

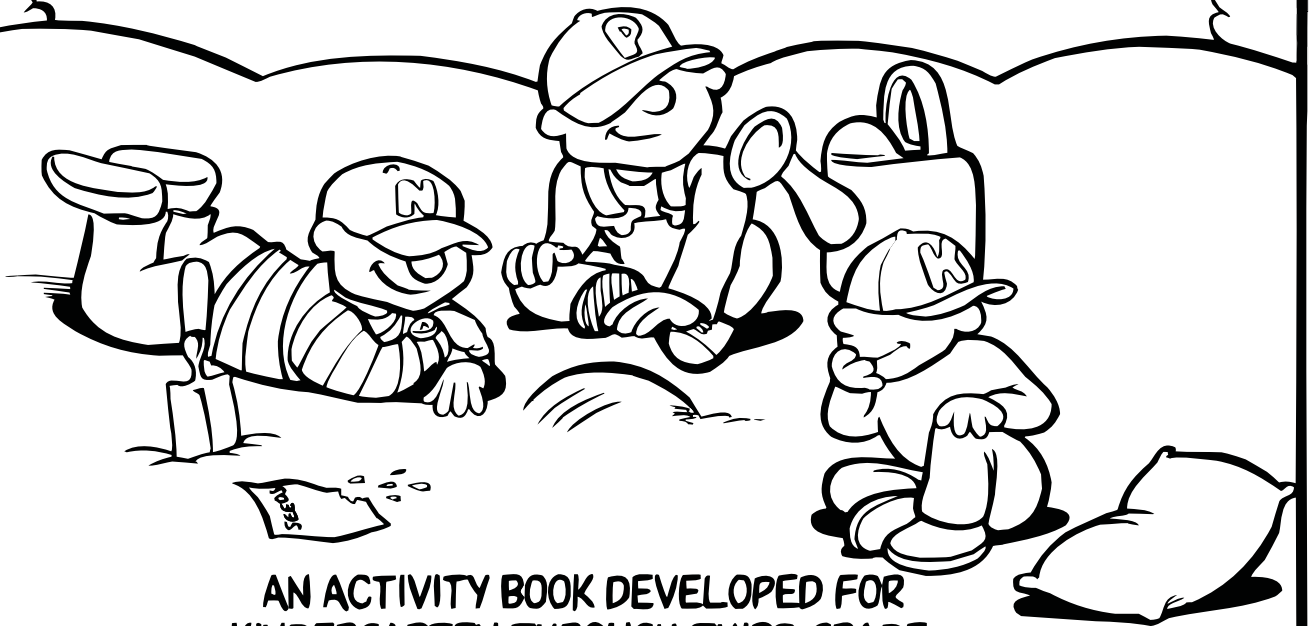
FUN WITH THE
**PLANT
NUTRIENT
TEAM**

Humans, animals and plants all depend on the soil for life. Without soil, we could not grow the food we eat. There would be no place to hold and store the water we drink. There would be no place for us to build our houses, roads, schools and cities.

How we care for the soil is important to our lives. As the world population increases and more food is needed to feed all the people, a knowledge of what is best for the soil, what is best for the plants and what is best for the world around us is a necessary part of everyone's education.

Fun with the Plant Nutrient Team activity book was written to help children better understand what the soil needs to be healthy in order to provide us with healthy foods.

FUN WITH THE PLANT NUTRIENT TEAM



AN ACTIVITY BOOK DEVELOPED FOR
KINDERGARTEN THROUGH THIRD GRADE.

ILLUSTRATED BY
GREG CRAVENS

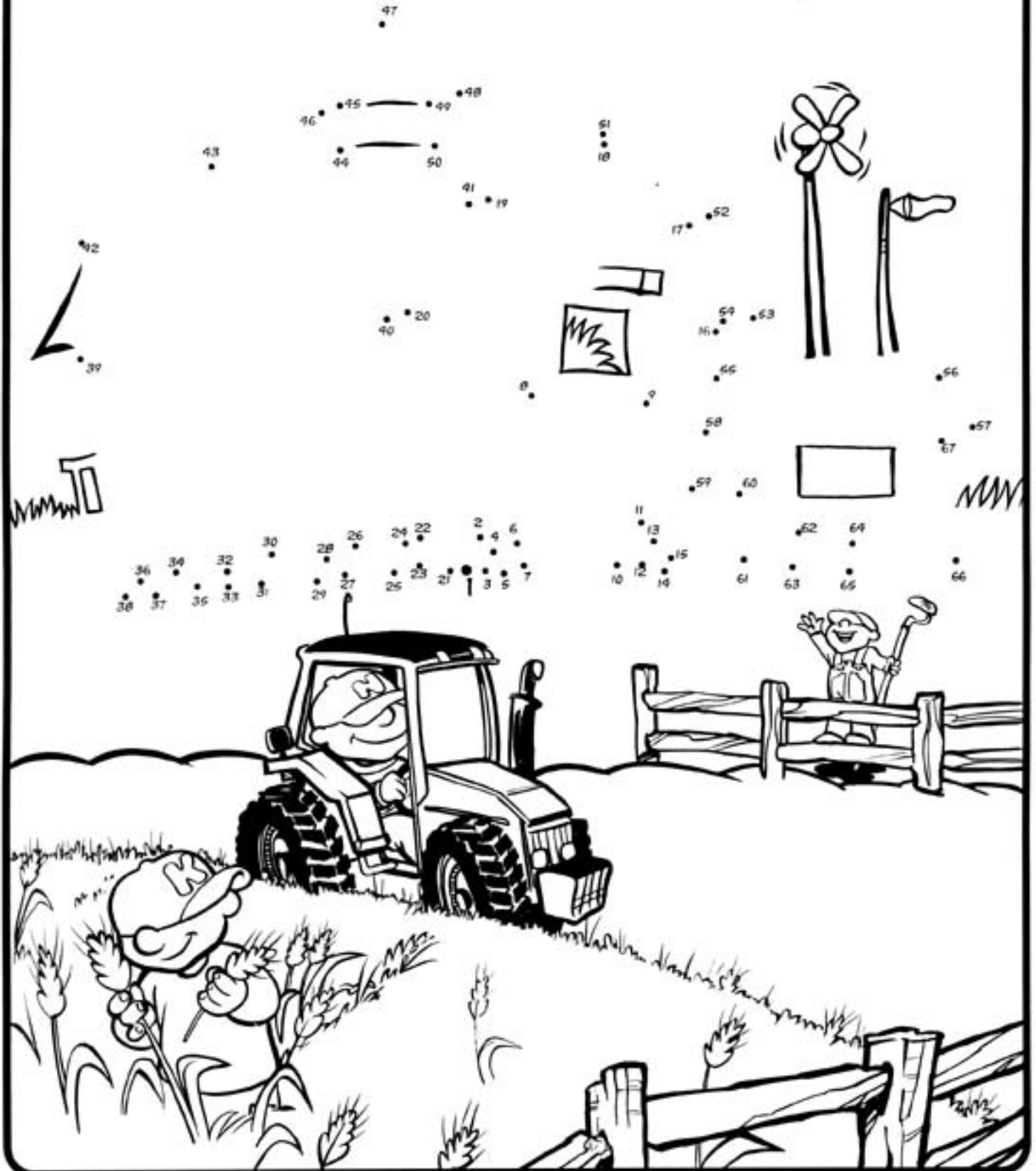
PLANT NUTRIENT TEAM

MY NAME
IS
NITROGEN,
AND MY
HAT HAS A
LETTER 'N'!

AND I'M
POTASSIUM,
WITH A LARGE
LETTER 'K' ON
MY HAT!

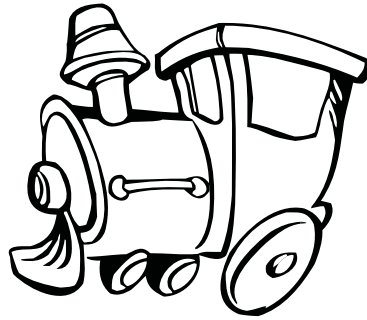
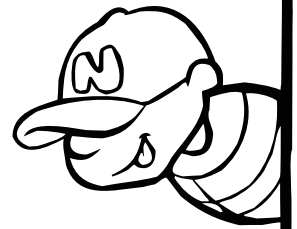
THEY CALL ME
PHOSPHORUS,
AND MY HAT
HAS A LARGE
LETTER 'P'!

WE HELP THE FARMER PRODUCE HEALTHY PLANTS!



CIRCLE THE RIGHT ANSWERS

PLANTS NEED:

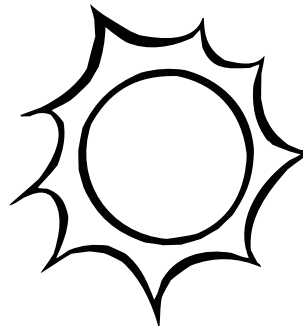
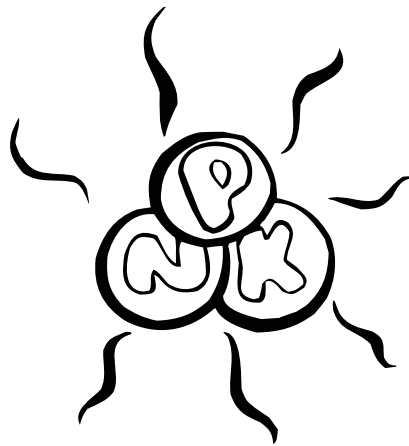


MILK

LIGHT



WATER

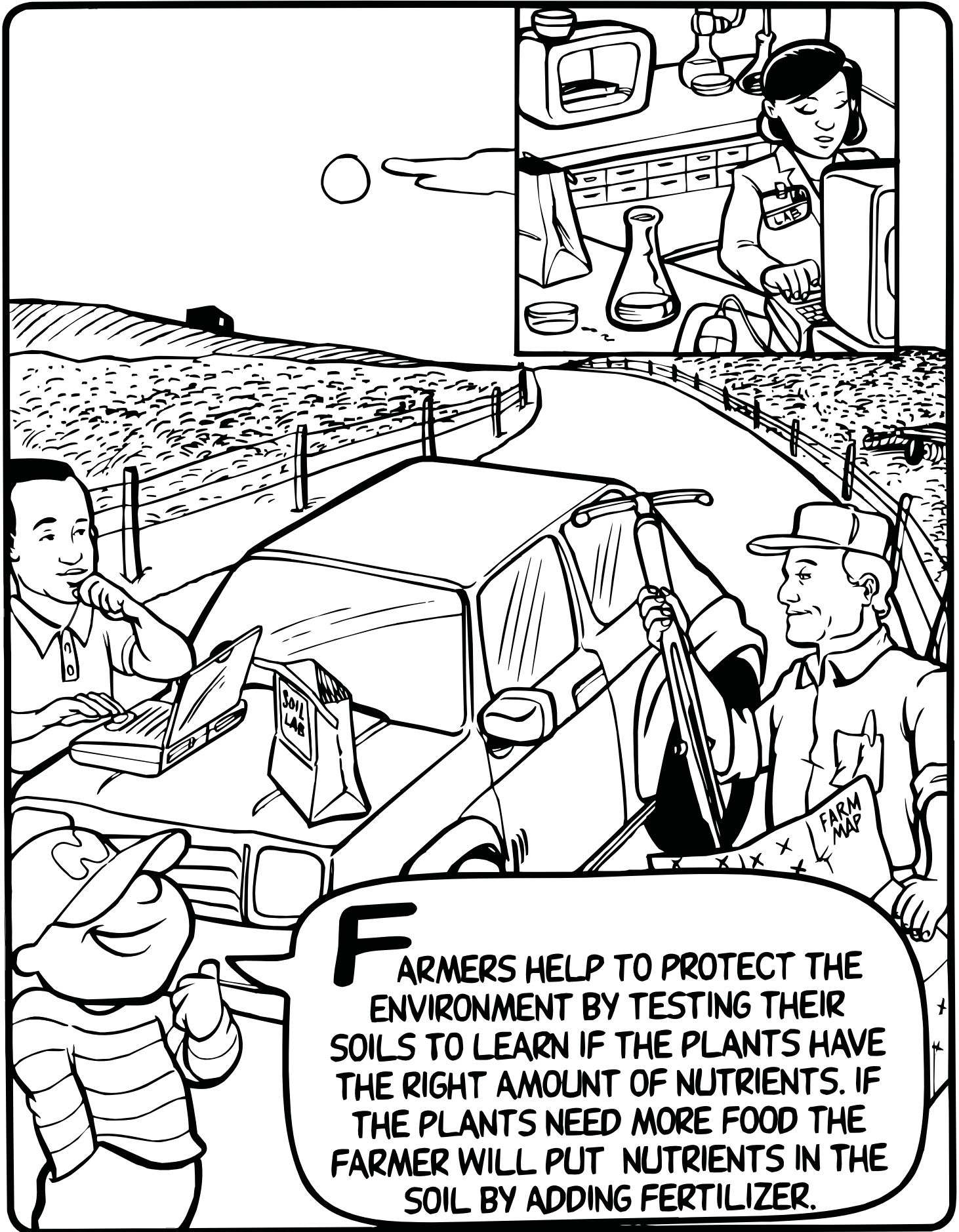


NUTRIENTS

TOYS

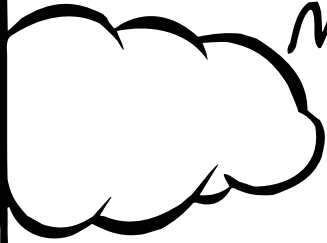


LITTLE SWEATERS



FARMERS HELP TO PROTECT THE ENVIRONMENT BY TESTING THEIR SOILS TO LEARN IF THE PLANTS HAVE THE RIGHT AMOUNT OF NUTRIENTS. IF THE PLANTS NEED MORE FOOD THE FARMER WILL PUT NUTRIENTS IN THE SOIL BY ADDING FERTILIZER.

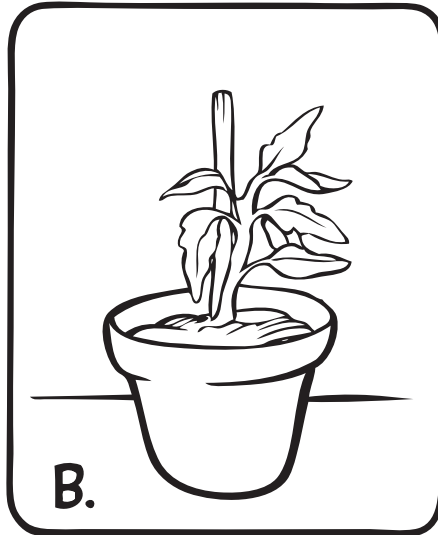
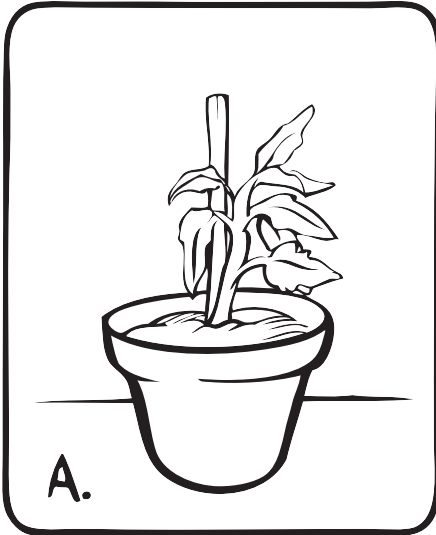
PLANTS CAN BECOME SICK.
WHEN THEY DO THE FARMER
MUST FIND OUT WHY.



CAN YOU FIND SOME OF
THE UNHEALTHY PLANTS?

LET'S DO AN EXPERIMENT!

LET'S SEE WHAT HAPPENS TO PLANTS WHEN THEY DO NOT HAVE FOOD AND SUNLIGHT.



- DISTILLED WATER
- SAND
- SUNLIGHT

- TAP WATER
- GOOD SOIL
- SUNLIGHT

- TAP WATER
- SAND
- NO SUNLIGHT

DAY 1   

DAY 1   

DAY 1   

DAY 4   

DAY 4   

DAY 4   

DAY 7   

DAY 7   

DAY 7   

DAY 11   

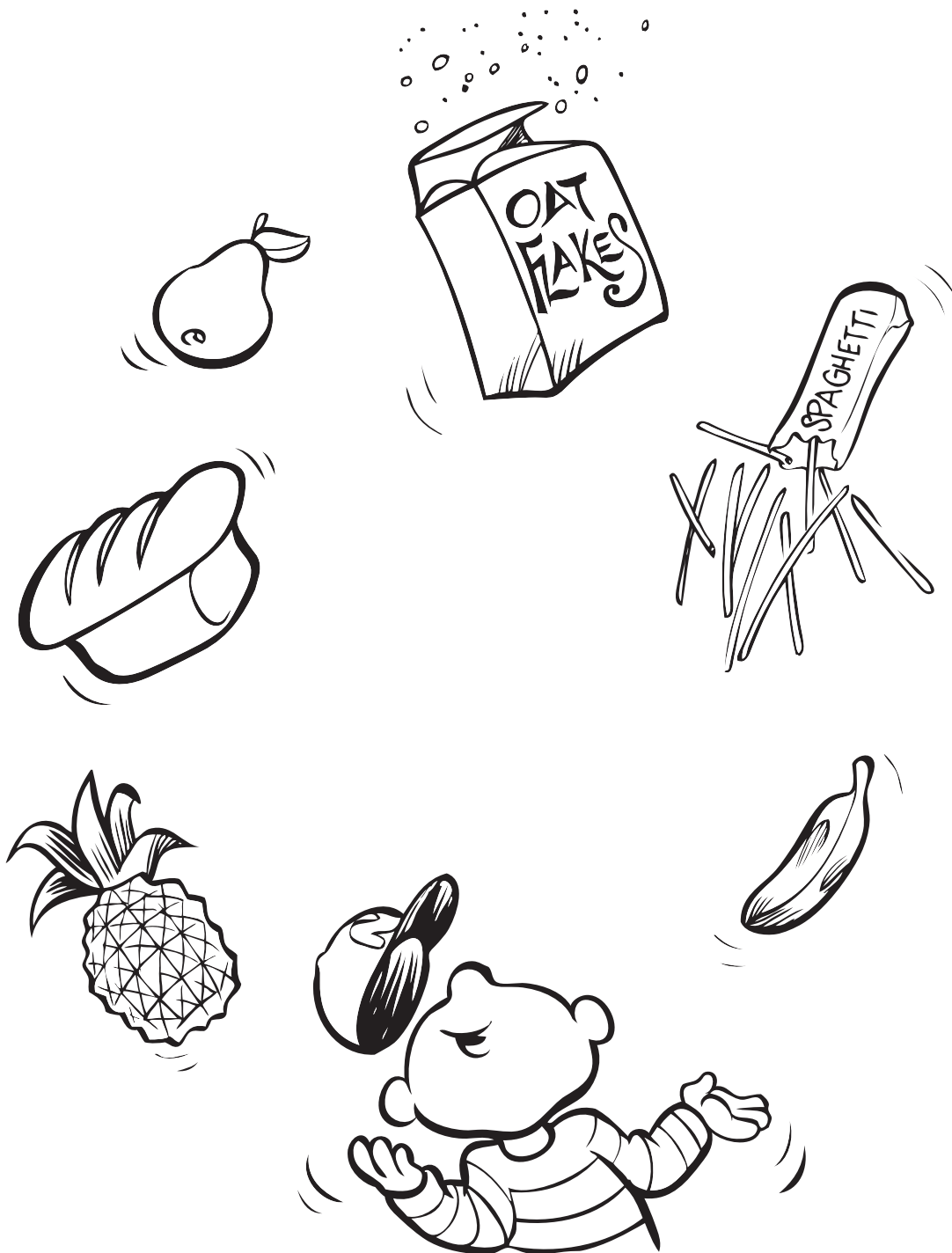
DAY 11   

DAY 11   

DAY 14   

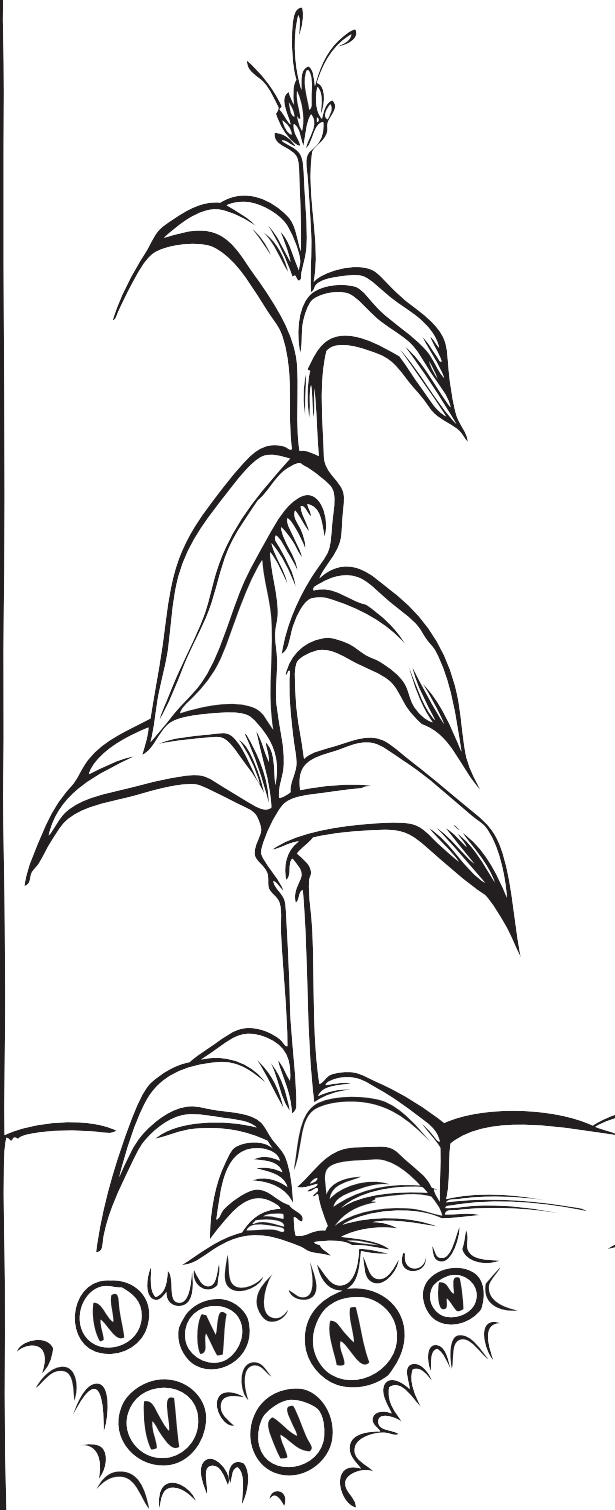
DAY 14   

DAY 14   



**NITROGEN (N) IS A PART OF
PROTEIN WE GET FROM FOOD.**

**CIRCLE THE FRUIT OBJECTS IN RED.
CIRCLE THE GRAIN PRODUCTS IN GREEN.**



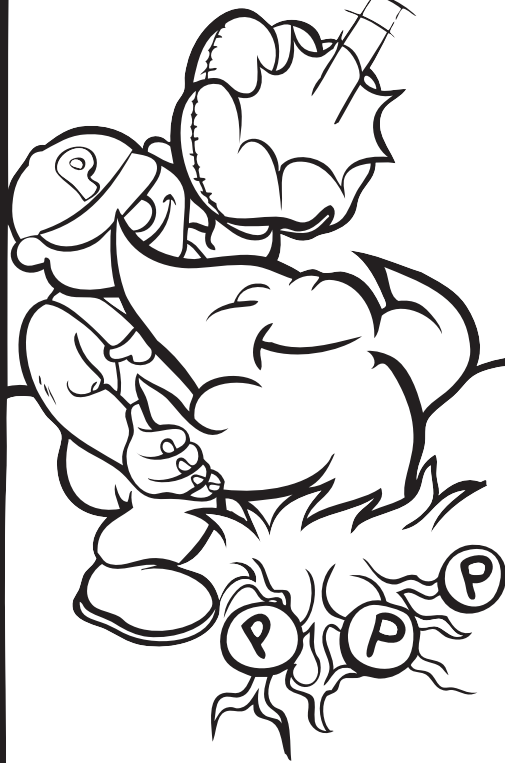
CORN AND OTHER PLANTS
NEED NITROGEN (N) TO BE
GREEN AND HEALTHY.

HELP!



WITHOUT N, PLANTS
ARE WEAK AND LOOK
YELLOW.

PHOSPHORUS (P) HELPS
THE PLANT CATCH THE
SUN'S ENERGY.

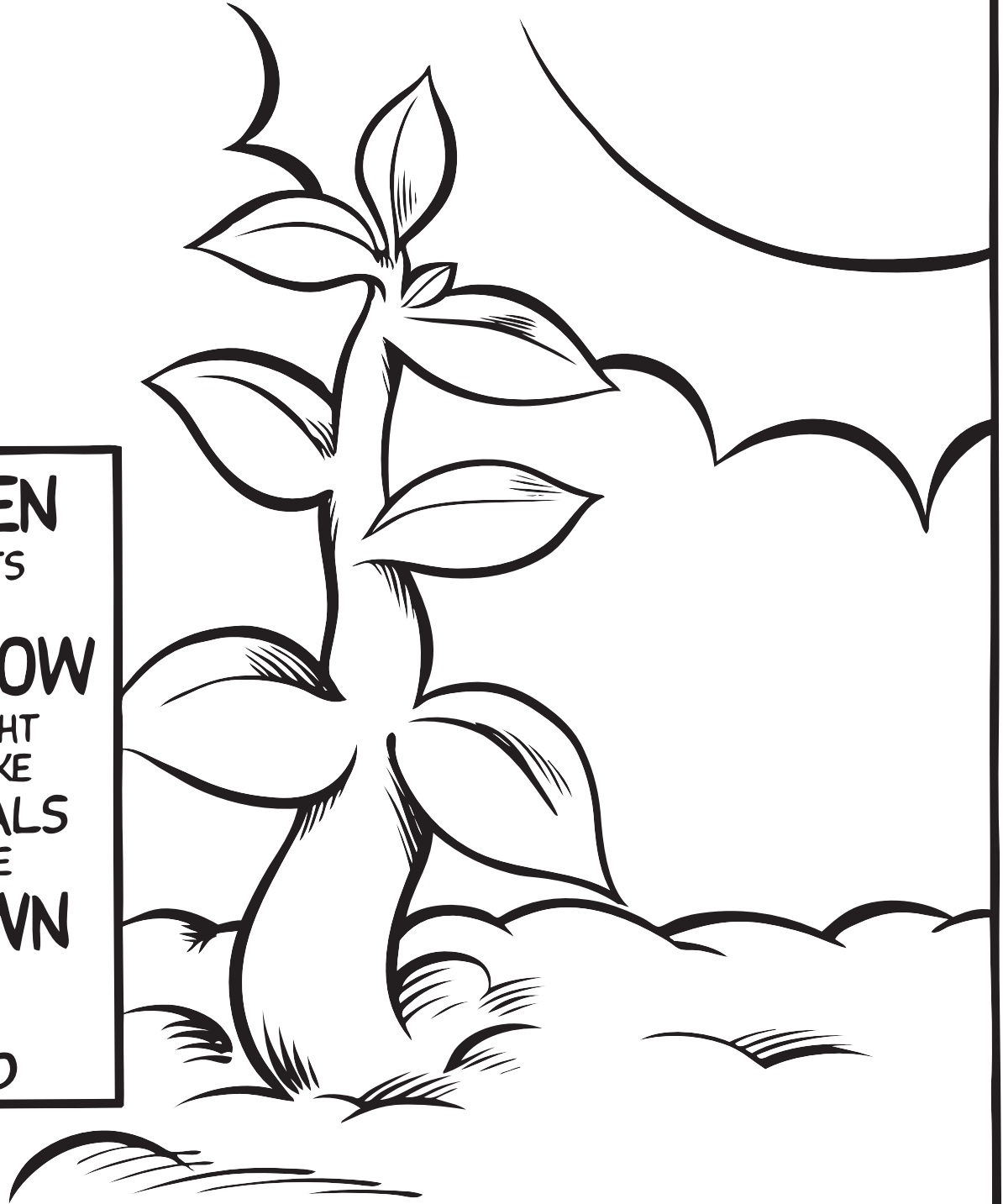


PLANTS NEED P FOR HEALTHY ROOTS

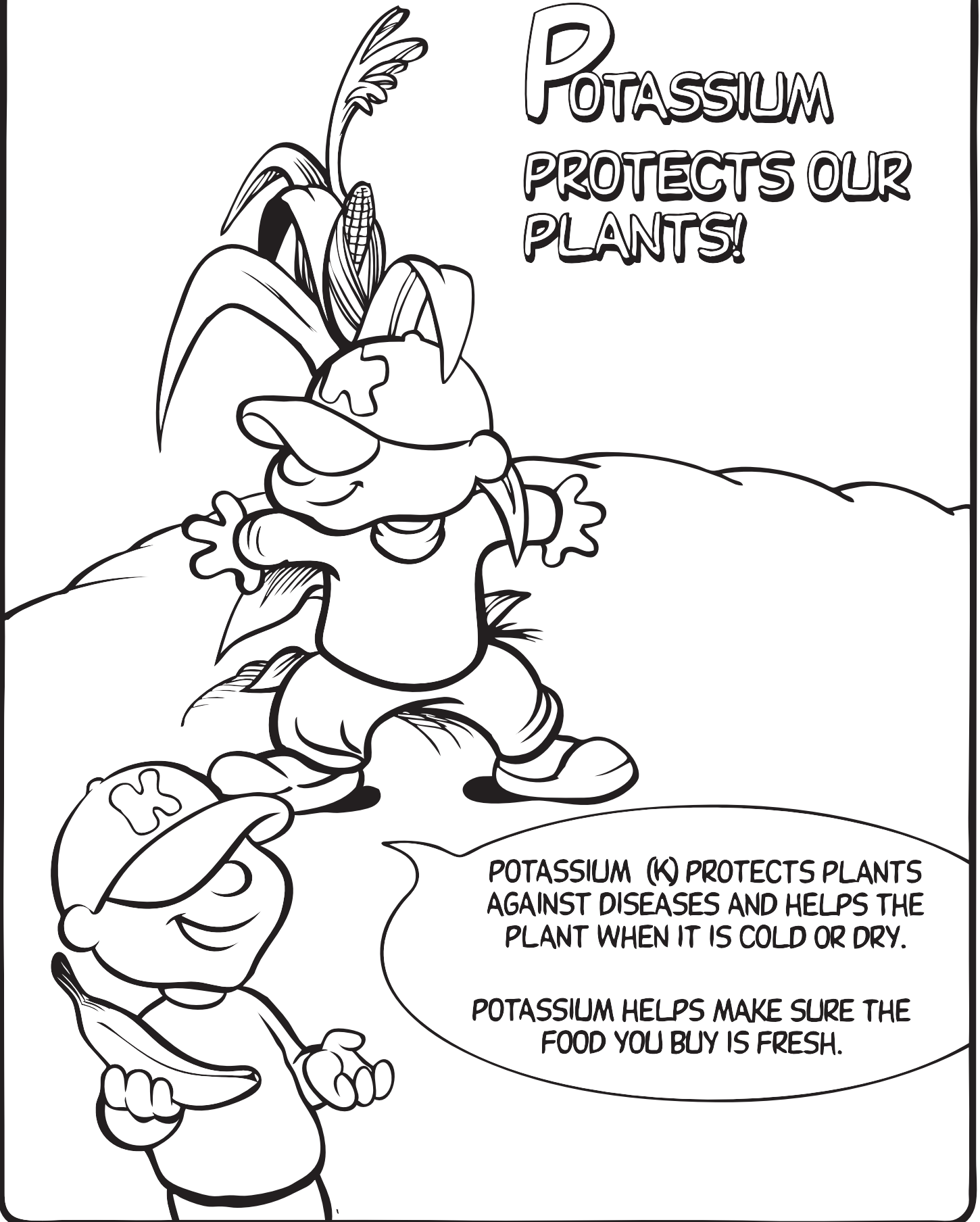
PHOTOSYNTHESIS

PHOTOSYNTHESIS IS THE WAY PLANTS USE SUNLIGHT TO MAKE ENERGY FOR THEMSELVES SO THEY CAN GROW.

GREEN
PLANTS
USE
YELLOW
SUNLIGHT
TO MAKE
MINERALS
IN THE
BROWN
SOIL
INTO
FOOD



POTASSIUM PROTECTS OUR PLANTS!



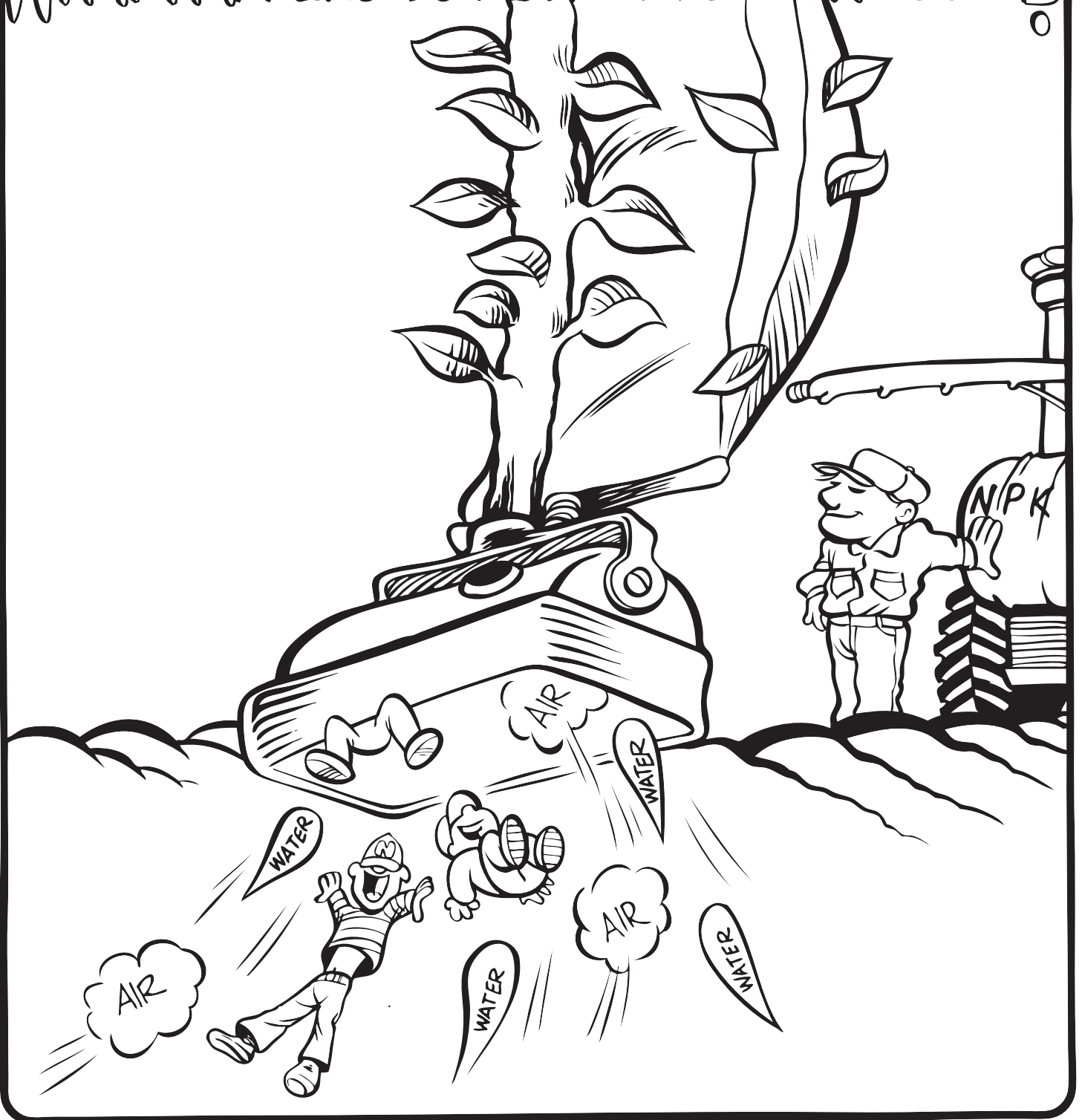
POTASSIUM (K) PROTECTS PLANTS
AGAINST DISEASES AND HELPS THE
PLANT WHEN IT IS COLD OR DRY.

POTASSIUM HELPS MAKE SURE THE
FOOD YOU BUY IS FRESH.



POTASSIUM (THAT'S ME) HAS
MANY JOBS TO DO!

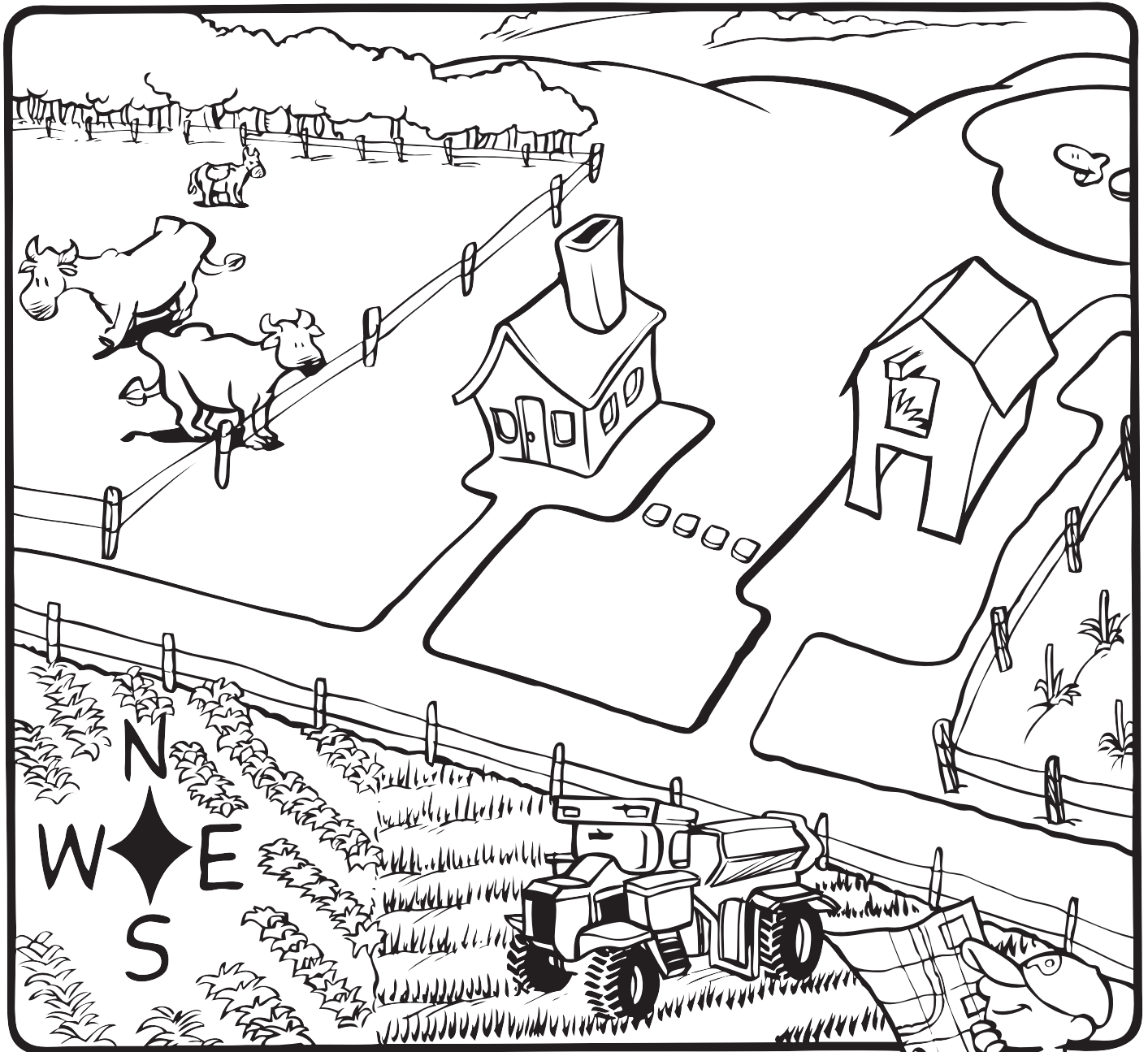
WHAT HAPPENS TO NUTRIENTS IN THE SOIL?



AS PLANTS GROW, HEALTHY ROOTS TAKE UP N-P-K AND OTHER NEEDED NUTRIENTS AS WELL AS AIR AND WATER FROM THE SOIL. THAT'S WHY NUTRIENTS HAVE TO BE ADDED BACK TO THE SOIL.

SOME PEOPLE ARE EVEN USING SATELLITES TO HELP GUIDE PLANT FOOD APPLICATION AND OTHER WORK ON THE FARM.



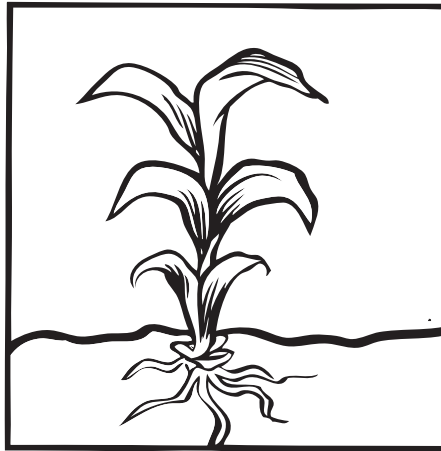


A FARM CAN BE LARGE OR SMALL.
THIS IS A MAP OF ONE FARM. IT HAS MANY PARTS.
CAN YOU FIND THE POND?
HOW MANY OTHER PARTS OF THE FARM CAN YOU NAME?

THE FARMER TAKES CARE OF HIS LAND. HE TESTS THE SOIL AND PLANTS THE SEEDS.



PLANT THE SEED



THE SEED BECOMES A PLANT.



THE PLANTS ARE WATERED AND FED.



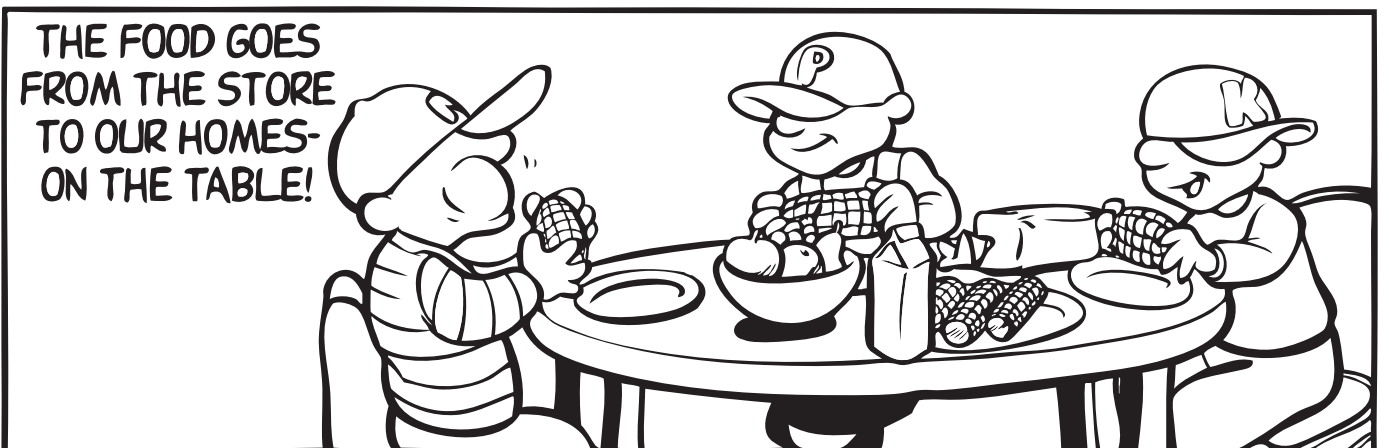
FOOD GROWS FROM THE PLANT.



THE PLANTS ARE HARVESTED.

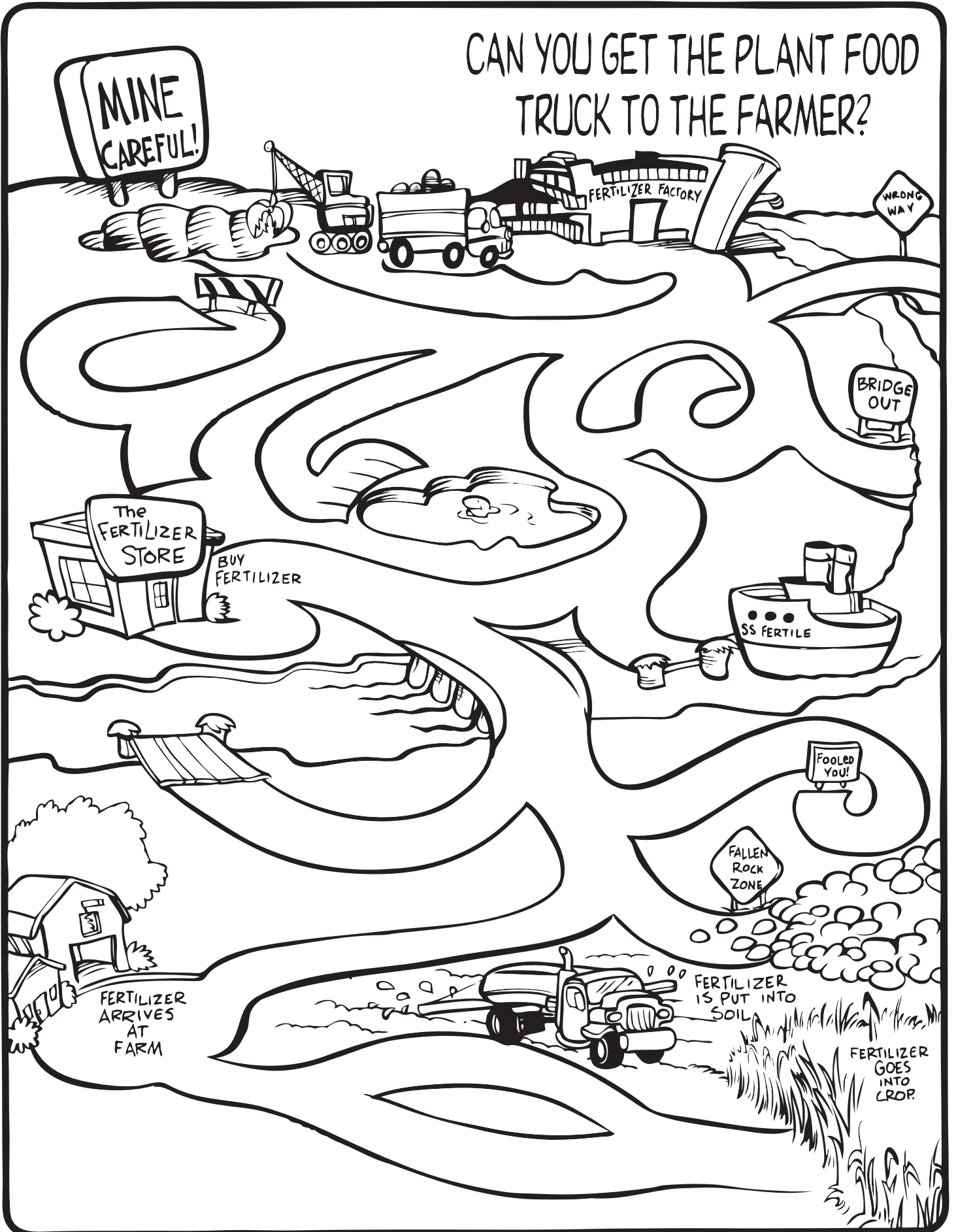


THE FOOD FROM THE PLANT GOES TO THE STORE.



THE FOOD GOES FROM THE STORE TO OUR HOMES- ON THE TABLE!

CAN YOU GET THE PLANT FOOD TRUCK TO THE FARMER?





WEATHER CAN HELP THE FARMER OR THE WEATHER CAN HARM THE PLANTS. UNSCRAMBLE THE WORDS AND MATCH THEM TO THE WEATHER PICTURES.



UNSNY
NDWIY



OCDL

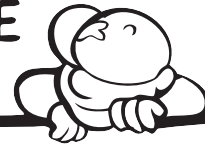


YARNI

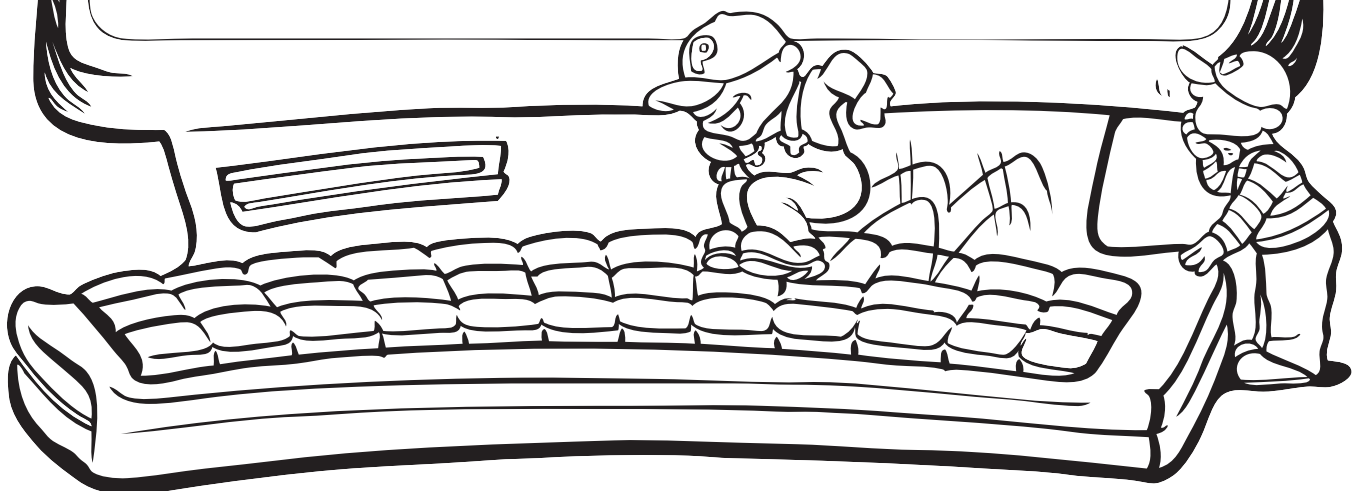
HELP US FIND THESE WORDS HIDDEN IN THE COMPUTER. THE WORDS ARE:

SOIL
SEED
POTASSIUM
PHOSPHORUS
NITROGEN

WATER
SUN
HARVEST
CROP
SCIENCE



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



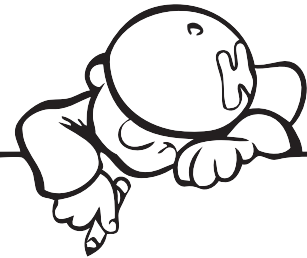




A LOT OF THINGS WE BUY IN STORES AND SEE EVERY DAY COME FROM THE FARM. LOOK AT THE STORES IN THE TOWN. DO YOU SEE THINGS THAT CAME FROM THE FARM? NAME THEM!

THERE'S A SECRET MESSAGE BELOW-
USE THIS DECODER TO FIGURE OUT WHAT IT IS!

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26



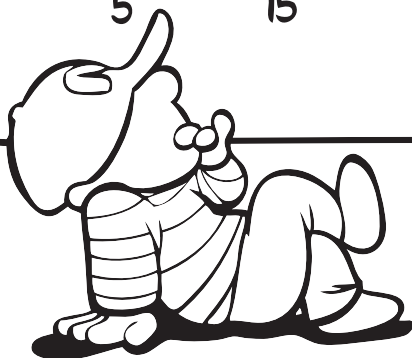
8 5 1 12 20 8 25

16 12 1 14 20 19

6 15 18

8 5 1 12 20 8 25

16 5 15 16 12 5

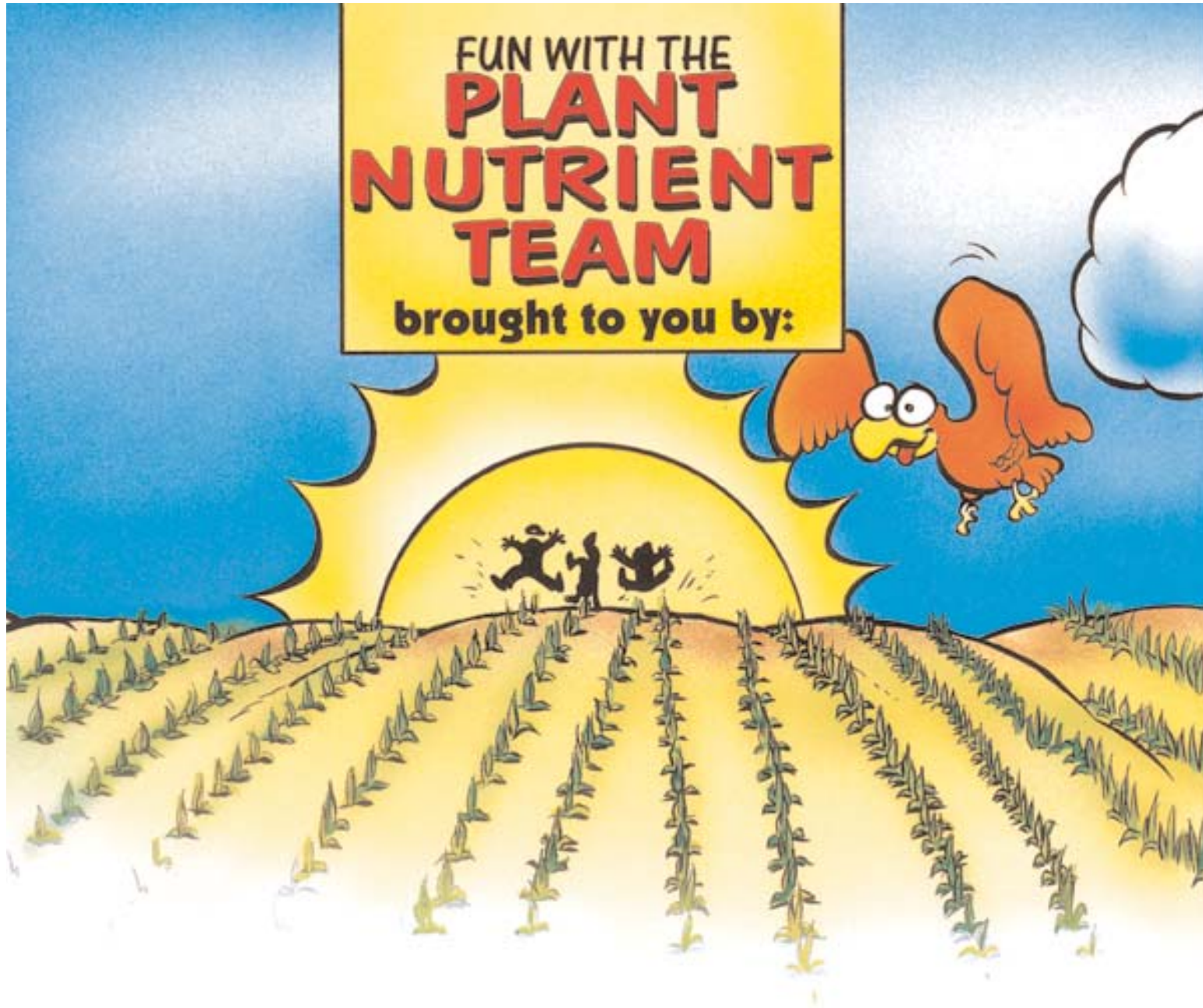


THERE ARE 16 NUTRIENTS ON
OUR TEAM! THEY ALL WORK
TOGETHER TO FEED PLANTS
AND KEEP THEM HEALTHY!



FUN WITH THE **PLANT NUTRIENT TEAM**

brought to you by:



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