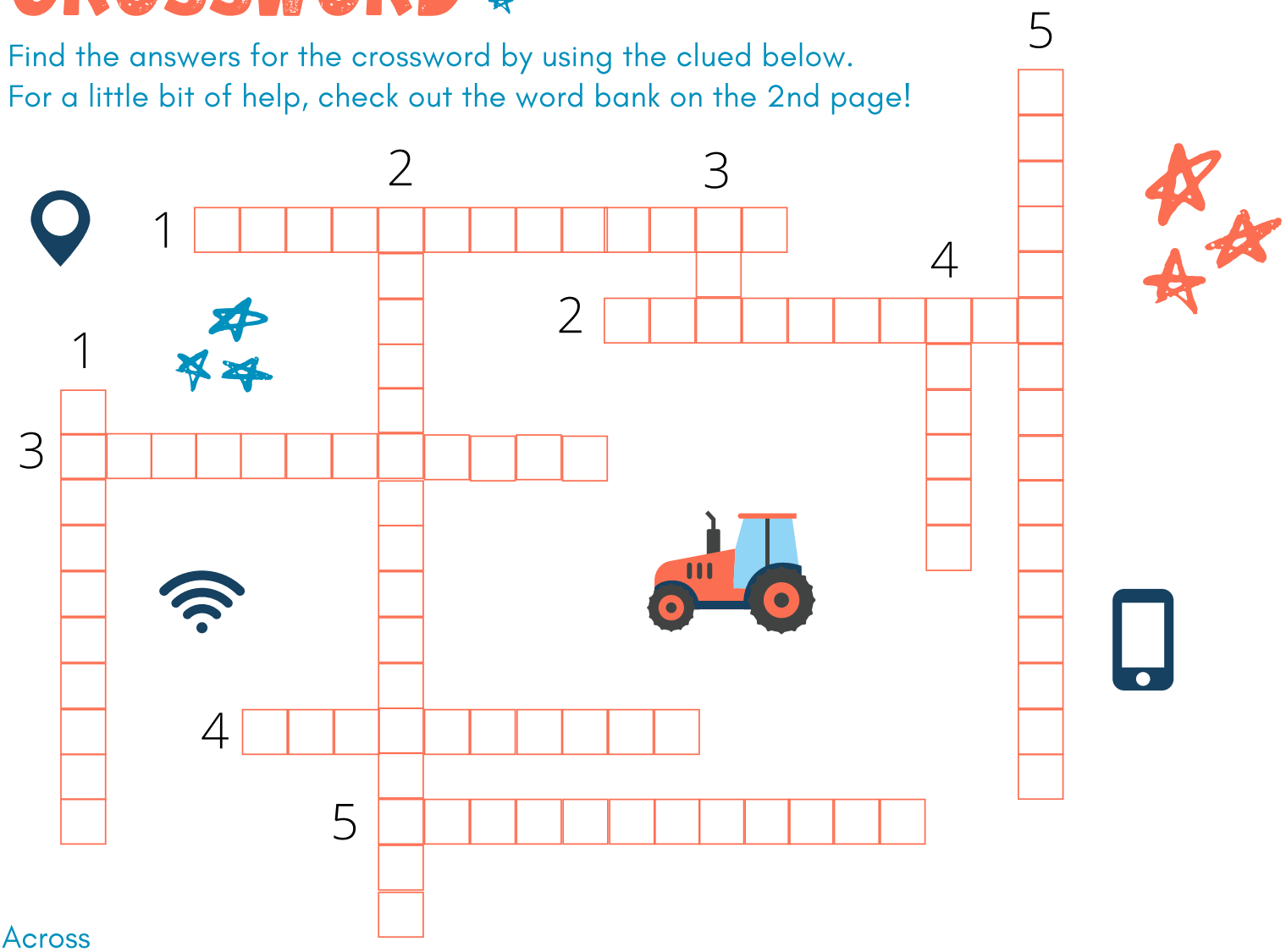
FARM TECHNOLOGY CROSSWORD

BRUCE D. CAMPBELL FARM AND FOOD DISCOVERY CENTRE

Find the answers for the crossword by using the clued below.
For a little bit of help, check out the word bank on the 2nd page!



Across

1) This is a way to introduce beneficial genes, modify existing genes and remove detrimental genes from the DNA of a plant or animal. The result of this technology is most often known as genetically modified organisms (GMOs). This technology produces more and better food by improving the natural biological processes in the plants and animals.[1]

2) These inputs are one of the ways farmers prevent pests (insects, fungi and disease) from damaging crops thus improving yield. Without the use of _____ and biotechnology, Canada's farmers would need to cultivate 35 million more acres to produce the same amount of food.[1]

3) This technology can be found in some dairy barns. The machine is able to milk the cattle and collect data about each milking.[2]

4) This piece of technology that orbits the earth is used to control GPS on farm equipment to ensure sprays and fertilizers are applied in the right amounts in the right places.[1]

5) This made-in-Canada technology helps identify pests. Scientists take a tissue sample from the animal/plant/fungi and the DNA is extracted, amplified and sequenced for identification working similarly, to how barcodes are scanned at the grocery store.[1]

Down

1) Modern barns operating with a robotic system can identify problems and alert farmers to any potential issue with a text message sent directly to their _____.[2]

2) This feeding system reads a chip in the hog's ear tag to detect which animal has entered the feeder and will drop the exact amount of feed needed by that specific hog.[3]

3) This technology found in most smartphones and cars can help improve efficiency by steering farm equipment in accurate rows.[4]

4) Farmers can use a camera on these unmanned aerial vehicles to scan their fields and identify any problem areas. The camera on the_____ can be set to pick up certain wavelengths reflected by plants damaged by disease, pests of lack of nutrients.[4]

5) This farming practice uses technology to improve efficiency on crop farms. The areas of the field are analyzed and targeted to determine the exact amount of seed, fertilizer or pesticide (inputs) needed. This can to minimize the use of inputs and fuel while improving crop yields.[4]

Word Bank

Precision Farming	Smart Phone
DNA Barcoding	Pesticides
Biotechnology	Electronic Feeder
GPS	Drones
Satellites	Milking Robot

Sources:

[1] The Real Dirt on Farming

[2] Dairy Farmers of Canada

[3] Manitoba Pork Council

[4] Agriculture in the Classroom, Canada - SnapAG

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Answers:

Across
1) Biotechnology
2) Pesticides
3) Milking Robot
4) Satellites
5) DNA Barcoding

Down
1) Smart phone
2) Electronic Feeder
3) GPS
4) Drones
5) Precision Farming