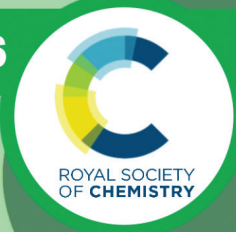


FREE!
#1


UNIVERSITY OF YORK AND TEESIDE UNIVERSITY PRESENTS



GREENKID




STORIES! PUZZLES! GAMES! IN THIS ISSUE: THE SECRET OF CYRENE!



CYRUS!

GLOSSARY!



SPROUT!

NOT SURE WHAT SOME OF THE WORDS IN THE COMIC MEAN? THAT'S OKAY! SPROUT AND CYRUS ARE HERE TO HELP!

CATALYSTS - SOMETHING THAT LOWERS THE ENERGY AND TIME NEEDED TO MAKE A REACTION HAPPEN BUT DOESN'T GET USED UP

CELLULOSE - THE MOST ABUNDANT CARBON BASED CHEMICAL ON EARTH, EVERY YEAR 100 BILLION TONS IS PRODUCED BY PLANTS. CELLULOSE IS A POLYMER MADE UP OF THE SUGAR GLUCOSE

CHEMICAL - A DISTINCT THING MADE FROM ATOMS

CIRCULAR ECONOMY - A CLOSED LOOP, AT THE END OF LIFE, THINGS CAN BE MADE BACK INTO NEW THINGS

COUNCIL - A GROUP OF PEOPLE WHO MAKE DECISIONS TOGETHER

CRUDE OIL - A MIX OF CARBON AND HYDROGEN CONTAINING CHEMICALS MADE FROM ORGANISMS THAT LIVED MILLIONS OF YEARS AGO

CYRENE™ - A SOLVENT MADE FROM CELLULOSE VIA LEVOGLUCOSENONE™

DNA - DEOXYRIBONUCLEIC ACID, THE INSTRUCTIONS FOR LIFE FOR ALMOST ALL LIVING THINGS. NEARLY EVERY CELL IN YOUR BODY HAS YOUR DNA IN IT AND IT CONTAINS ALL THE INFORMATION NEEDED FOR YOUR BODY TO MAKE YOU

EMISSIONS - THE PRODUCTION AND RELEASE OF SOMETHING, USUALLY A GAS

POLYMER - FROM GREEK, POLY MEANING MANY AND MER MEANING UNITS. IT IS A LONG CHAIN WITH LOTS OF REPEATING UNITS

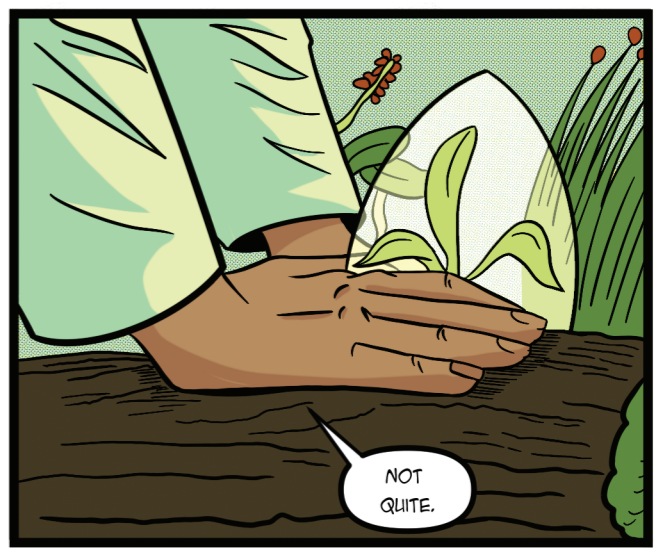
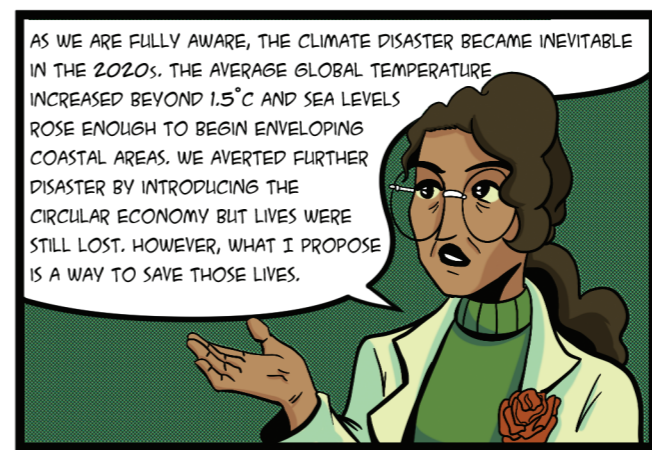
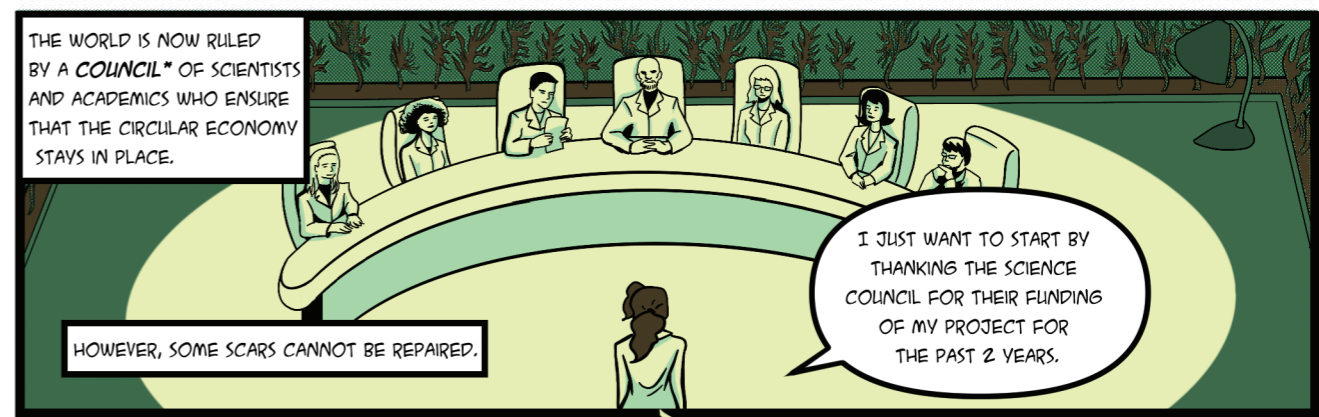
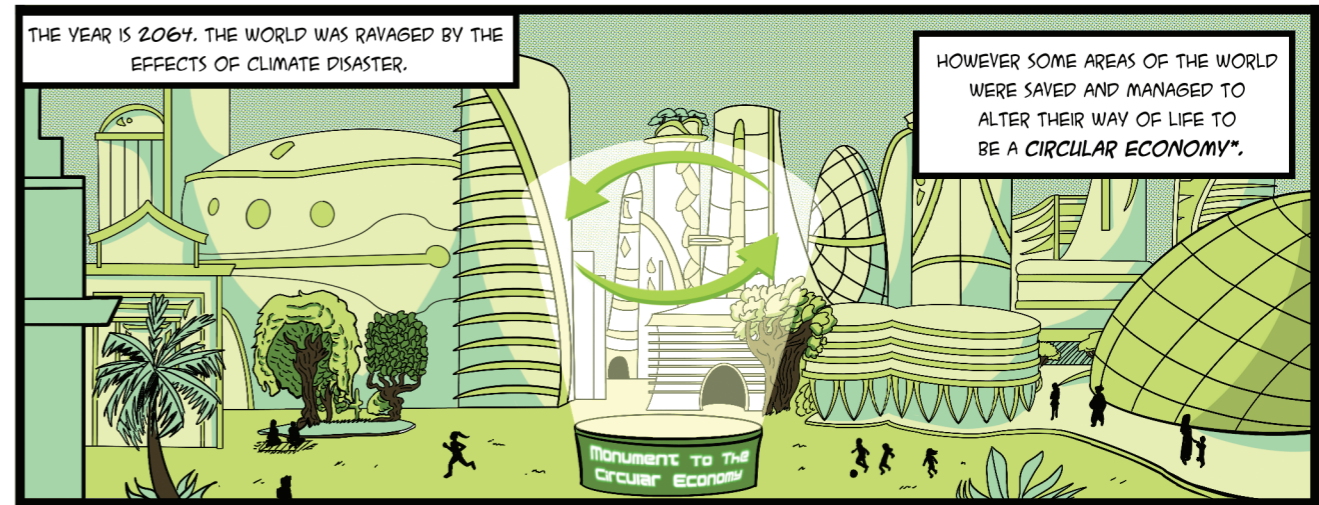
PYROLYSE - HEATING SOMETHING UP, BUT NOT IN AIR, SO THAT IT CHEMICALLY CHANGES BUT DOESN'T BURN

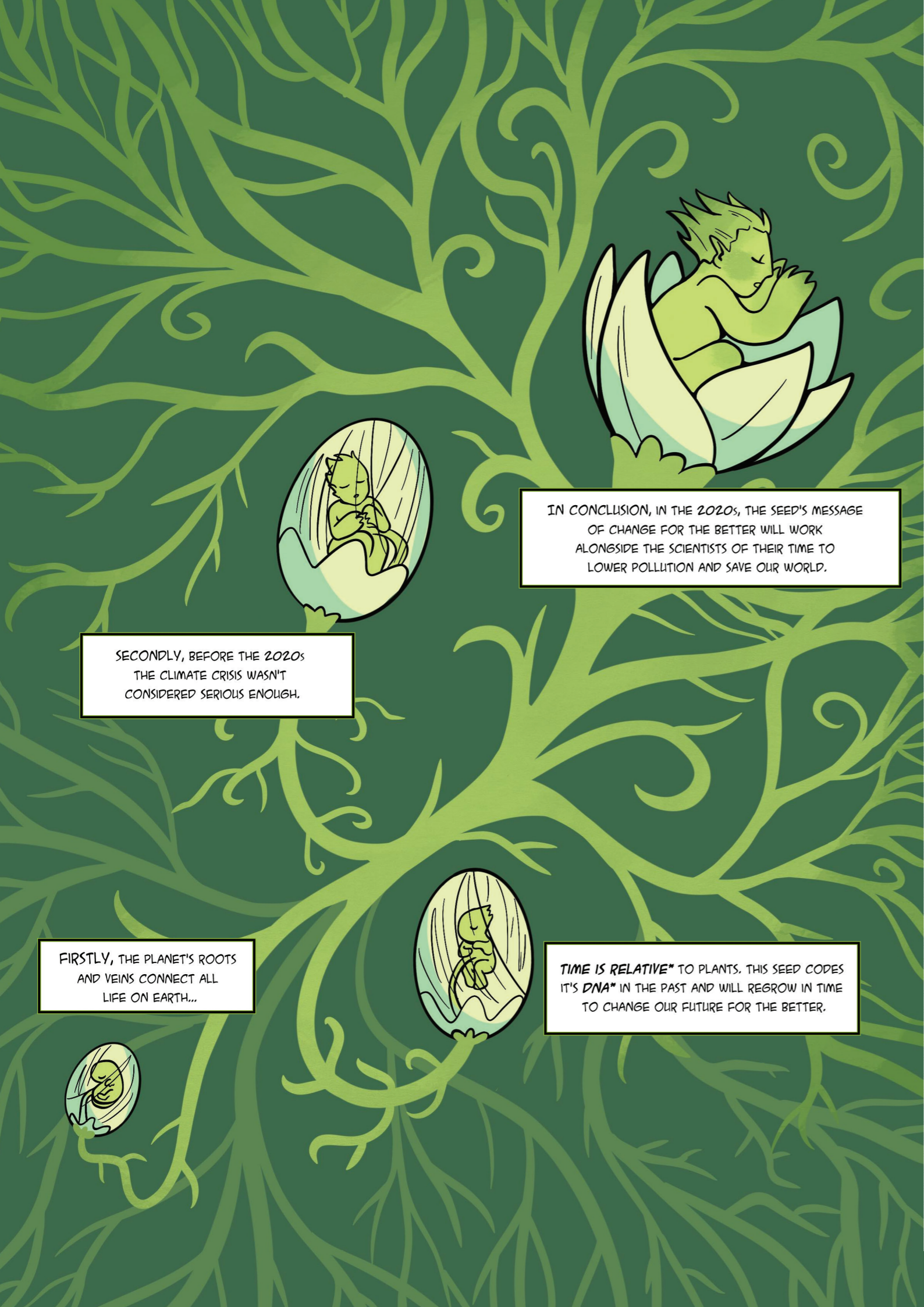
SOLVENT - A LIQUID THAT DISSOLVES OR DISPERSES THINGS. MOST SOLVENTS ARE MADE FROM CRUDE OIL, CYRENE IS NOT

SUSTAINABLE - MAKING SOMETHING IN A WAY THAT WE CAN KEEP ON MAKING IT FOREVER WITHOUT HARMING PEOPLE, THE ENVIRONMENT OR THE ECONOMY

TIME IS RELATIVE - HOW MUCH TIME PASSES DEPENDS ON YOUR FRAME OF REFERENCE

* - ACKNOWLEDGED TO CIRCA GROUP PTY LTD





IN CONCLUSION, IN THE 2020s, THE SEED'S MESSAGE OF CHANGE FOR THE BETTER WILL WORK ALONGSIDE THE SCIENTISTS OF THEIR TIME TO LOWER POLLUTION AND SAVE OUR WORLD.



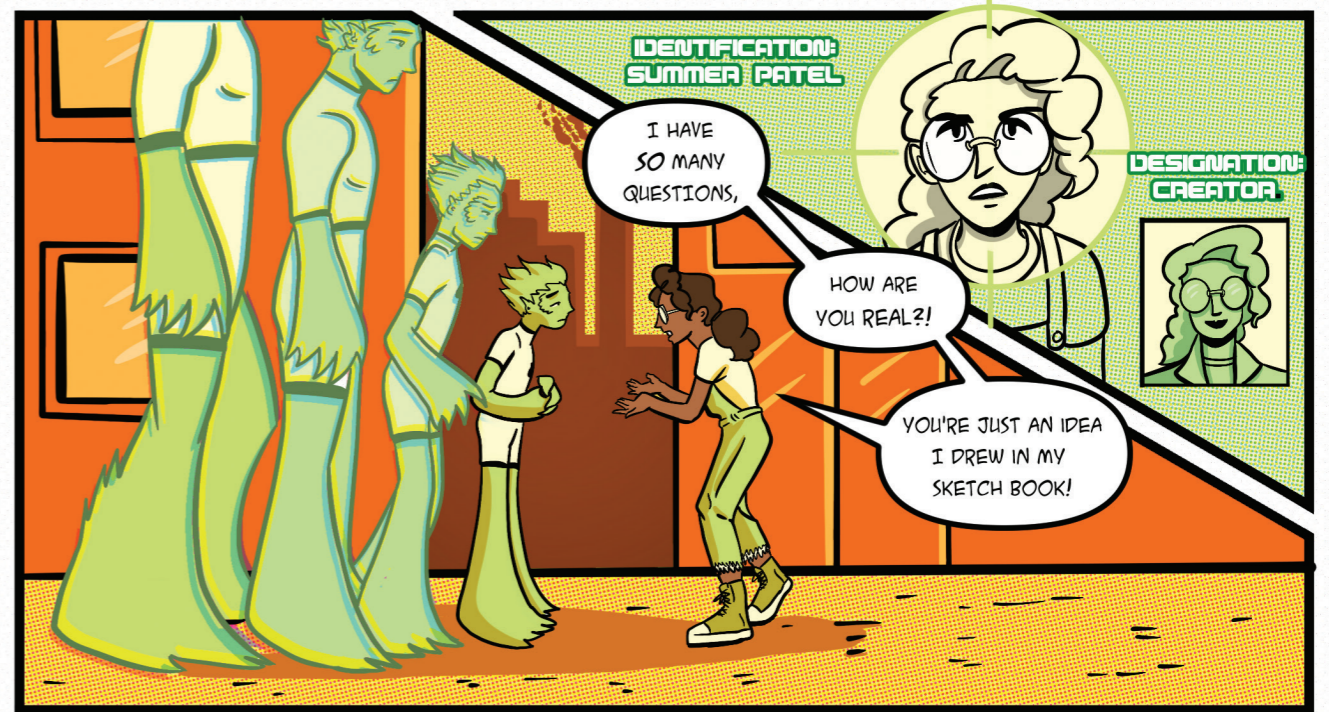
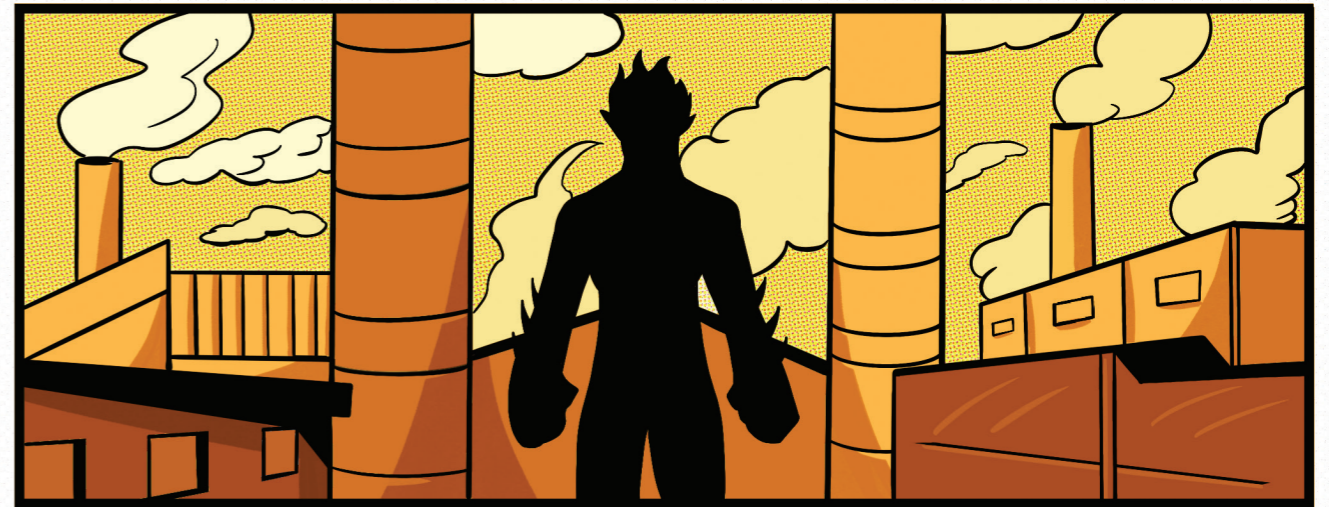
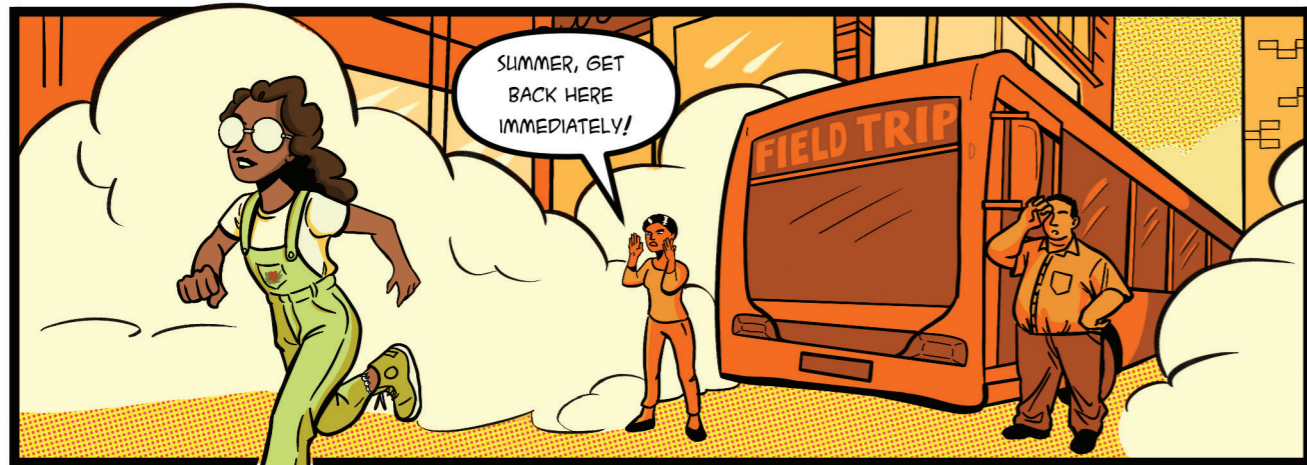
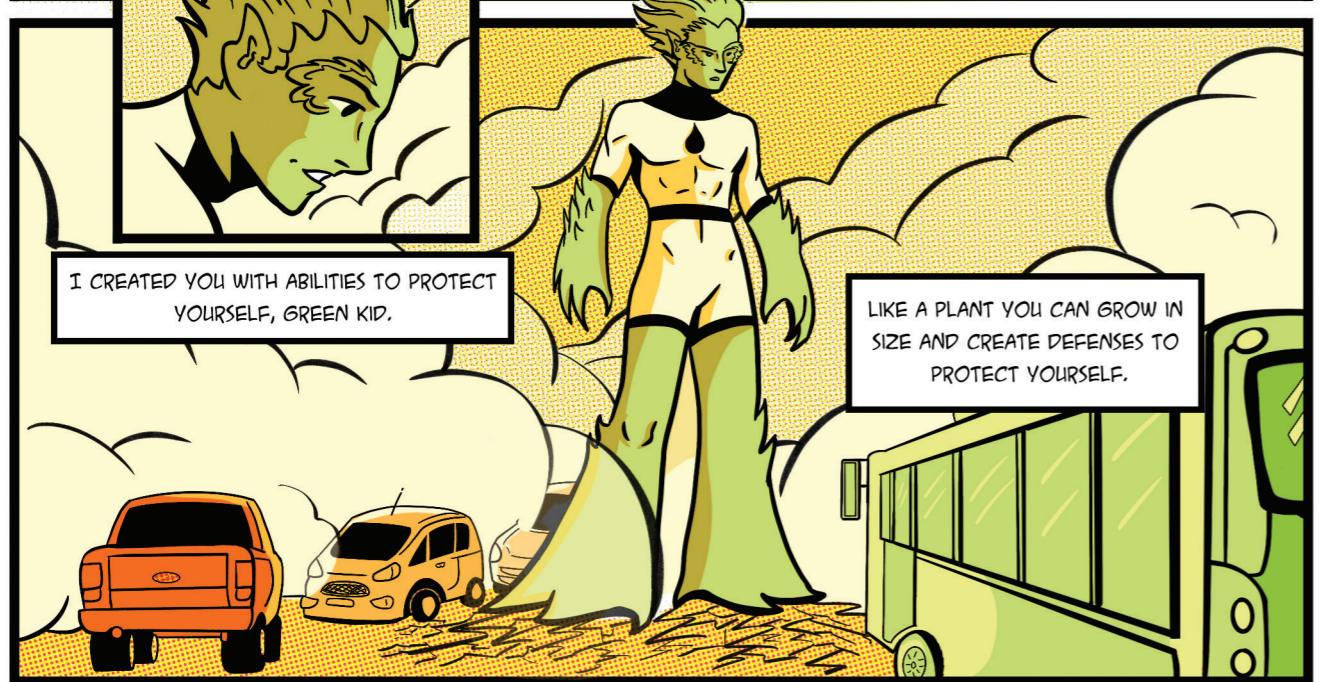
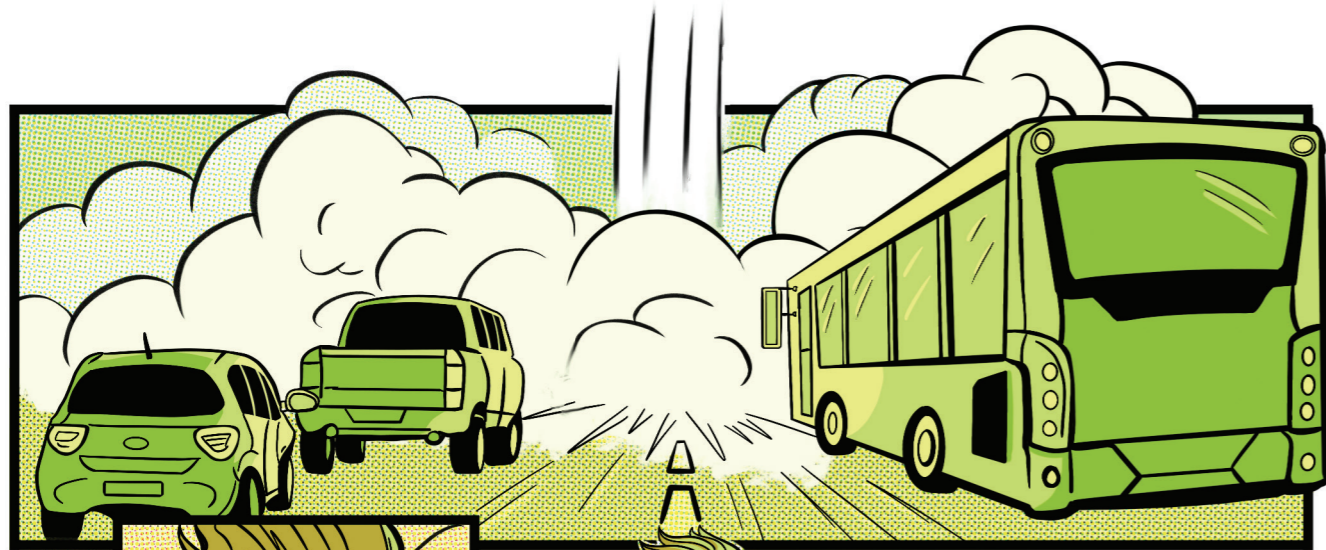
SECONDLY, BEFORE THE 2020s THE CLIMATE CRISIS WASN'T CONSIDERED SERIOUS ENOUGH.



TIME IS RELATIVE* TO PLANTS. THIS SEED CODES IT'S DNA* IN THE PAST AND WILL REGROW IN TIME TO CHANGE OUR FUTURE FOR THE BETTER.

FIRSTLY, THE PLANET'S ROOTS AND VEINS CONNECT ALL LIFE ON EARTH...







AND HOW ARE YOU HERE?

YOU CREATED ME IN THE FUTURE TO COME BACK TO THE PAST TO HELP PREVENT THE CLIMATE DISASTER.

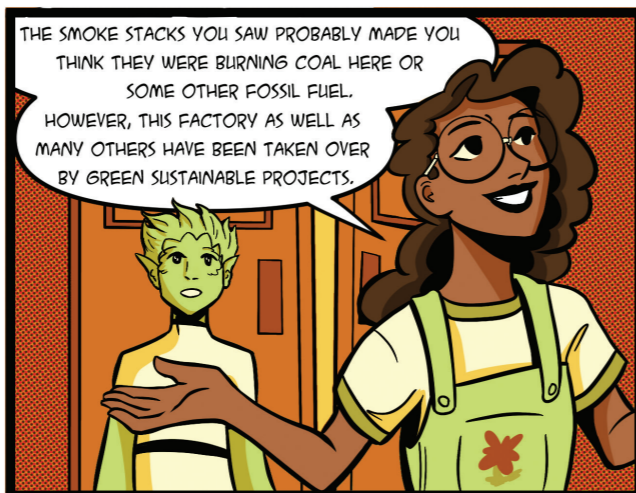
I THOUGHT IF I DESTROY THIS FACTORY IT'D HELP...

I.... WOW.



WELL YOU SHOULDN'T DESTROY THIS FACTORY ANYWAY. HERE THEY DO INCREDIBLY IMPORTANT WORK IN CREATING SUSTAINABLE SOLUTIONS!

OH?

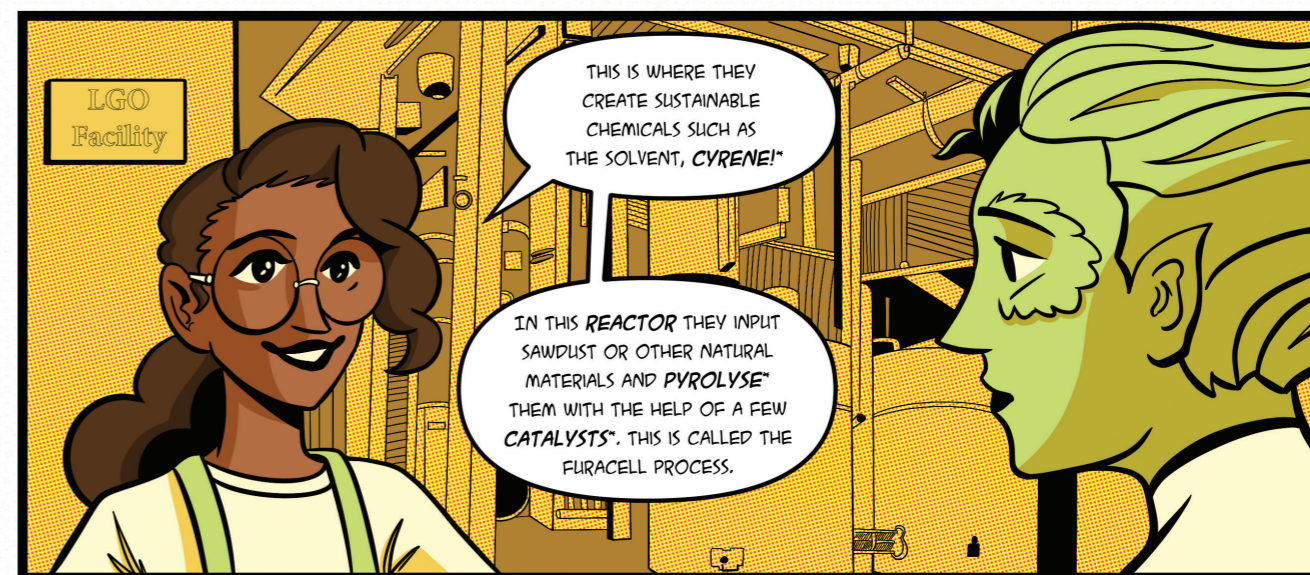


THE SMOKE STACKS YOU SAW PROBABLY MADE YOU THINK THEY WERE BURNING COAL HERE OR SOME OTHER FOSSIL FUEL. HOWEVER, THIS FACTORY AS WELL AS MANY OTHERS HAVE BEEN TAKEN OVER BY GREEN SUSTAINABLE PROJECTS.



WE JUST HAD A FIELD TRIP TO THIS SUSTAINABILITY FACILITY, LET ME SHOW YOU ONE OF THE AMAZING PROJECTS THAT THEY'RE WORKING ON!

PRETTY!

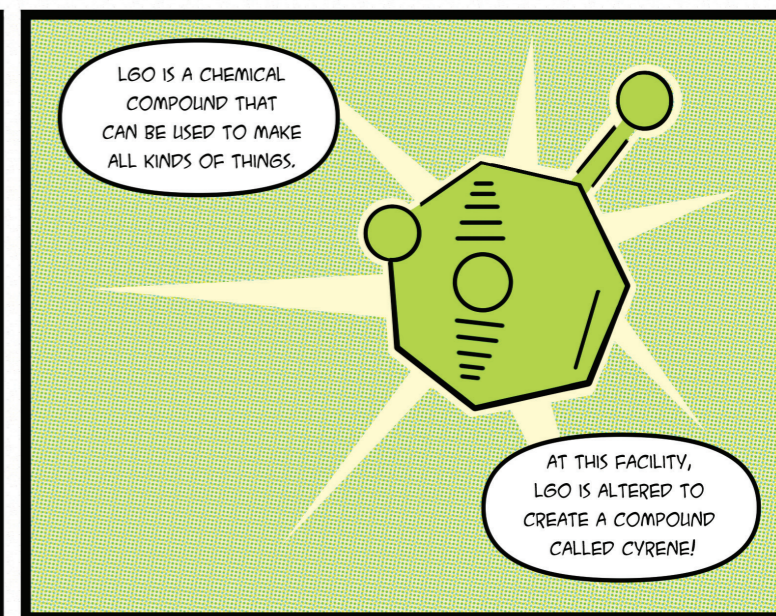


THIS IS WHERE THEY CREATE SUSTAINABLE CHEMICALS SUCH AS THE SOLVENT, **CYRENE!**

IN THIS **REACTOR** THEY INPUT SAWDUST OR OTHER NATURAL MATERIALS AND **PYROLYSE*** THEM WITH THE HELP OF A FEW **CATALYSTS***. THIS IS CALLED THE **FURACELL** PROCESS.

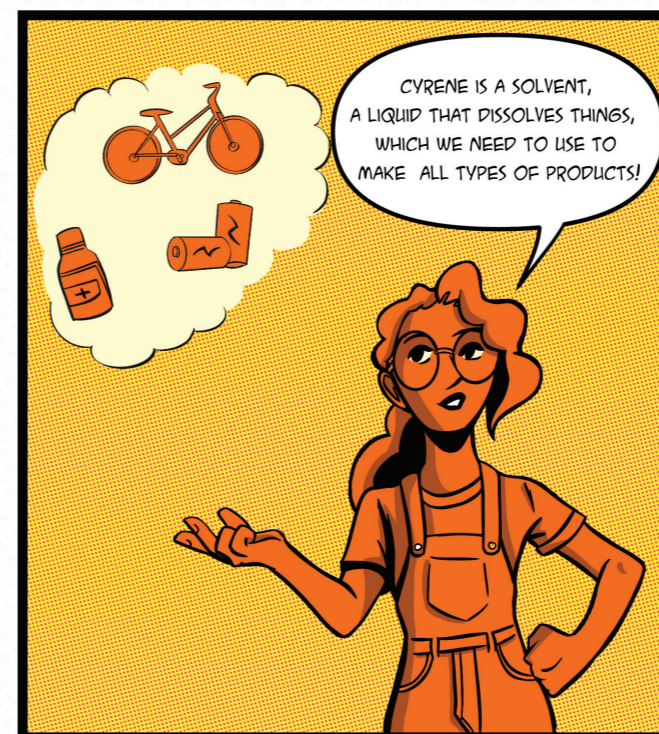


THIS CONVERTS THE **CELLULOSE*** INTO SOMETHING CALLED **LEVOGLUCOSENONONE™** OR **LGO** FOR SHORT.

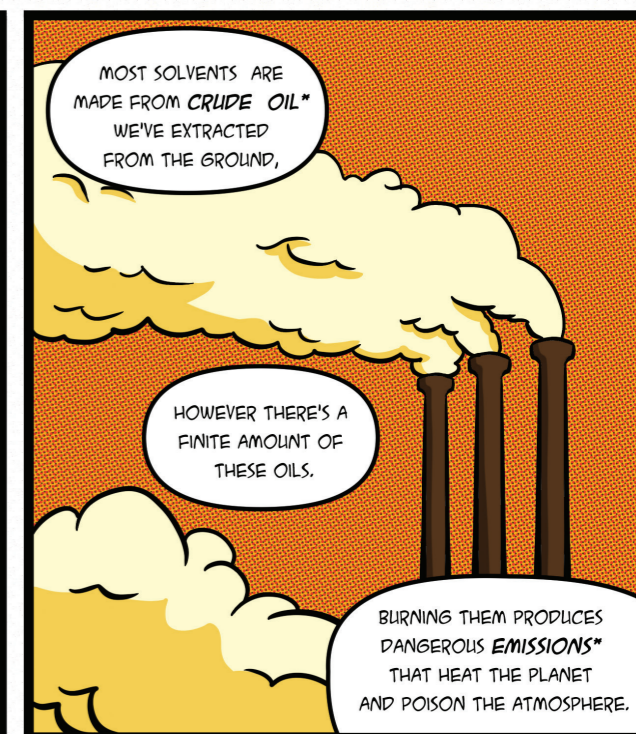


LGO IS A CHEMICAL COMPOUND THAT CAN BE USED TO MAKE ALL KINDS OF THINGS.

AT THIS FACILITY, LGO IS ALTERED TO CREATE A COMPOUND CALLED **CYRENE!**



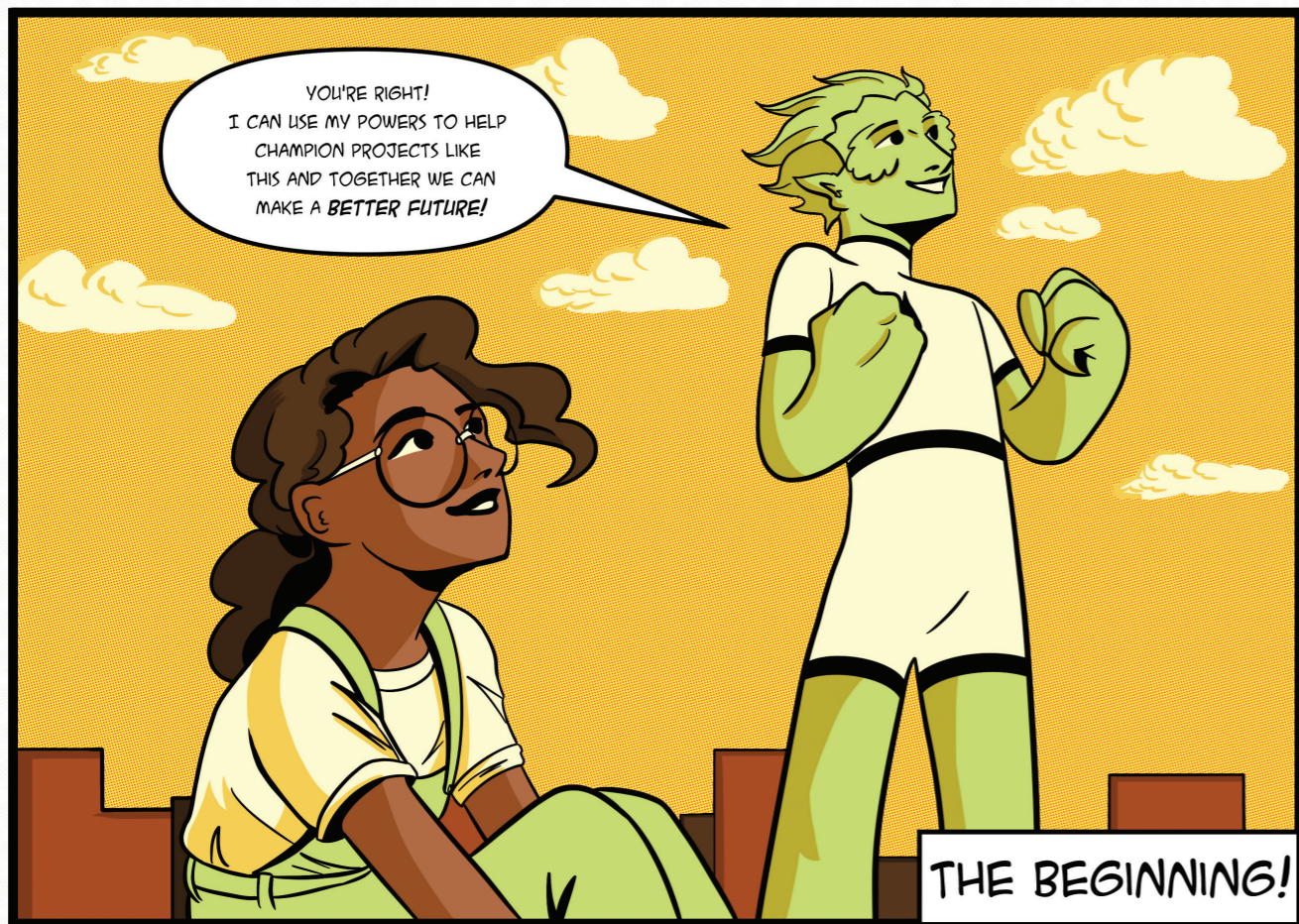
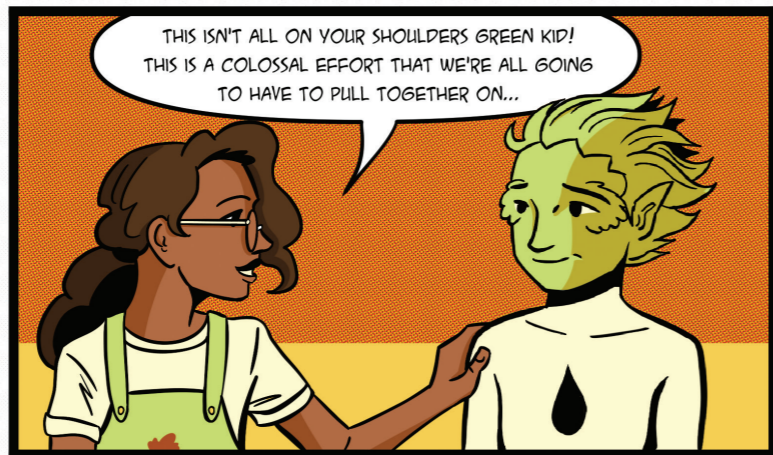
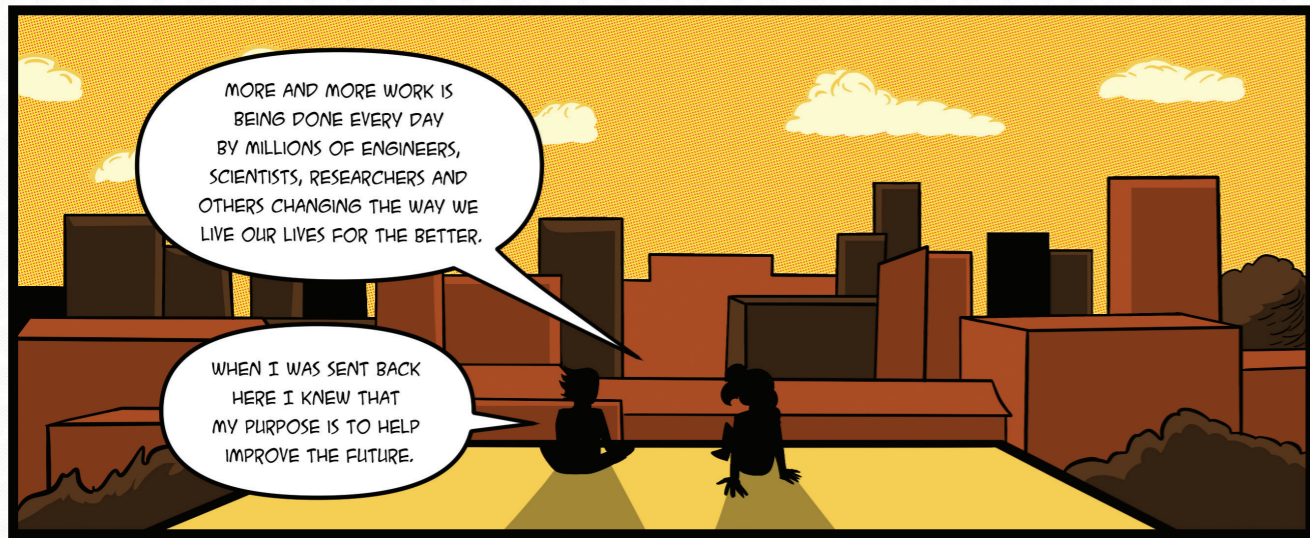
CYRENE IS A SOLVENT, A LIQUID THAT DISSOLVES THINGS, WHICH WE NEED TO USE TO MAKE ALL TYPES OF PRODUCTS!



MOST SOLVENTS ARE MADE FROM **CRUDE OIL*** WE'VE EXTRACTED FROM THE GROUND,

HOWEVER THERE'S A FINITE AMOUNT OF THESE OILS.

BURNING THEM PRODUCES **DANGEROUS EMISSIONS*** THAT HEAT THE PLANET AND POISON THE ATMOSPHERE.



FUN AND GAMES!

GREENKID AND HIS FRIENDS ARE HERE! CAN YOU HELP OUT HIS FRIENDS SPROUT AND CYRUS?



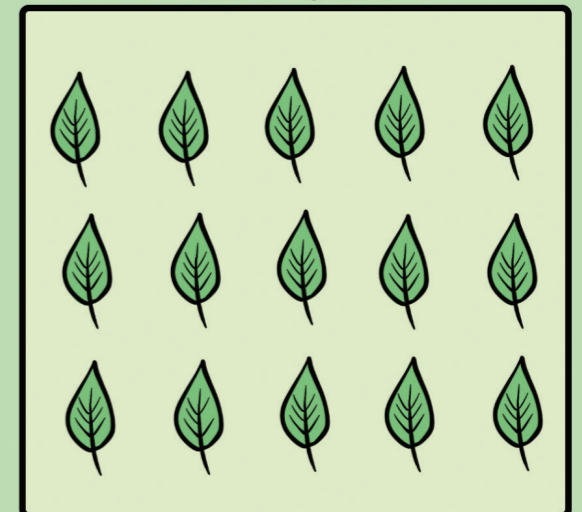
DID YOU COUNT THE GREENKID LOGOS IN THE COMIC?



COLOUR SPROUT AND GREENKID IN!

CAN YOU FIND THE ODD LEAF OUT?

BEST FRIENDS!



CAN YOU HELP CYRUS AND FIND THESE WORDS?

S	O	S	G	R	E	N	E	W	A	B	L	E
U	E	C	C	A	T	A	L	Y	S	T	L	E
S	F	U	D	T	Y	O	C	R	S	L	P	S
T	E	Y	E	D	P	D	T	S	O	M	Y	O
A	E	I	N	S	U	N	F	S	N	G	R	L
I	D	P	E	B	E	I	A	T	E	R	O	U
N	S	I	E	L	L	L	T	H	L	E	L	L
A	T	S	S	O	L	V	E	N	T	E	Y	L
B	O	T	S	H	L	S	E	O	V	N	S	E
L	C	T	W	O	O	V	N	A	E	K	I	C
E	K	N	E	O	Y	I	P	Y	O	I	S	S
N	E	R	O	Y	A	E	S	A	E	D	L	T
P	H	O	T	O	S	Y	N	T	H	E	S	I
S	O	E	Y	L	R	S	L	A	T	T	N	N

- GREENKID
- CATALYST
- SOLVENT
- CELLULOSE
- PYROLYSIS
- SUSTAINABLE
- RENEWABLE
- PHOTOSYNTHESIS
- POLYMER
- FEEDSTOCK



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