

A large-scale hydroponic greenhouse filled with rows of leafy vegetables. The plants are arranged in long, parallel channels, with green leafy vegetables in the foreground and red leafy vegetables in the background. The greenhouse structure is visible in the background, with a high ceiling and support beams.

HYDROPONICS

BY : NIKKI, DALILAH, SAMUEL, RYAN S,
JENNA

WHAT IS HYDROPONICS?

HYDROPONICS IS THE GROWING OF PLANTS IN GRAVEL WITH ADDED NUTRIENTS.

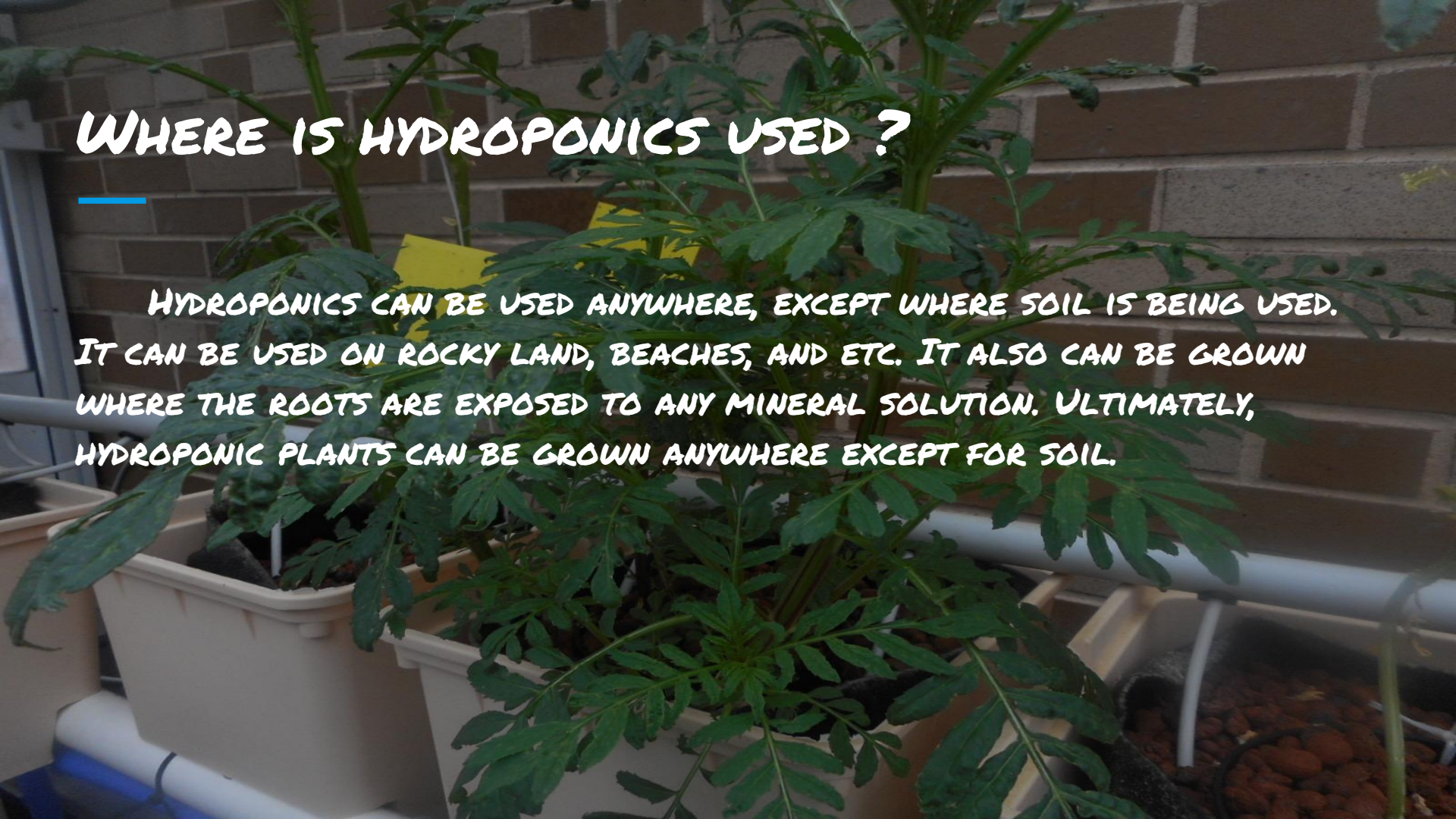


HOW DOES HYDROPONICS WORK ?

HYDROPONICS WORKS WHEN PLANTS ARE GROWN ANYWHERE EXCEPT FOR SOIL, AND THEY GET MOST OF THEIR NUTRIENTS FROM WATER AND SUNLIGHT. HYDROPONICS REVOLVES AROUND PROVIDING NUTRIENTS TO THE PLANTS FROM A WATER SYSTEM.

WHERE IS HYDROPONICS USED ?

HYDROPONICS CAN BE USED ANYWHERE, EXCEPT WHERE SOIL IS BEING USED. IT CAN BE USED ON ROCKY LAND, BEACHES, AND ETC. IT ALSO CAN BE GROWN WHERE THE ROOTS ARE EXPOSED TO ANY MINERAL SOLUTION. ULTIMATELY, HYDROPONIC PLANTS CAN BE GROWN ANYWHERE EXCEPT FOR SOIL.



WHY IS HYDROPONICS USED ?

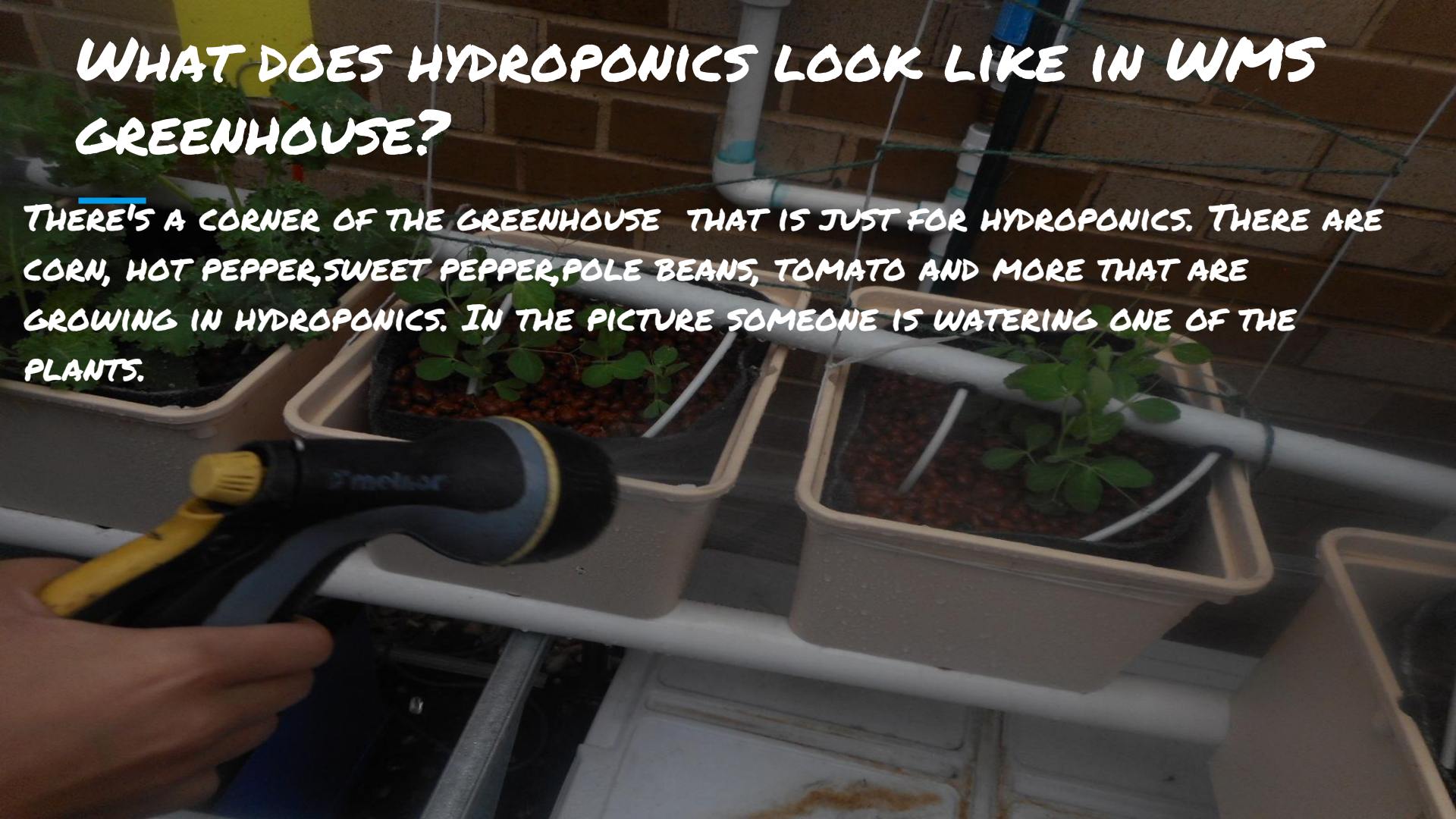
HYDROPONICS CAN ELIMINATE SOIL BORNE PEST AND DISEASES.
WHICH MEANS YOU NO LONGER WOULD HAVE TO USE
PESTICIDES. THIS MAKES HYDROPONICS MUCH MORE SAFE AND
HEALTHY THAN REGULAR FARMING.

WHO WOULD USE HYDROPONICS ?

PEOPLE WHO LIVE IN DESERTS AND TUNDRAS WOULD BE LIKELY TO USE HYDROPONICS BECAUSE THE CLIMATE OUTSIDE IS UNBEARABLE FOR MOST PLANTS. PEOPLE AND STORES IN BIG CITIES LIKE CHICAGO, NYC AND SAN FRANCISCO MIGHT USE HYDROPONICS BECAUSE OF THE TIGHT SPACES. HYDROPONICS WOULD BE USED IN UNUSED SPACES IN CITIES LIKE OLD WAREHOUSES.

WHAT DOES HYDROPONICS LOOK LIKE IN WMS GREENHOUSE?

THERE'S A CORNER OF THE GREENHOUSE THAT IS JUST FOR HYDROPONICS. THERE ARE CORN, HOT PEPPER, SWEET PEPPER, POLE BEANS, TOMATO AND MORE THAT ARE GROWING IN HYDROPONICS. IN THE PICTURE SOMEONE IS WATERING ONE OF THE PLANTS.



WHAT DID EACH PERSON DO WHILE IN THE GREENHOUSE.

JENNA TOOK PICTURES OF THE PLANTS GROWTH SO WE CAN SEE IF THE THE FIRST WEEKS PLANTS PICTURE WHY HEALTHY OR WORST THAN THE SECOND

SAM MEASURED HOW MUCH THE PLANTS GREW WITH A RULER TO MAKE SURE THEY ARE GROWING HEALTHY.

DALILAH CHECKED FOR WHITEFLIES, WHITEFLIES SUCK THE NUTRIENTS OUT OF THE PLANTS SO GENTLY FLICKY THEM OFF REALLY HELPS THE PLANTS.

NIKKI DID THE PH READINGS AND EC READINGS SO SHE CAN CHECK IF THE PLANTS WERE GETTING ENOUGH NUTRIENTS.

RYAN S ALSO MEASURED HOW MUCH THE PLANT GREW WITH A RULER TO MAKE SURE THEY ARE GROWING HEALTHY.

ALL OF THESE STEPS WERE DONE BECAUSE WE WANT TO SHOW HOW WE MEASURED PLANTS, AND HOW WE TOOK CARE OF THE PLANTS.

MEASUREMENTS

THESE ARE ALL MOSTLY GOOD MEASUREMENTS FOR HYDROPONICS. THE PH SHOULD BE AROUND 7- 7.5 AND IT STAYED IN THAT RANGE. THE EC GOT A LITTLE HIGH IN THE BEGINNING BUT IT LOWERED. THE TEMPERATURE WAS GOOD.

DATE	EC	PH	TEMPERATURE
3/6/17	2.7	7.1	60.3
3/13/17	2.6	7.0	60.5
4/7/17	2.4	7.2	60.3

SUMMARY

DOING HYDROPONICS WAS FUN TO LEARN ABOUT. WE LEARNED HOW EVEN THOUGH PEOPLE LIVE IN A TIGHT PLACE OR A PLACE WITH NO SOIL THEY CAN STILL GROW FOODS. I THOUGHT HYDROPONICS WAS VERY USEFUL AND A SMART IDEA. I THOUGHT IT WAS USEFUL BECAUSE IF YOU'RE IN AN AREA THAT DOESN'T HAVE GOOD SOIL YOU COULD USE HYDROPONICS TO RAISE YOUR CROPS. I THOUGHT THAT HYDROPONICS WAS A FUN AND INTERESTING, AND I LEARNED MORE ABOUT IT WHEN I WAS IN THE GREENHOUSE. HYDROPONICS WAS A VERY INTERESTING PROJECT, I LEARNED HOW TO MAINTAIN THE PLANTS USING HYDROPONICS. ITS VERY INTERESTING BECAUSE THE PLANTS ARE GROWING IN WATER AND NUTRIENTS INSTEAD OF SOIL SAND OR ROCK.