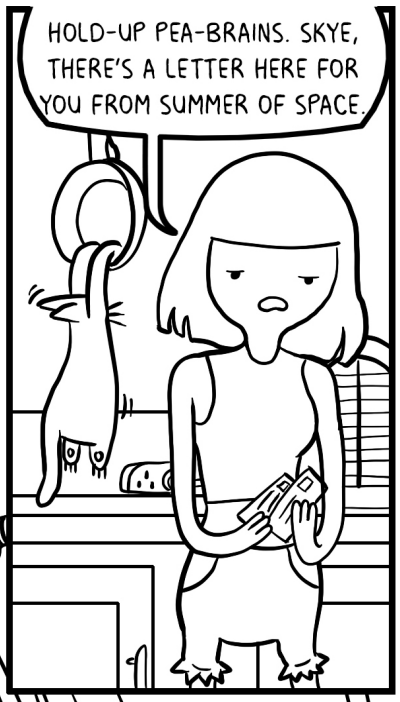
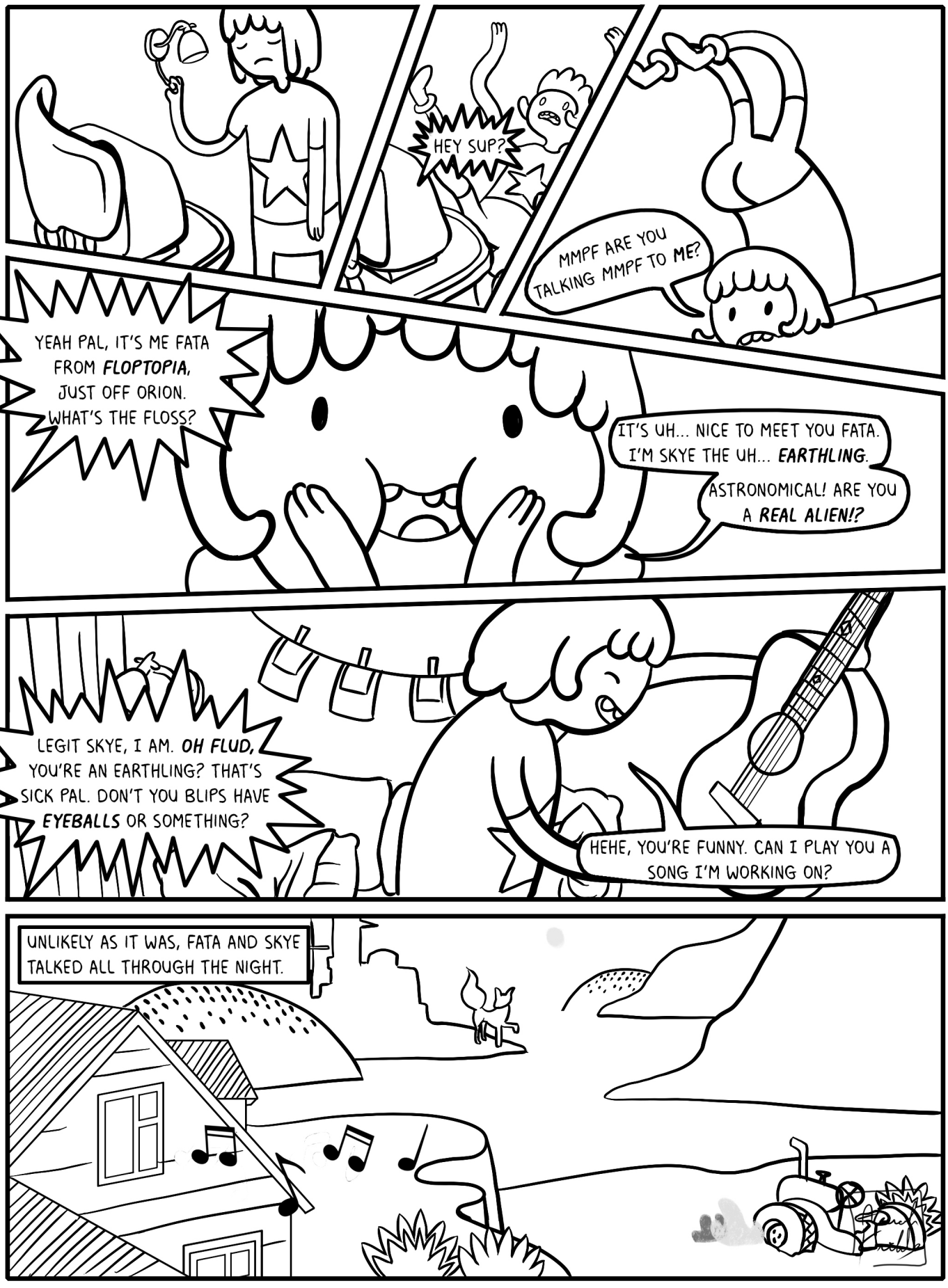
FINDING FLOPTOPIA

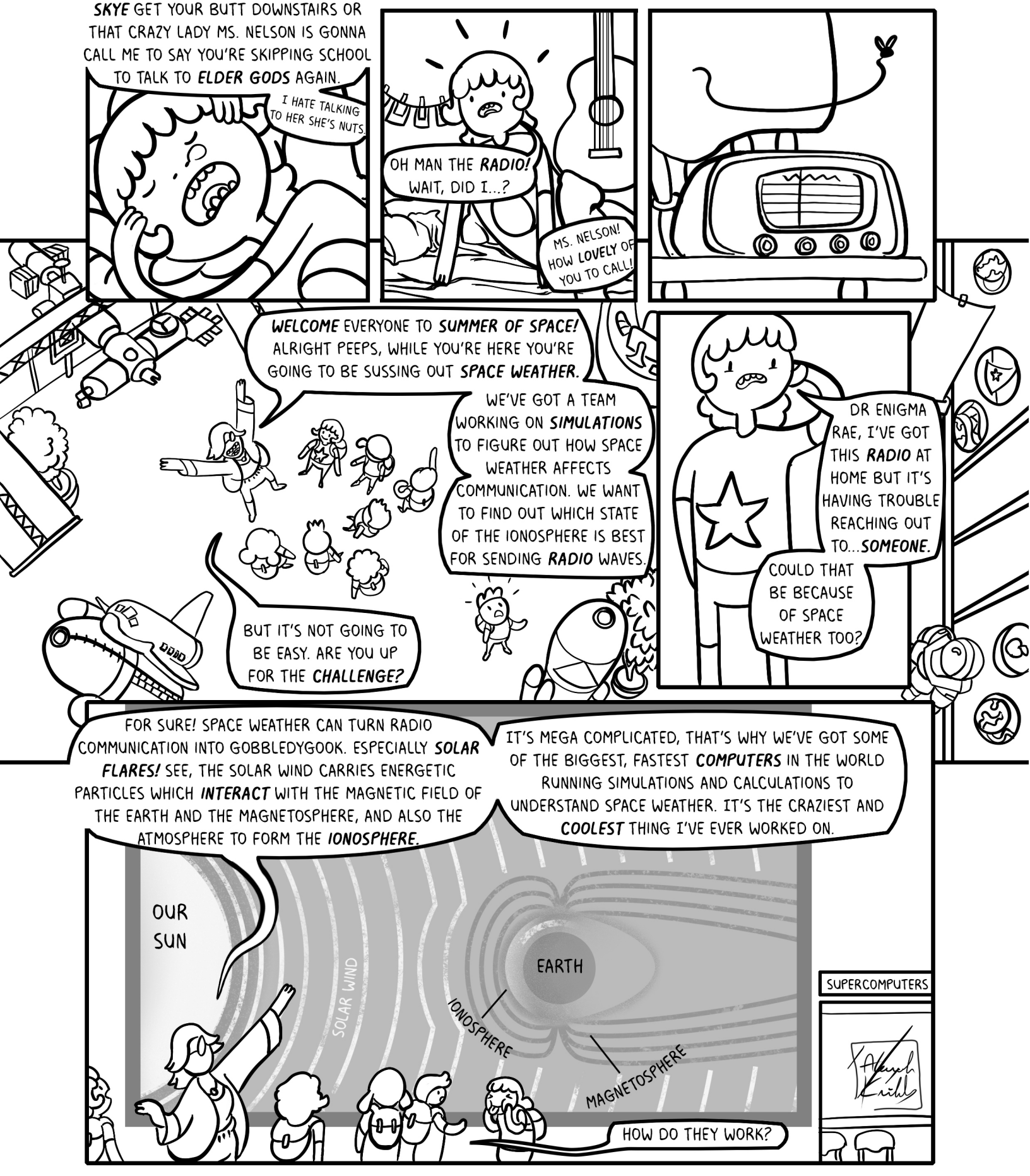
PRACE

CO-WRITTEN AND ILLUSTRATED BY ALANAH KNIBB



LATER THAT EVENING.


HEY SUP?
MMPF ARE YOU TALKING MMPF TO ME?
YEAH PAL, IT'S ME FATA FROM FLOPTOPIA, JUST OFF ORION. WHAT'S THE FLOSS?
IT'S UH... NICE TO MEET YOU FATA. I'M SKYE THE UH... EARTHLING.
ASTRONOMICAL! ARE YOU A REAL ALIEN!?
LEGIT SKYE, I AM. OH FLUD, YOU'RE AN EARTHLING? THAT'S SICK PAL. DON'T YOU BLIPS HAVE EYEBALLS OR SOMETHING?
HEHE, YOU'RE FUNNY. CAN I PLAY YOU A SONG I'M WORKING ON?
UNLIKELY AS IT WAS, FATA AND SKYE TALKED ALL THROUGH THE NIGHT.


SKYE GET YOUR BUTT DOWNSTAIRS OR THAT CRAZY LADY MS. NELSON IS GONNA CALL ME TO SAY YOU'RE SKIPPING SCHOOL TO TALK TO ELDER GODS AGAIN.
I HATE TALKING TO HER SHE'S NUTS.
OH MAN THE RADIO! WAIT, DID I...?
MS. NELSON! HOW LOVELY OF YOU TO CALL!
WELCOME EVERYONE TO SUMMER OF SPACE! ALRIGHT PEEPS, WHILE YOU'RE HERE YOU'RE GOING TO BE SUSSING OUT SPACE WEATHER.
WE'VE GOT A TEAM WORKING ON SIMULATIONS TO FIGURE OUT HOW SPACE WEATHER AFFECTS COMMUNICATION. WE WANT TO FIND OUT WHICH STATE OF THE IONOSPHERE IS BEST FOR SENDING RADIO WAVES.
BUT IT'S NOT GOING TO BE EASY. ARE YOU UP FOR THE CHALLENGE?
DR ENIGMA RAE, I'VE GOT THIS RADIO AT HOME BUT IT'S HAVING TROUBLE REACHING OUT TO...SOMEONE.
COULD THAT BE BECAUSE OF SPACE WEATHER TOO?
FOR SURE! SPACE WEATHER CAN TURN RADIO COMMUNICATION INTO GOBBLEDYGOOK. ESPECIALLY SOLAR FLARES! SEE, THE SOLAR WIND CARRIES ENERGETIC PARTICLES WHICH INTERACT WITH THE MAGNETIC FIELD OF THE EARTH AND THE MAGNETOSPHERE, AND ALSO THE ATMOSPHERE TO FORM THE IONOSPHERE.
IT'S MEGA COMPLICATED, THAT'S WHY WE'VE GOT SOME OF THE BIGGEST, FASTEST COMPUTERS IN THE WORLD RUNNING SIMULATIONS AND CALCULATIONS TO UNDERSTAND SPACE WEATHER. IT'S THE CRAZIEST AND COOLEST THING I'VE EVER WORKED ON.
OUR SUN
SOLAR WIND
EARTH
IONOSPHERE
MAGNETOSPHERE
HOW DO THEY WORK?
SUPERCOMPUTERS

WELL YOUR ***SMARTPHONE*** IS A COMPUTER. IMAGINE A ***GIANT*** BALL POOL WHERE EACH BALL IS A PHONE AND THEY'RE ALL ***CONNECTED*** AND WORKING TOGETHER. IT'S LIKE HAVING 100 PEOPLE DO YOUR ***HOMEWORK*** FOR YOU, IT WOULD BE DONE IN ***NO TIME!***

SCALE THAT UP TO ALL YOUR HOMEWORK FOR A WHOLE YEAR. A SUPERCOMPUTER COULD DO IT IN ***LESS THAN A MINUTE!***

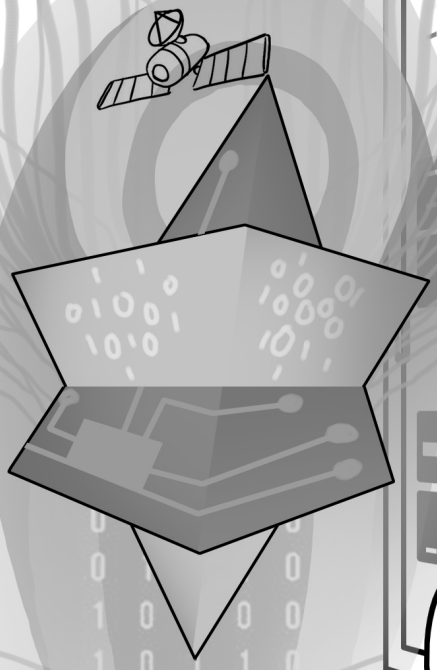
IN EUROPE, ***PRACE*** PROVIDES ACCESS TO THE LARGEST MACHINES AVAILABLE.

WE'VE GOT 26 COUNTRIES IN THIS GROUP, ALL WITH SUPERCOMPUTERS, ALL WORKING TOGETHER.

NICEEE... SO HOW DOES THAT HELP YOU PREDICT SPACE WEATHER?

A ***SPACE WEATHER*** FORECAST IS MUCH LIKE A NORMAL WEATHER FORECAST. FIRST, WE ***OBSERVE*** SPACE WEATHER WITH THE HELP OF ***SATELLITES***, RADARS AND MAGNETOMETERS.

THEN, WE FEED THAT INFORMATION INTO THE SUPERCOMPUTER MODEL WHICH ***SIMULATES*** HOW MATTER AND ENERGY FLOW AND INTERACT.



THEN WE FIRE UP THE SUPERCOMPUTER AND IT DOES A ***HUMONGOUS*** AMOUNT OF CALCULATIONS UNTIL THE FORECAST IS READY. WE LOOK AT THE ***RESULTS***, UNDERSTAND THEM AND PREDICT WHAT COULD HAPPEN.

AND TO DO ALL THAT WE NEED TO UNDERSTAND ***CODING***, SO WE CAN ACTUALLY ***USE*** THE SPACE WEATHER DATA.

NO PEEPS, IT'S ***EASY***. I JUST NEED TO CALCULATE THE BEST SPACE WEATHER CONDITIONS TO REACH SOMEWHERE ***FAR FAR AWAY*** BY RADIO.

THEN I CAN FIND OUT IF ALL THIS FLOPTOPIA STUFF IS FOR ***REALS*** OR JUST IN MY BRAIN SPACE.

CODING CLASS

AND TO DO IT, I'LL USE ***SUPERCOMPUTERS!*** THAT'S IT! I'M GOING TO BECOME THE BEST SCIENTIST IN THE WORLD AND FIND FLOPTOPIA ***MYSELF!***

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