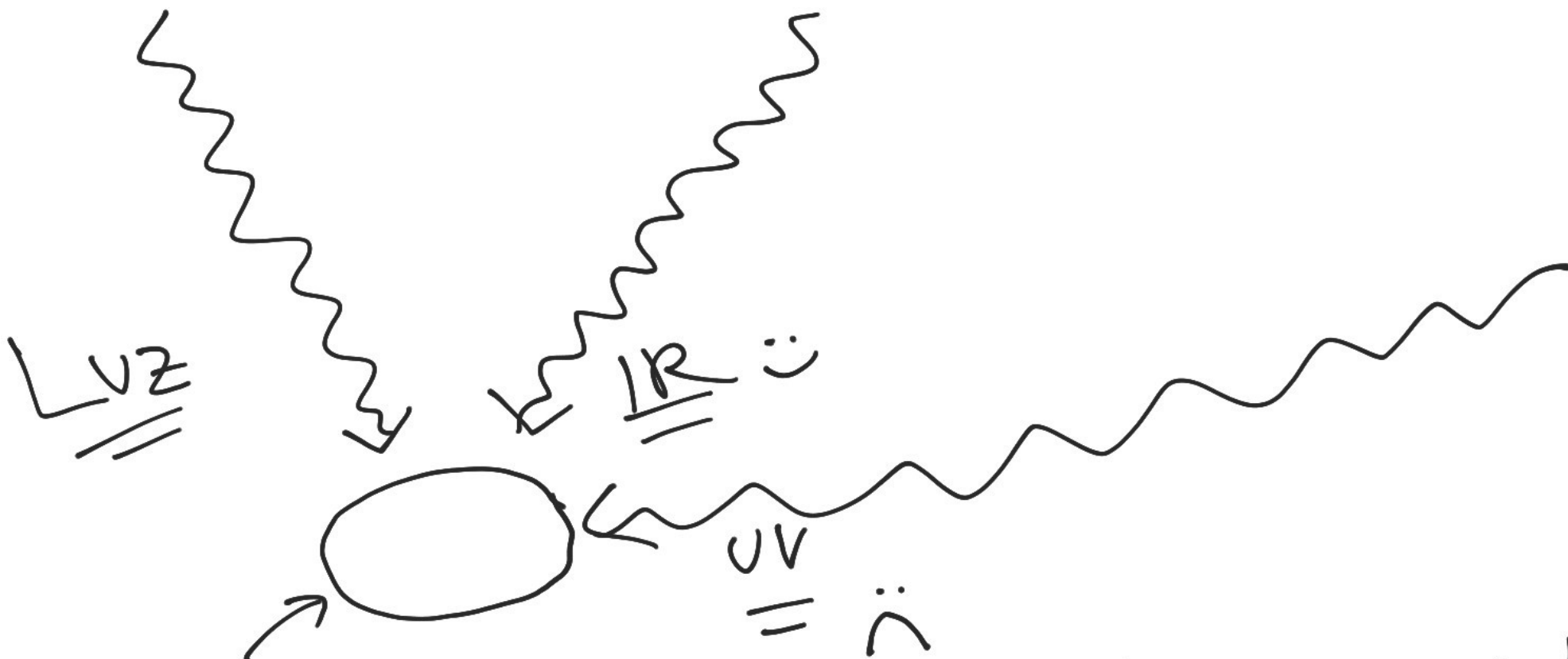
PWND!

9

"The light"







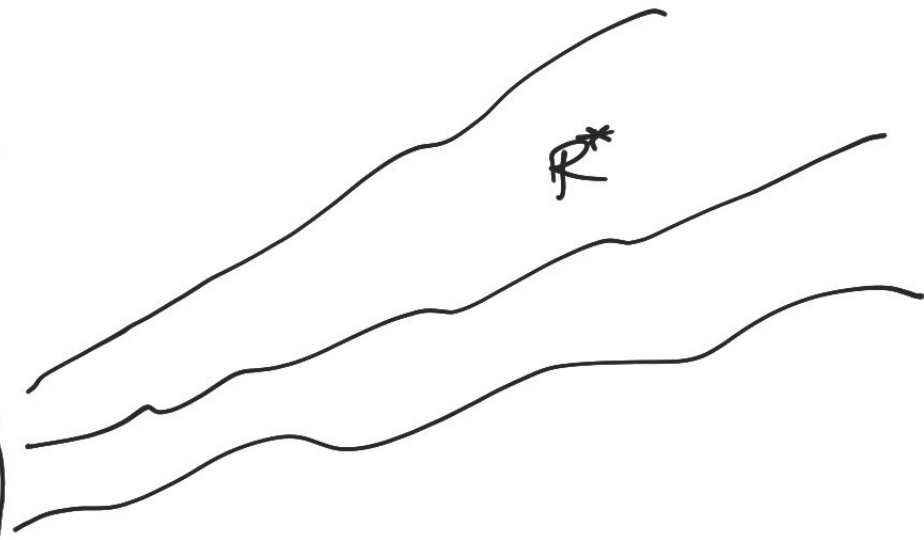
Célula (viva)

NOTA: UV malo!!!



Célula

→ FILTRO



Radiación

- $\alpha$  ← wah!
- $\beta$  ← whea!
- $\gamma$  ← oh, shit!

10

(FINAL)

"TERRA FORMING"

# TERRAFORMING: "VIVIR COMO EN LA TIERRA"

- T<sup>o</sup> - NECESIDADES BASICAS
- AGUA - OCIO
- ALIMENTO

COLONIA

PROVISIONES

MEDICAMENTOS  
INSTRUMENTOS  
INTERNETS

INTERNETS

TV!

(MARTE)

OK!

(TIERRA)



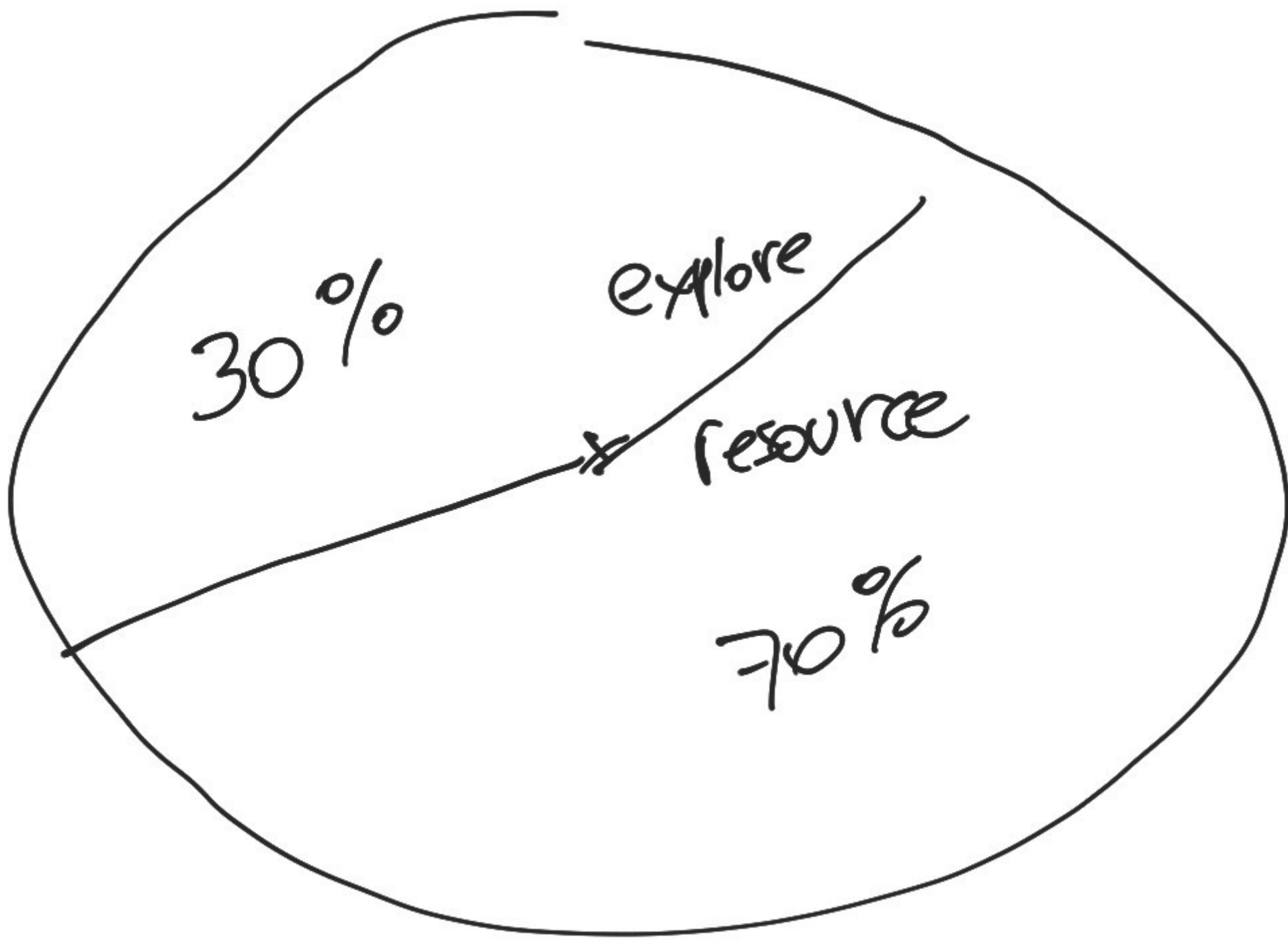
NEIL DE GRASSE TYSON:

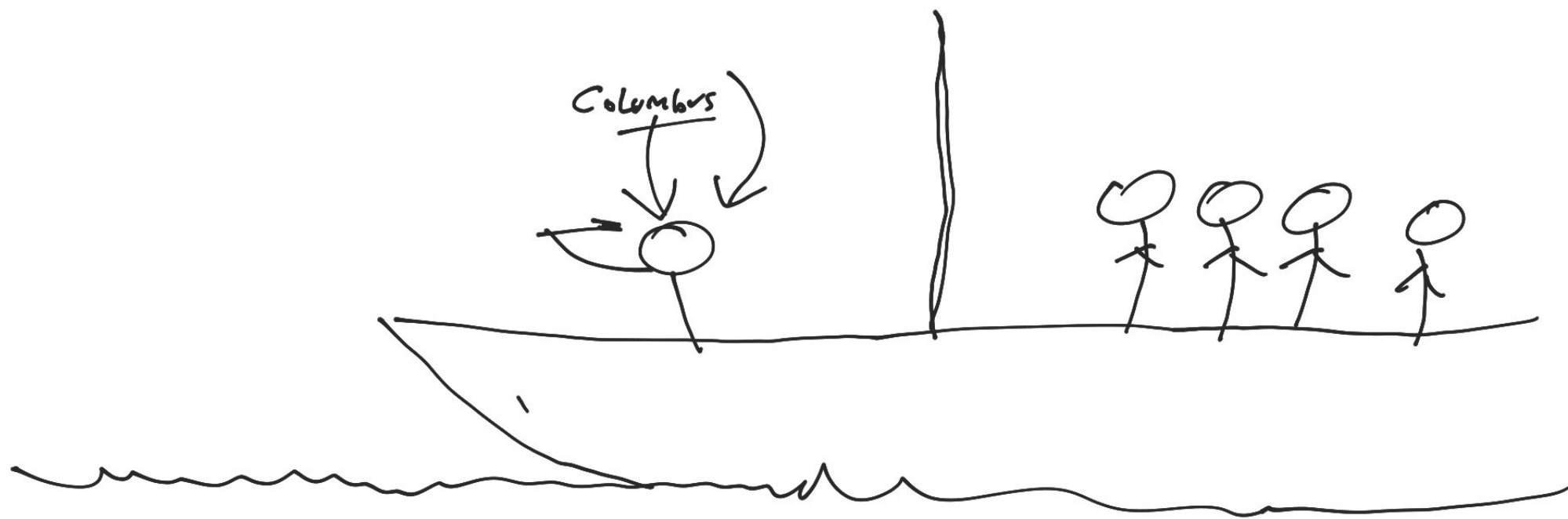
"IF WE CAN TERRAFORM, MEANS WE CAN  
FIX ANY ENVIRONMENTAL PROBLEM  
ON EARTH.

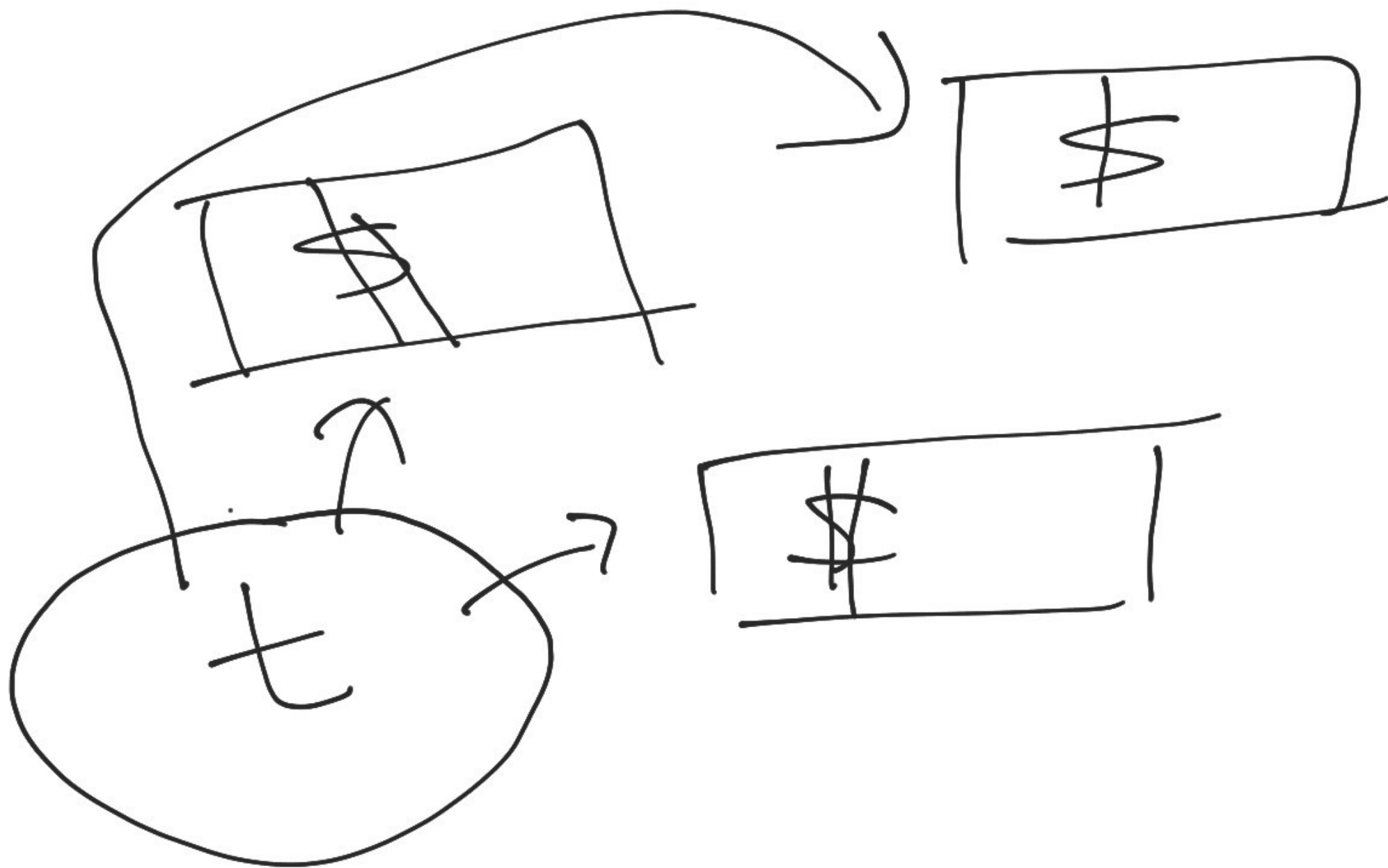
STARTALK  
PODCAST

THAT WAY, WE WON'T HAVE THE

→ NEED TO LEAVE EARTH. "









WHY BOTHER?



PEACEFUL

NOT  
PEACEFUL

?

NOT

AFTER

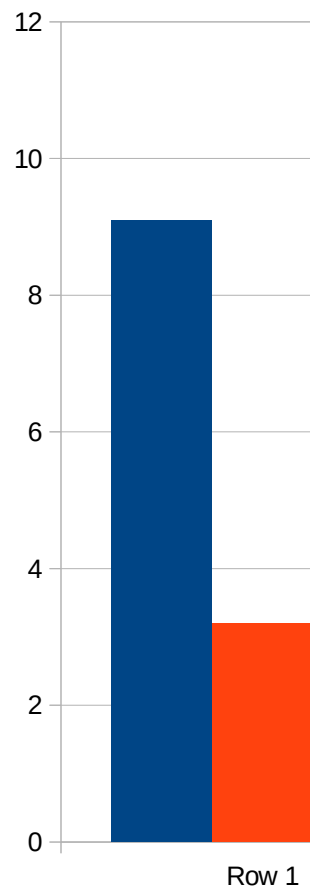
UN

✓

AFTER

UN

✗



GRACIAS!!

- FUENTES

NASA

CRACKED.COM  
SPACEX