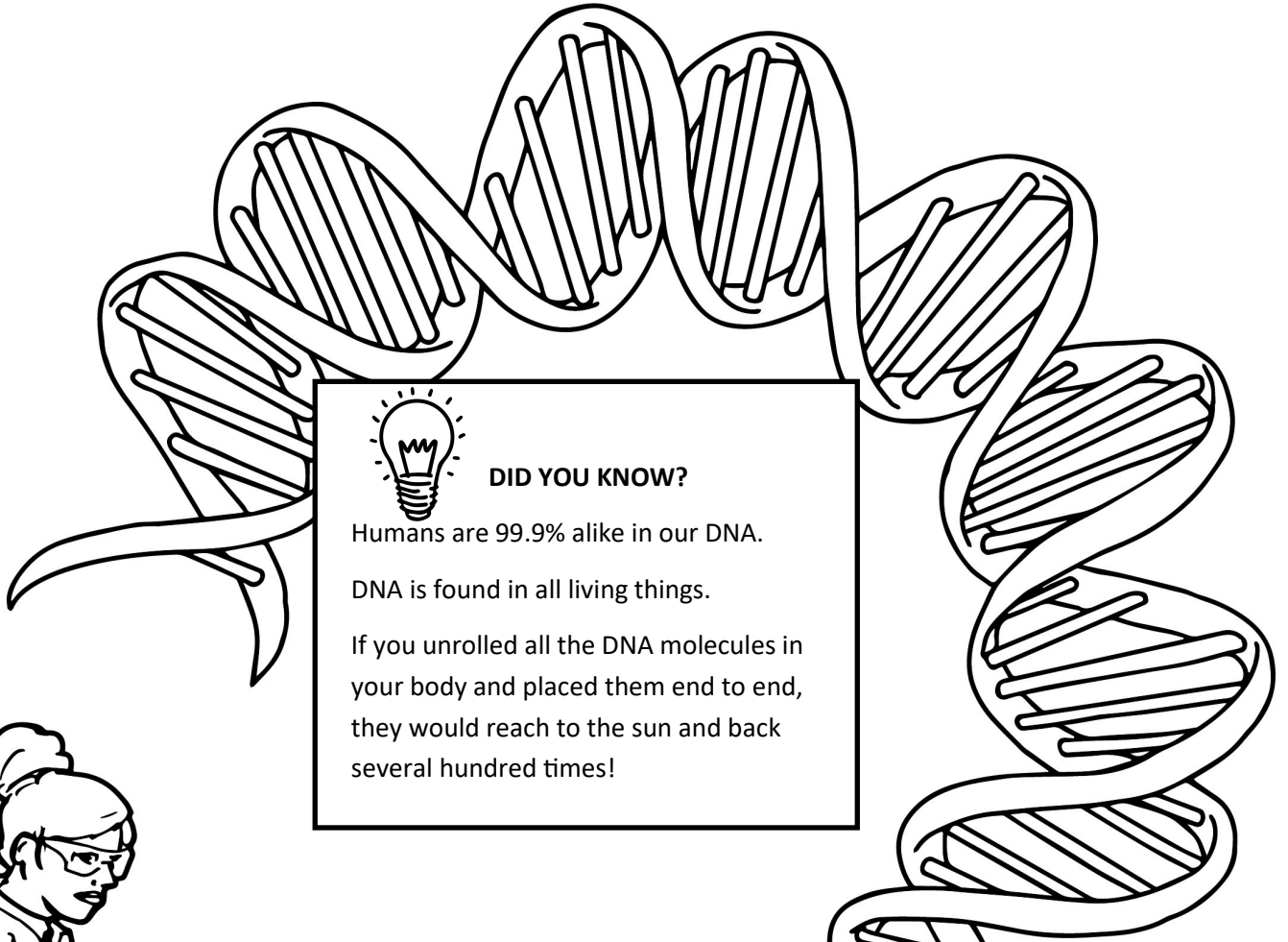


ADVENTURES IN

Agriculture






DID YOU KNOW?

Humans are 99.9% alike in our DNA.

DNA is found in all living things.

If you unrolled all the DNA molecules in your body and placed them end to end, they would reach to the sun and back several hundred times!

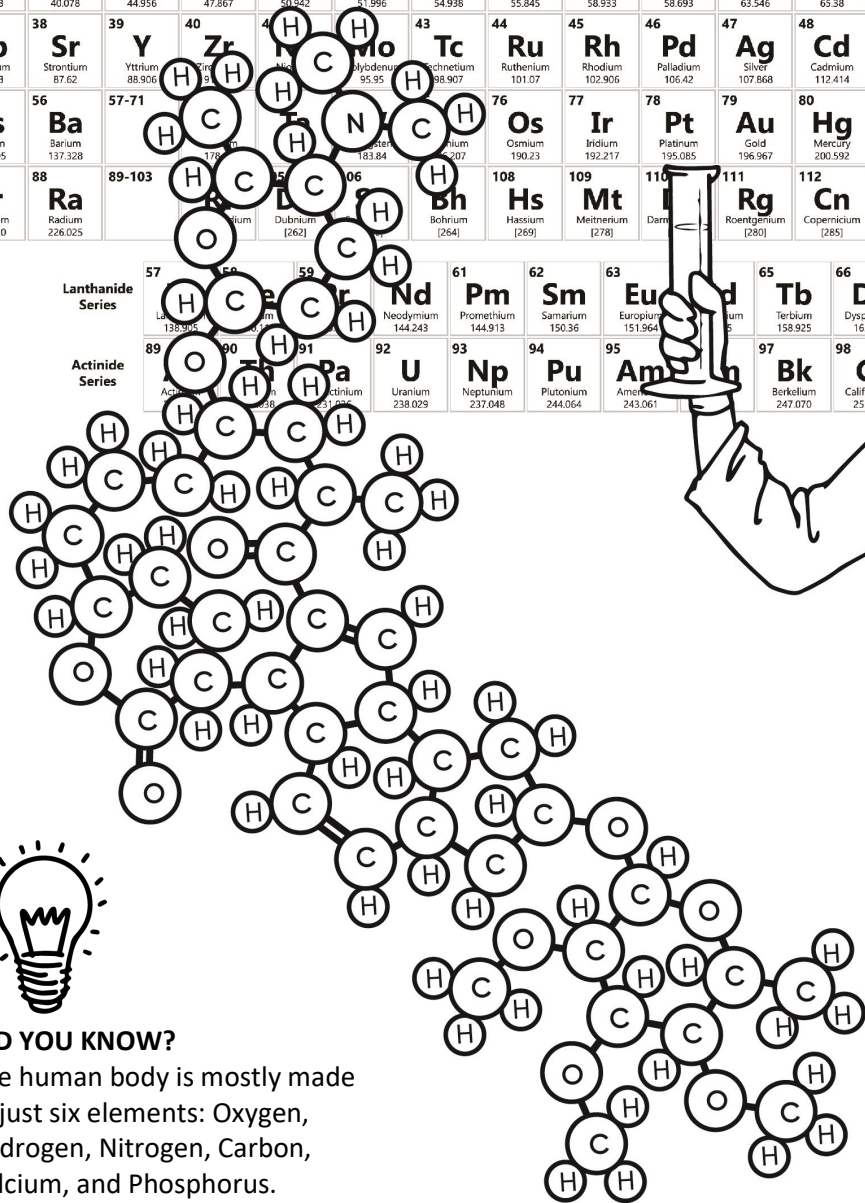


		
	Would you like to extract DNA at home? Use this QR Code for a simple, at-home DNA extraction activity.	

Scientists work with machines and robots to determine the DNA profile of plants to help select those with the best genetics.

Periodic Table of the Elements

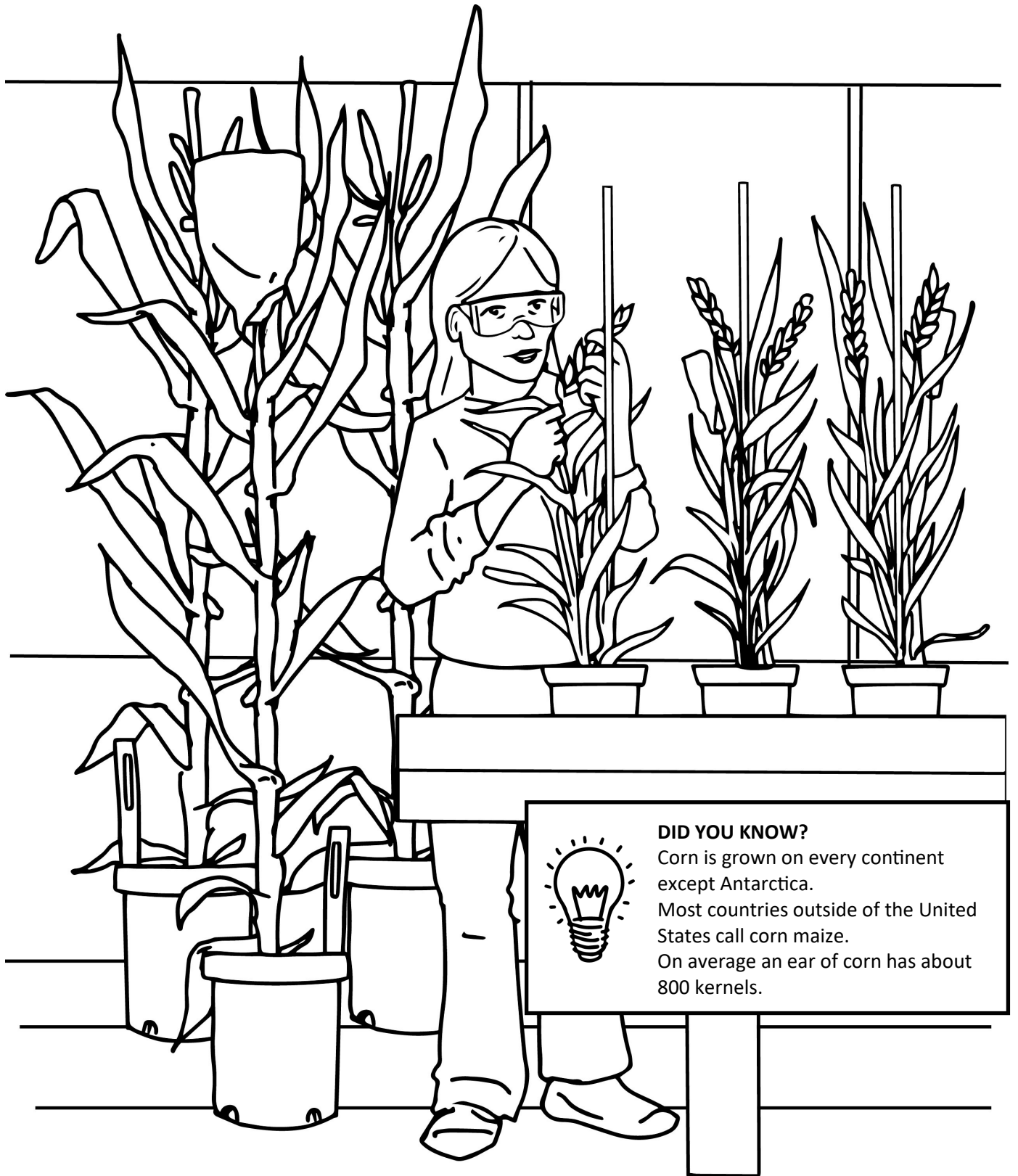
1 H Hydrogen 1.008																	2 He Helium 4.003
3 Li Lithium 6.941	4 Be Beryllium 9.012											5 B Boron 10.811	6 C Carbon 12.011	7 N Nitrogen 14.007	8 O Oxygen 15.999	9 F Fluorine 18.998	10 Ne Neon 20.180
11 Na Sodium 22.990	12 Mg Magnesium 24.305											13 Al Aluminum 26.982	14 Si Silicon 28.086	15 P Phosphorus 30.974	16 S Sulfur 32.066	17 Cl Chlorine 35.453	18 Ar Argon 39.948
19 K Potassium 39.098	20 Ca Calcium 40.078	21 Sc Scandium 44.956	22 Ti Titanium 47.867	23 V Vanadium 50.942	24 Cr Chromium 51.996	25 Mn Manganese 54.938	26 Fe Iron 55.845	27 Co Cobalt 58.933	28 Ni Nickel 58.693	29 Cu Copper 63.546	30 Zn Zinc 65.38	31 Ga Gallium 69.723	32 Ge Germanium 72.631	33 As Arsenic 74.922	34 Se Selenium 78.971	35 Br Bromine 79.904	36 Kr Krypton 83.798
37 Rb Rubidium 85.468	38 Sr Strontium 87.62	39 Y Yttrium 88.906	40 Zr Zirconium 91.224	41 Nb Niobium 92.906	42 Mo Molybdenum 95.94	43 Tc Technetium 98.906	44 Ru Ruthenium 101.07	45 Rh Rhodium 102.906	46 Pd Palladium 106.42	47 Ag Silver 107.868	48 Cd Cadmium 112.414	49 In Indium 114.818	50 Sn Tin 118.711	51 Sb Antimony 121.760	52 Te Tellurium 127.6	53 I Iodine 126.904	54 Xe Xenon 131.294
55 Cs Cesium 132.905	56 Ba Barium 137.328	57-71 Lanthanide Series	72 Hf Hafnium 178.49	73 Ta Tantalum 180.948	74 W Tungsten 183.84	75 Re Rhenium 186.207	76 Os Osmium 190.23	77 Ir Iridium 192.22	78 Pt Platinum 195.085	79 Au Gold 196.967	80 Hg Mercury 200.592	81 Tl Thallium 204.383	82 Pb Lead 207.2	83 Bi Bismuth 208.980	84 Po Polonium [209]	85 At Astatine [209]	86 Rn Radon [222]
87 Fr Francium 223.020	88 Ra Radium 226.025	89-103 Actinide Series	104 Rf Rutherfordium [261]	105 Db Dubnium [262]	106 Sg Seaborgium [263]	107 Bh Bohrium [264]	108 Hs Hassium [269]	109 Mt Meitnerium [278]	110 Dam Darmstadtium [285]	111 Rg Roentgenium [280]	112 Cn Copernicium [285]	113 Nh Nihonium [284]	114 Fl Flerovium [289]	115 Mc Moscovium [288]	116 Lv Livermorium [293]	117 Ts Tennessine [294]	118 Og Oganesson [294]
		57 La Lanthanum 138.905	58 Ce Cerium 140.12	59 Pr Praseodymium 140.908	60 Nd Neodymium 144.243	61 Pm Promethium [145]	62 Sm Samarium 150.36	63 Eu Europium 151.964	64 Gd Gadolinium 157.25	65 Tb Terbium 158.925	66 Dy Dysprosium 162.500	67 Ho Holmium 164.930	68 Er Erbium 167.256	69 Tm Thulium 168.934	70 Yb Ytterbium 173.055	71 Lu Lutetium 174.967	
		89 Ac Actinium [227]	90 Th Thorium [232]	91 Pa Protactinium [231]	92 U Uranium 238.029	93 Np Neptunium 237.048	94 Pu Plutonium 244.064	95 Am Americium [243]	96 Cm Curium [247]	97 Bk Berkelium 247.070	98 Cf Californium 251.080	99 Es Einsteinium [252]	100 Fm Fermium [257]	101 Md Mendelevium [258]	102 No Nobelium 259.101	103 Lr Lawrencium [262]	



DID YOU KNOW?

The human body is mostly made of just six elements: Oxygen, Hydrogen, Nitrogen, Carbon, Calcium, and Phosphorus.

Scientists study chemistry and work with molecules to develop new products to protect crops from diseases, pests, and weeds.



DID YOU KNOW?

Corn is grown on every continent except Antarctica.
Most countries outside of the United States call corn maize.
On average an ear of corn has about 800 kernels.

Scientists work in greenhouses to develop crops with the best genetics. This scientist is examining pots with wheat plants. What kind of crop are the tall plants behind her? Notice the bag on the top of the plant. That is to collect pollen, to control pollination with other plants.

Answer: Corn

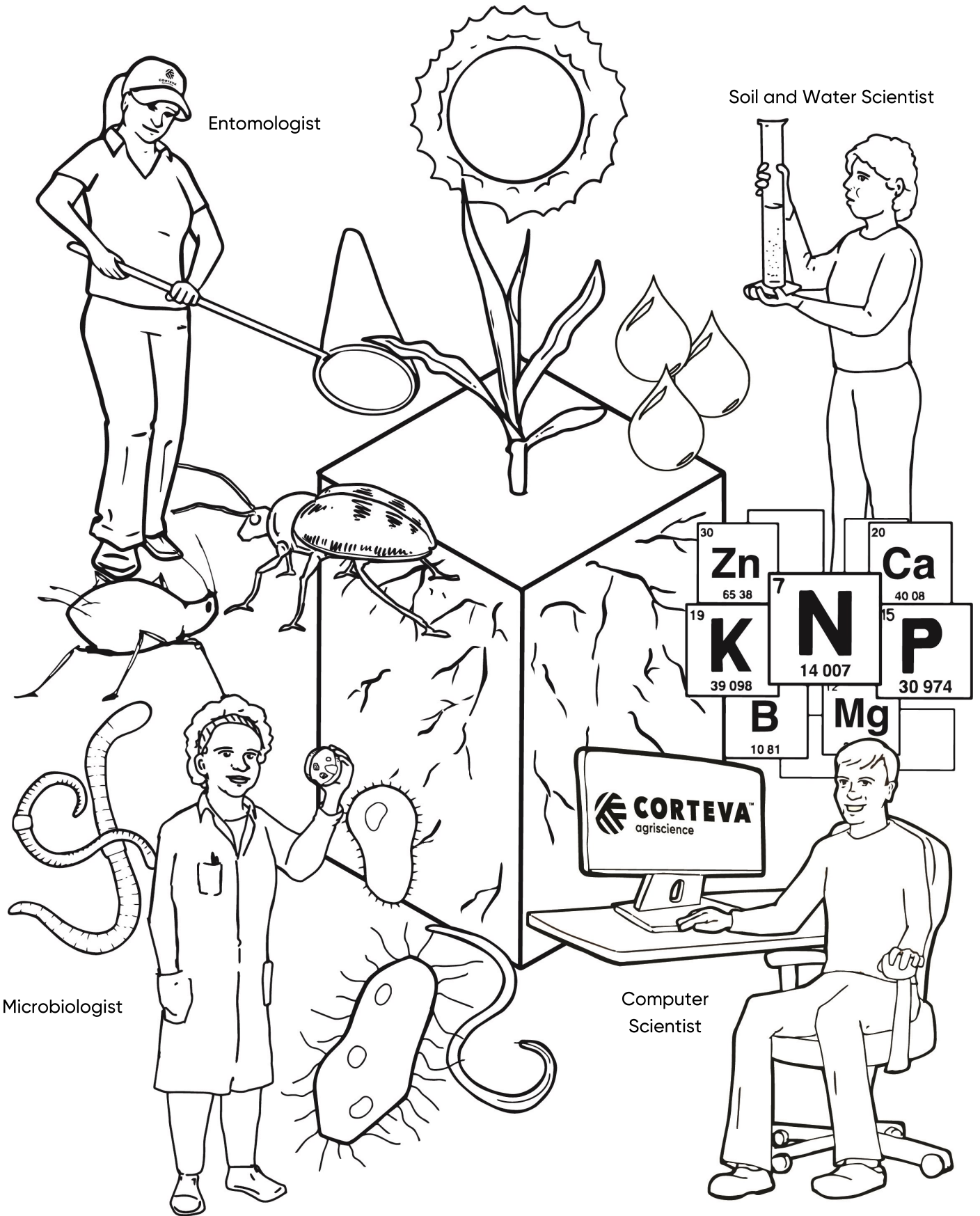


DID YOU KNOW?

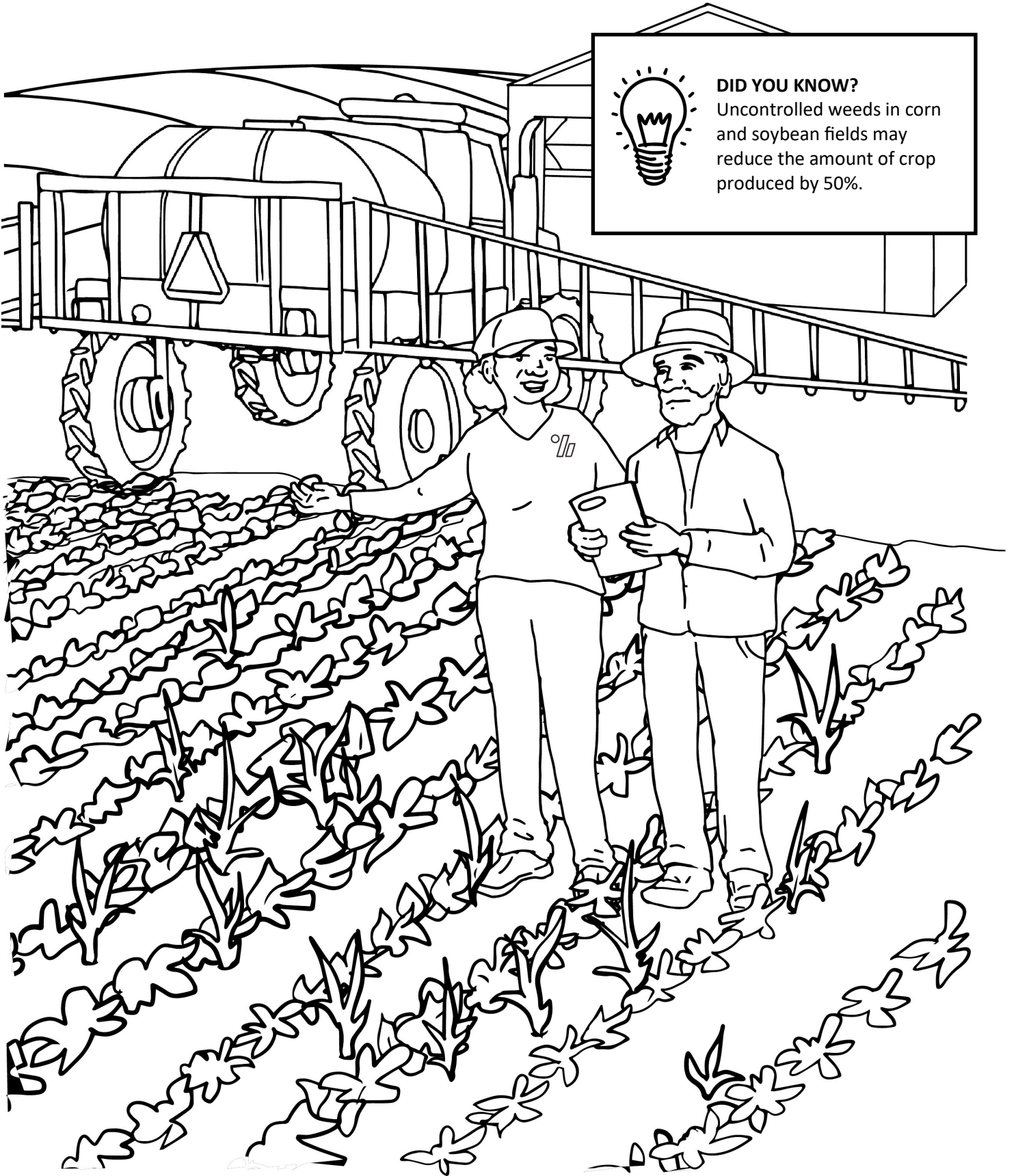
Specialized equipment like those shown below are used to carefully control the growth of micro-organisms to create naturally-occurring chemical compounds.



Chemists work together using many tools and approaches to create chemical compounds to help keep plants healthy and reduce impact to the environment.



Healthy plants are important in agriculture. Scientists are trained in many different subjects to help plants grow; these are just a few examples.

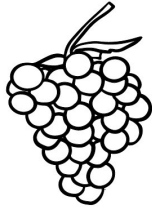


 **DID YOU KNOW?**
Uncontrolled weeds in corn and soybean fields may reduce the amount of crop produced by 50%.

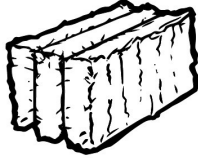
Farmers must protect their crops from pests including insects, weeds and diseases.

Can you find the weeds growing in the field among the crop plants?

It's your turn to be a farmer! What would you like to harvest from your fields? Draw a picture of things you would like to harvest from your farm. Here are a few examples.



Grapes



Hay



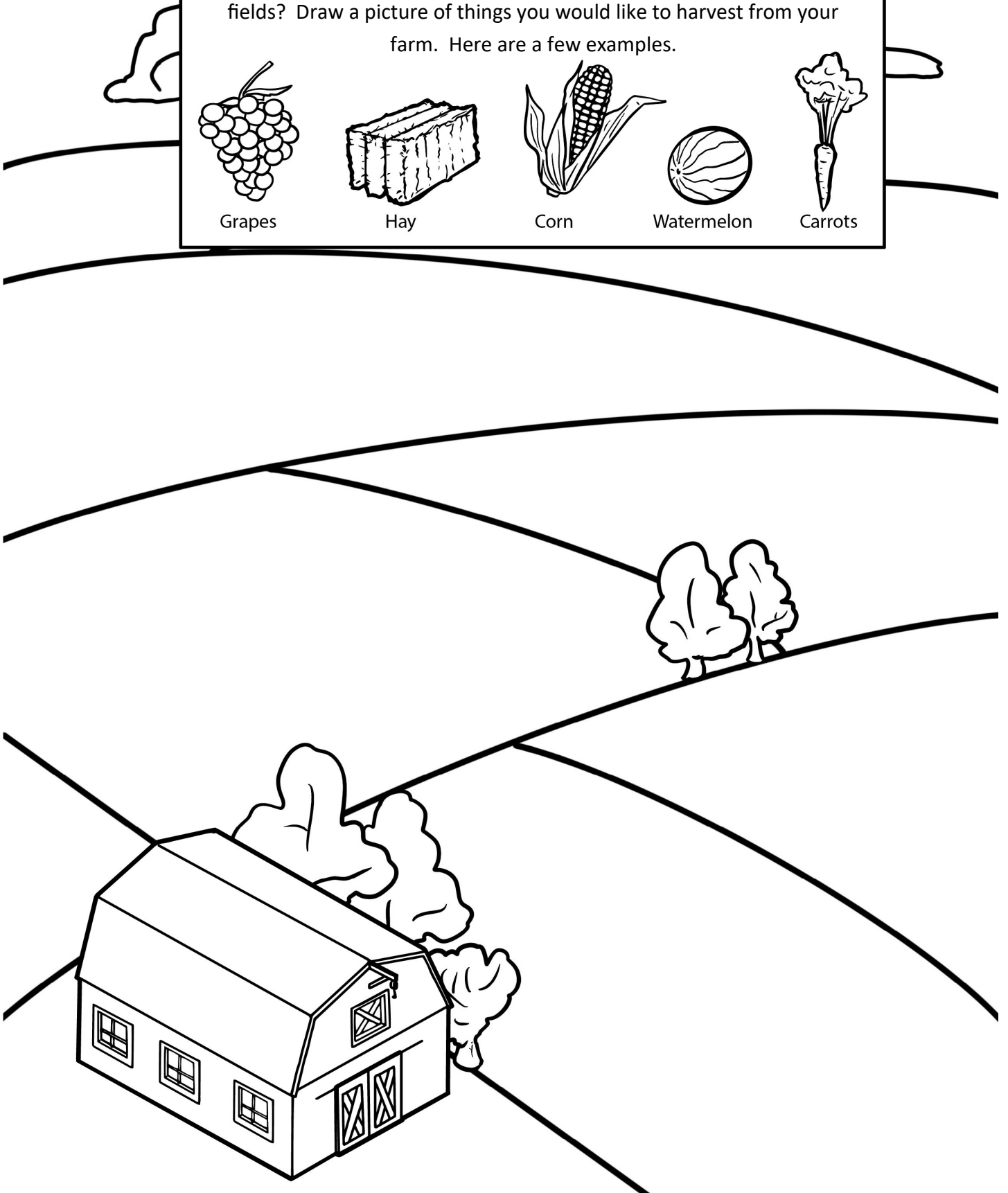
Corn

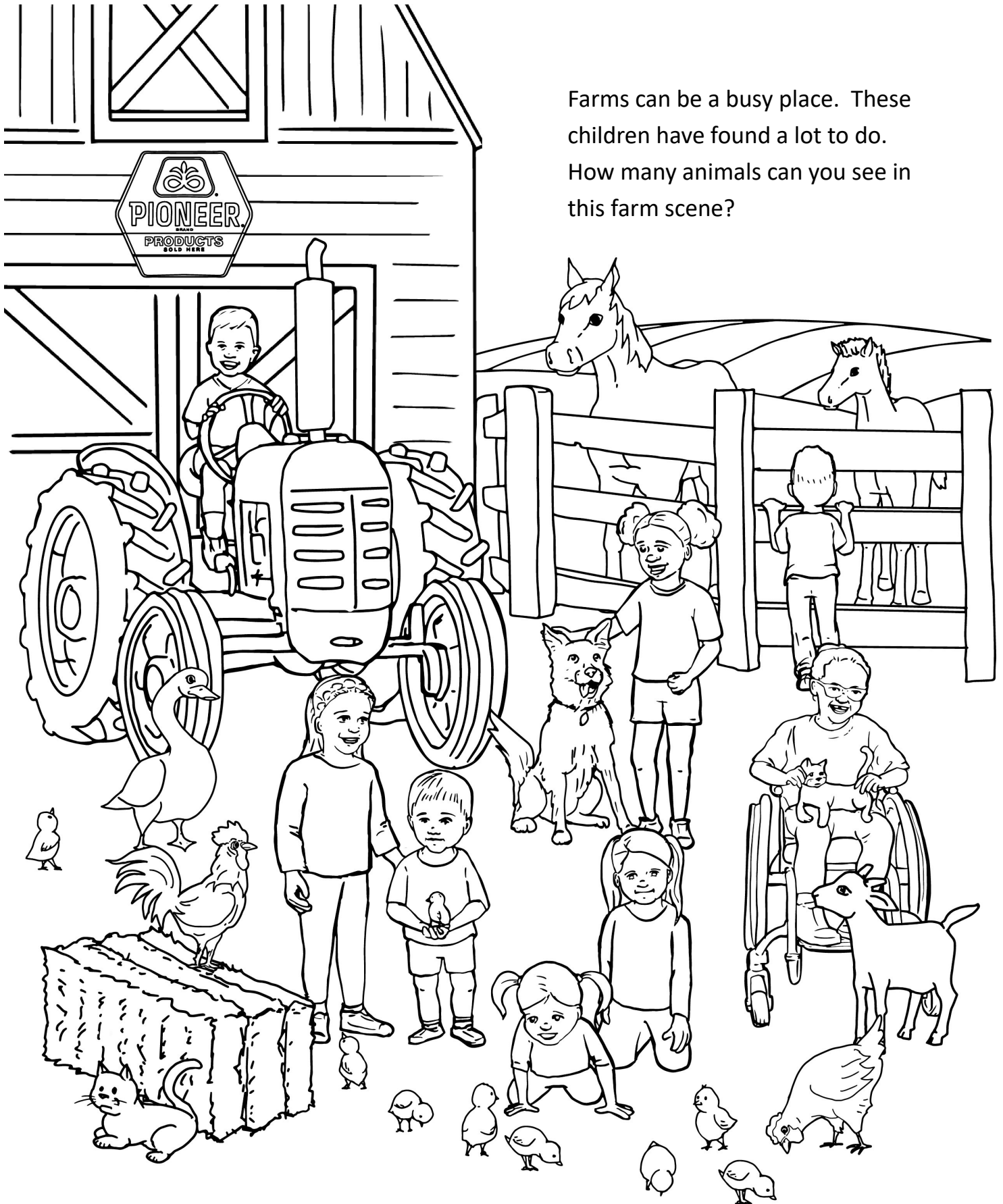


Watermelon



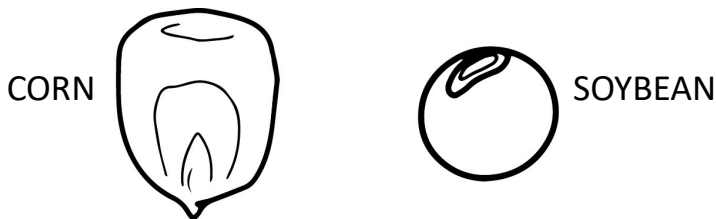
Carrots





Farms can be a busy place. These children have found a lot to do. How many animals can you see in this farm scene?

Answer: 9 baby chickens, 1 hen, 1 rooster, 2 cats, 1 goat, 1 pig, 1 dog, 1 goose, 1 chicken, and 8 children

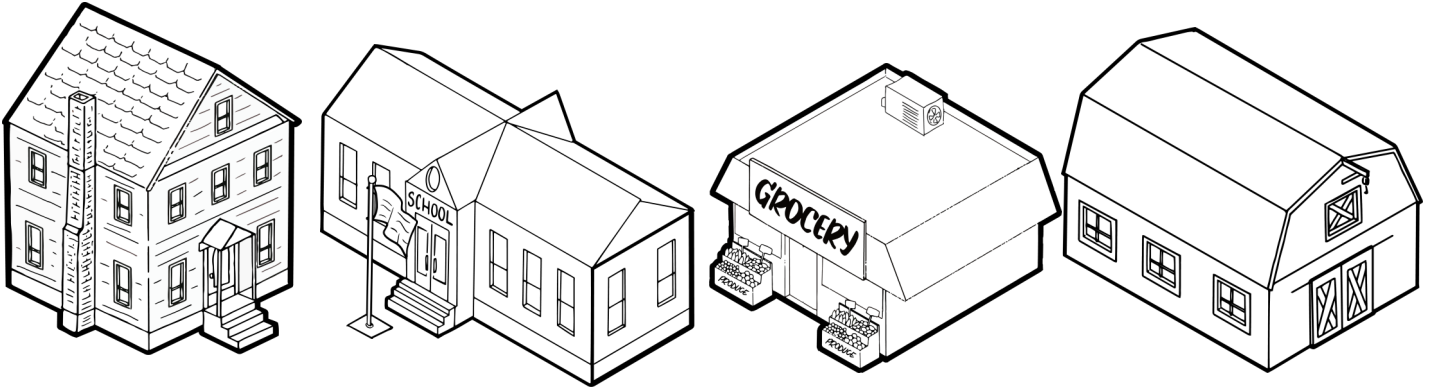


Many products you use everyday are made from crops like **corn** and **soybeans**. See if you can guess which products use corn or soybean, or both. Do you have any of these products in your own home?

#	Item	Corn	Soy
1	Canned Corn		
2	Taco Shells		
3	Candy		
4	Soy Sauce		
5	Margarine		
6	Popcorn		
7	Medicine		
8	Lactose-free milk		
9	Paint		
10	Soda		
11	Textiles		
12	Cooking Oil		
13	Adhesives		
14	Crayons		
15	Candles		
16	Fuel		
17	Animal Feed		
18	Cosmetics		
19	Soap		

Answers: 1-C, 2-C, 3-C, 4-S, 5-S, 6-C, 7-C/S, 8-S, 9-S, 10-C, 11-C/S, 12-C/S, 13-C/S, 14-S, 15-S, 16-C/S, 17-C/S, 18-C/S, 19-S

Many people are part of the process to deliver food from a farm to your home. Use the space below to write a thank you note to someone who helps provide food to you. This could be a parent, a school cafeteria worker, someone at the local grocery store, or a farmer.



Thank You!

Corteva Agriscience works to protect and preserve our global food supply, focuses on sustainability, and helps communities thrive. Our purpose statement refers to “. . . ensuring progress for generations to come.” We hope this coloring book, created in collaboration with the Women’s Inclusion Network, the Disability Awareness Network and Corteva Grows Science Outreach, shares a glimpse of the science of agriculture from the chemistry and genetics to farms and your home.

You can also access the previous versions of the *Adventures in Agriculture* coloring book by clicking on the QR code below.



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