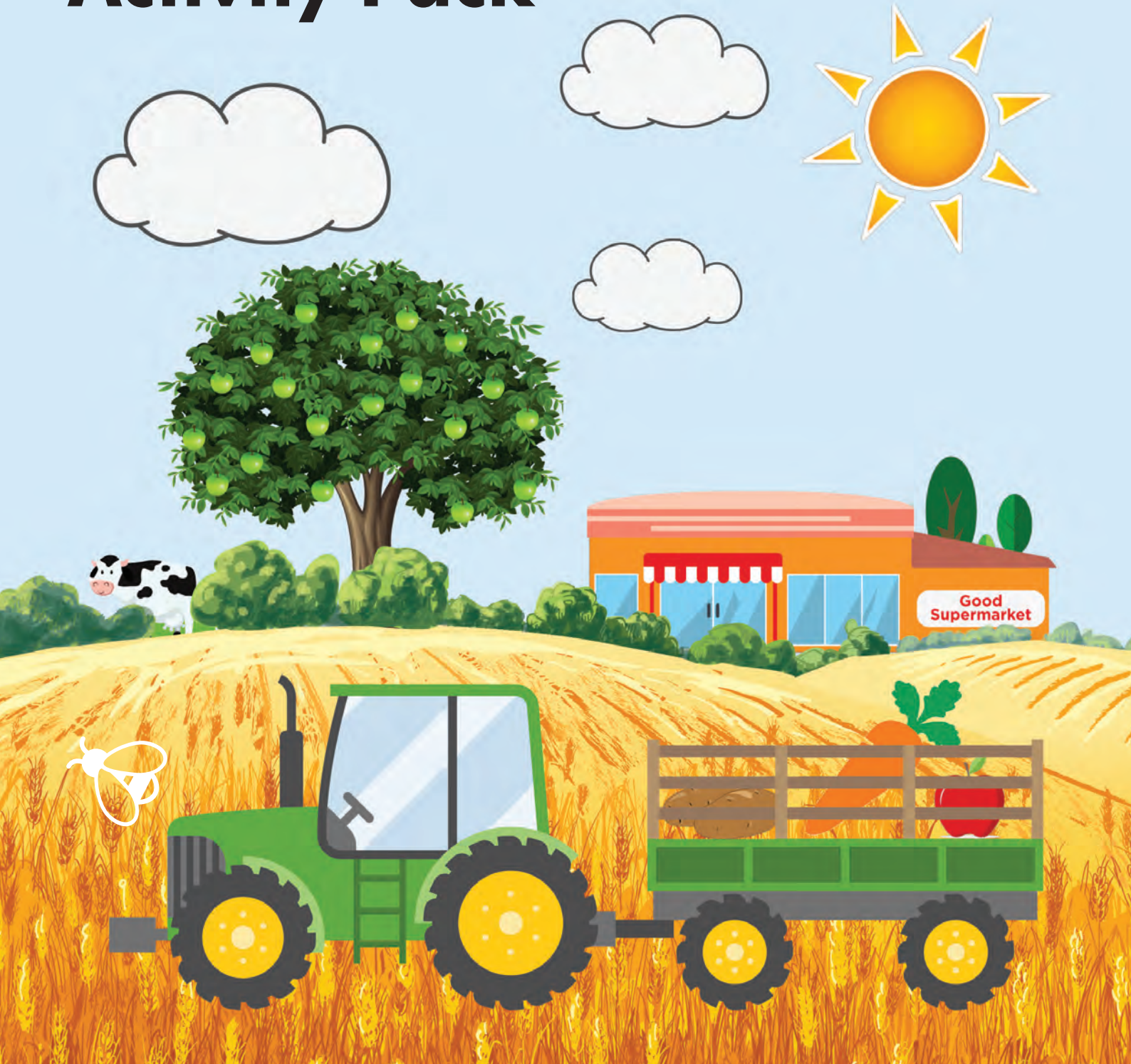


Agrii Food, Farming and Environment Activity Pack

Agri intelligence





Tim

Hello!
In this activity book you will find out more about food, farming and the environment. Look out for the speech bubbles for handy hints and information!



What is a crop? A crop is a plant that we grow to turn into food. Some crops are grown for us humans to eat, but others are grown to feed animals as well, like grass!

In fact some crops aren't grown to feed us or animals, but are grown to be turned into non food items.

Can you guess the two below?

B _ _ D _ _ _ _

C _ _ _ n



Look out for these boxes on each page, which tell you the difficulty level of the activities on that page.

Medium



Chris



Just like Tim, I'm an agronomist. An agronomist is someone who looks after the crops on a farm with the farmer.



Ben

A farmer's job starts before a crop is planted. First the farmer needs to make sure that the **soil** is healthy and prepared

Difficult



Cultivating the soil

Getting the soil ready . . .

Can you untangle these **anagrams**?

Clue: They're all words to do with soil and machinery

ROTCART

AUVCLIRTO

DESES

EARTWHMRO

TROSO

TAWRE

Can you think of a way to protect soil after harvest?

By planting **c** _ _ _ _ **c** _ _ _ _

Why is soil important?

If the soil is healthy, the crop growing in it will grow well and will provide future crops with nutrients too.

A healthy soil contains lots of worms. Can you help this worm find its way through the maze of tunnels to escape the hungry bird?



Easier





Lorraine



...then it's time to sow the seed. Farmers use a piece of machinery called a drill to plant seeds.



Colour in this picture of a drill planting seeds.

Can you match the pictures of these common seeds, with the crops they grow into?



M _ _ _ E
(Hint – it's not normally red!)



B _ R _ _ Y



O _ _ _ _ _ R _ _ _
(Hint – the crop it produces has bright yellow flowers)



W _ _ _ T



P _ _
(Hint – these are usually a bright green!)



Medium

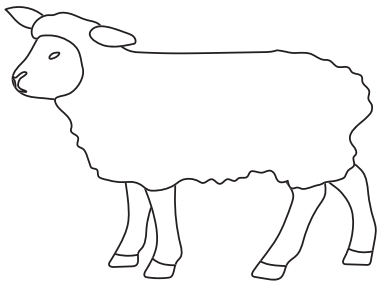


Emily

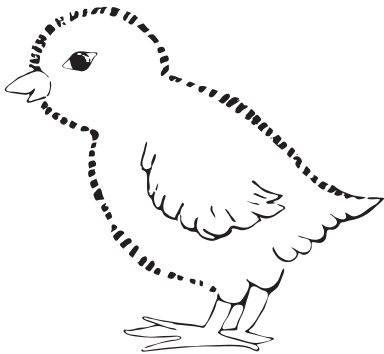
Many crops are sown in spring. Spring is also a busy time of year for livestock farmers, as it's when lambs and calves are being born.

Can you name these baby animals and draw a line to match them to the name of their mum?

Then have a go at colouring them in!



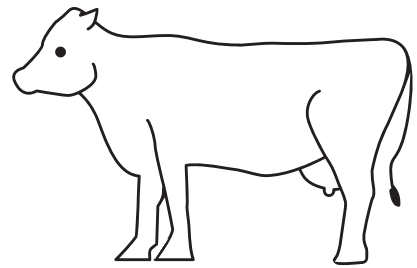
.....



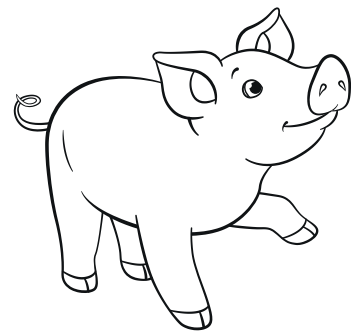
.....

Chicken
Sheep

Cow
Pig



.....



.....

Easier



In the UK we grow all sorts of crops – can you find some of them in our wordsearch?

Becky

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



Medium

**APPLE
 BARLEY
 CABBAGE
 CARROTS**

**GRASS
 KALE
 OATS
 ONION**

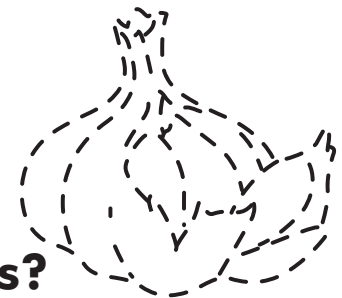
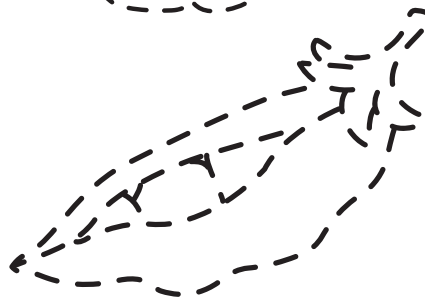
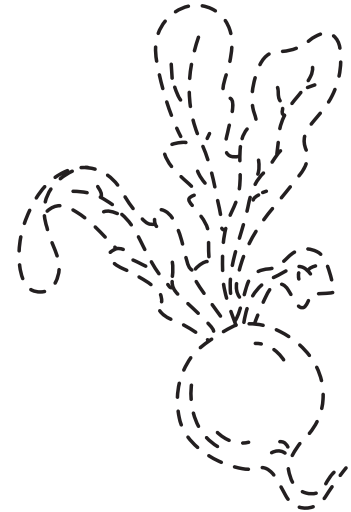
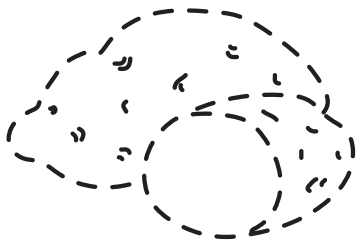
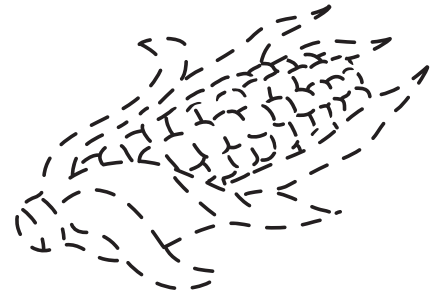
**OSR
 PARSNIPS
 POTATOES
 SUGAR BEET**

**TOMATOES
 WHEAT
 GRAPES**



John

Here are some more crops that we grow in the UK. Join the dots and colour them in.



Can you name these vegetables?
Have a go!

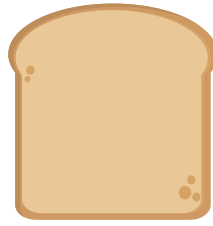
Easier



Peter

Grass is a crop too and people eat the grains that grasses produce. Grains like wheat and barley come from these crops, commonly known as cereals.

From . . .



Medium

Have a go at circling which common foods you think are usually made from wheat.

The type of grass that you're probably more familiar with is grown to feed farm animals.

Which farm animals might eat the grass below?

Can you draw them?



Easier

7



Jim

When a crop is growing it needs feeding. Lots of different nutrients are required.

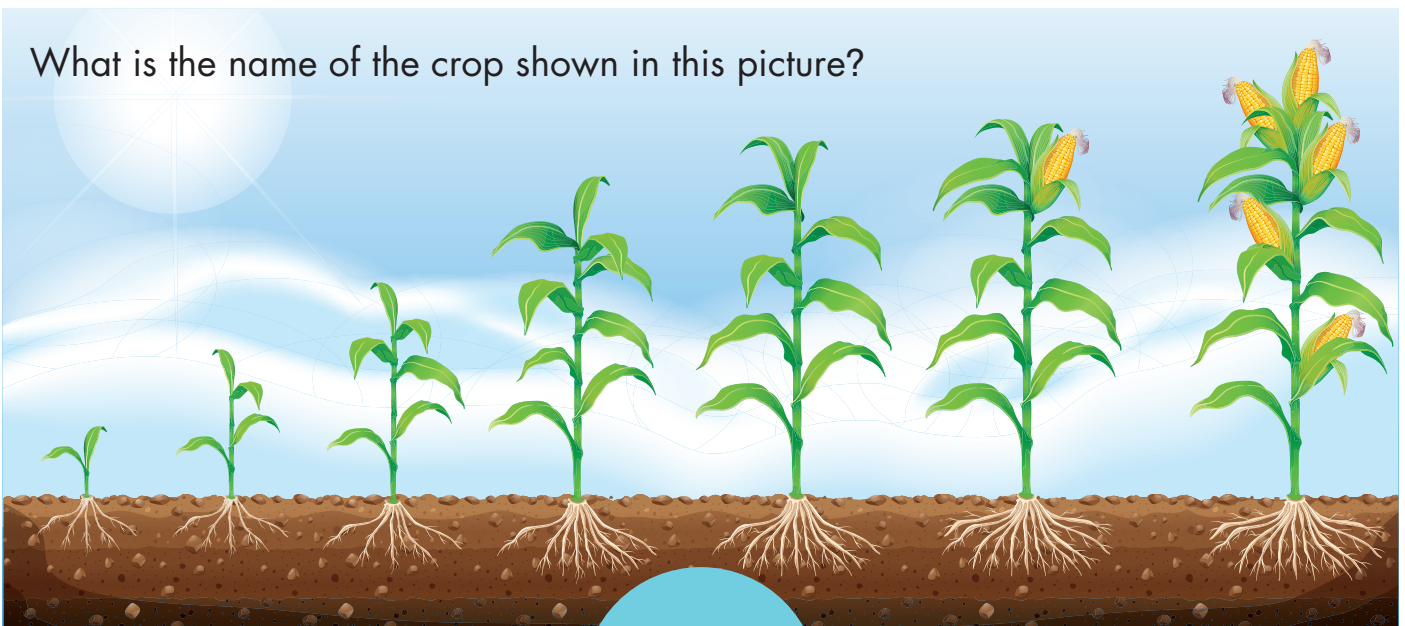
A plant can get most of the nutrients it needs from the soil – especially if the soil is healthy. But just like humans, our crops need a little bit of help sometimes.

Can you unscramble these anagrams to reveal some of the common nutrients that we add to our crops?

Very Difficult

GENTRONI	N _ _ _ _ _ N	SASUMITPO	P _ _ _ _ _ M
NOBOR	B _ _ _ N	CUMILAC	C _ _ _ _ M
RUSPHUL	S _ _ _ _ R	CINZ	Z _ _ C

What is the name of the crop shown in this picture?





Kevin

Farm animals need feeding too . . .

Can you name some of the types of food that these animals might eat?

Medium

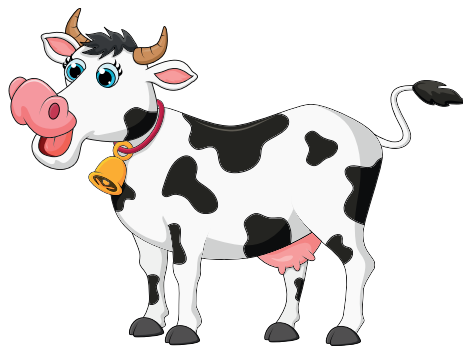
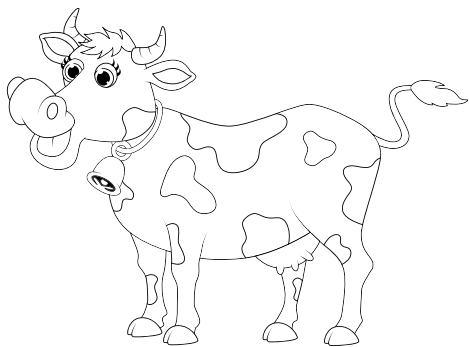
Chicken

Cow

Sheep

Pig

Easier



Can you colour in the cow to match the one on the right?

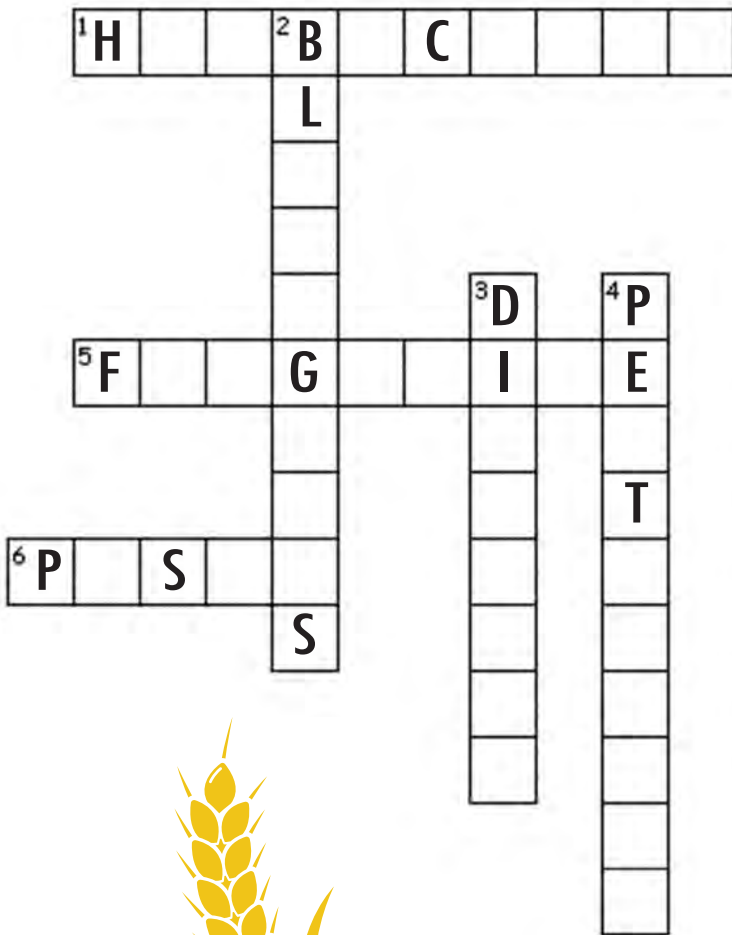
Farm animals eat the stems and leaves of grasses, grains like corn and even vegetables!



Matt

We also need to protect our crops from pests, diseases and weeds.

Have a go at the crossword using the clues below!
We've put in a few extra letters to help you.



Across

- 1. Chemicals used to kill plants or weeds
- 5. A chemical that destroys fungus
- 6. Insects or animals that can harm crops

Down

- 2. A prolific weed that can affect cereal based crops
- 3. Illnesses that affect crop production
- 4. Chemicals used to kill pests

A weed is any plant that isn't growing where you want it!

Seed from last year's crop can cause problem weeds, and grasses can be weeds as well, like Blackgrass. This weed causes many problems for farmers in the UK.

Difficult





Fraser

Pests can come in all shapes and sizes. Solve the clues below to reveal some of them (we've made a start for you). The yellow squares will reveal an insect that we definitely couldn't do without.

1. A problem for fruit growers, this small green insect might be more commonly known for its destruction of garden plants – particularly roses.

2. Farmers don't think this nocturnal creature is fantastic – particularly when it goes for a flock of chickens.

3. A medium sized grey bird, often fed by crowds of people in cities. This feathered foe can ruin a crop.

4. In the UK we have roe, red, fallow and muntjack species of these mammals – also known as Bambi

5. The caterpillars of this nocturnal insect are a problem for growers of crops of peas.

6. A common problem insect in oilseed rape. Its name is made up of two different types of insect. The first is a four letter word which can be a problem for dogs and cats. The second is also the name of another insect.

7. The type of bird in this picture – you might think this would be an unlikely grazer on young crops. Swans can cause similar problems!

				A		1					
						2		X			
			G			3					
					E	4					
S	I	L	V	E	R	5	Y	M	O	T	H
			F			6				T	
					S	7					
			M			8					
						9			U		

8. A four legged rodent which loves to make its home in grain stores and eat the valuable results of a farmer's labours.

9. A slimy creature that leaves a silvery trail – a common problem for many gardeners as well as farmers!



Difficult



Rob

Some insects are pests, but there are some insects that farmers couldn't live without! We rely on pollinators like bees, and we need to look after them.



Easier

Which route does the bee need to take to go to the tasty flowers on the potato plant?

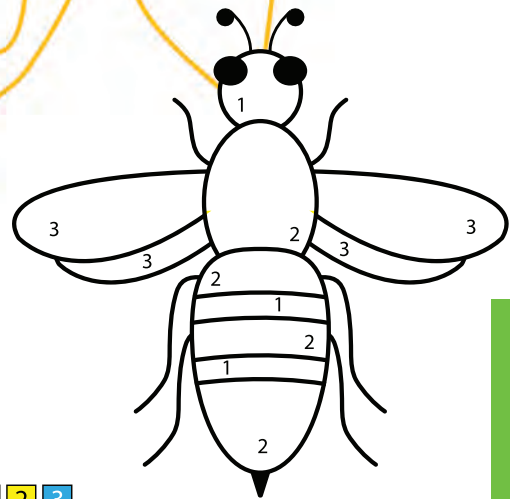


Did you know?

Bumblebees are often brought in to help with the pollination of commercially grown tomato plants?

Anagrams

As well as insects like bees, which pollinate our crops, farmers also rely on other insects and animals, which are natural predators of some of the pests we've talked about. Can you unscramble these anagrams to name a few?



1 2 3

Easier

Colour by numbers!

BESTLEE

B.....

LACEGWIN

L.....

ALDYBIDR

L.....

Difficult



Amy

In fact farmers have a huge role to play in looking after the environment.

Can you complete some of the ways farmers help to look after the natural environment?

By making sure N_____ that they put on the fields don't run into rivers

Planting and maintaining H_____

Providing food and H_____ for animals, birds and insects

Medium

Difficult

Can you draw a line from the wildlife examples to the places on a farm you might expect to find them?

Wildlife

Songbirds

Harvest mice

Barn owl

Newts

Beetles

Features

Farmhouse

Field of crops

Barns

Buffer strip

Hedgerow

Pond/ditch



Easier

Can you colour in the mouse on the left to match the one on the right?



Did you know?

Buffer strips planted at the edge of a field can provide a valuable wildlife habitat – particularly when planted with a nectar or pollen rich mix of plants for them to feed off.



Chris

Weather also plays an important part and crops need rain as well as sunshine to grow. Different crops need different amounts, but too little or too much rain can harm crop growth.

Agronomists like Chris use weather stations to help them monitor what the weather conditions are going to be like for the growing crop. The weather also affects spraying and pest and disease risk, so it is important to know!

Can you work out what the different instruments on the weather station are used to measure? We've filled one in for you. Then colour in the symbols.

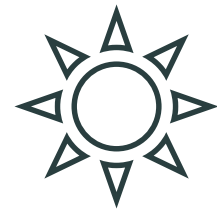
Easier

Rain gauge measures:

R _ _ _ f _ _ _

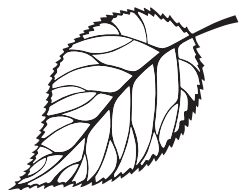


Wind sensor: measures wind
s _ _ e _ and wind d _ _ _ _ _ n



Pyranometer
(that's a hard one)

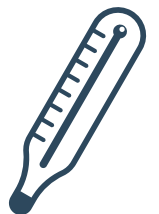
S _ _ n _ _ _ _ _



L _ _ _
wetness sensor

Combi-sensor

Measures air temperature and humidity



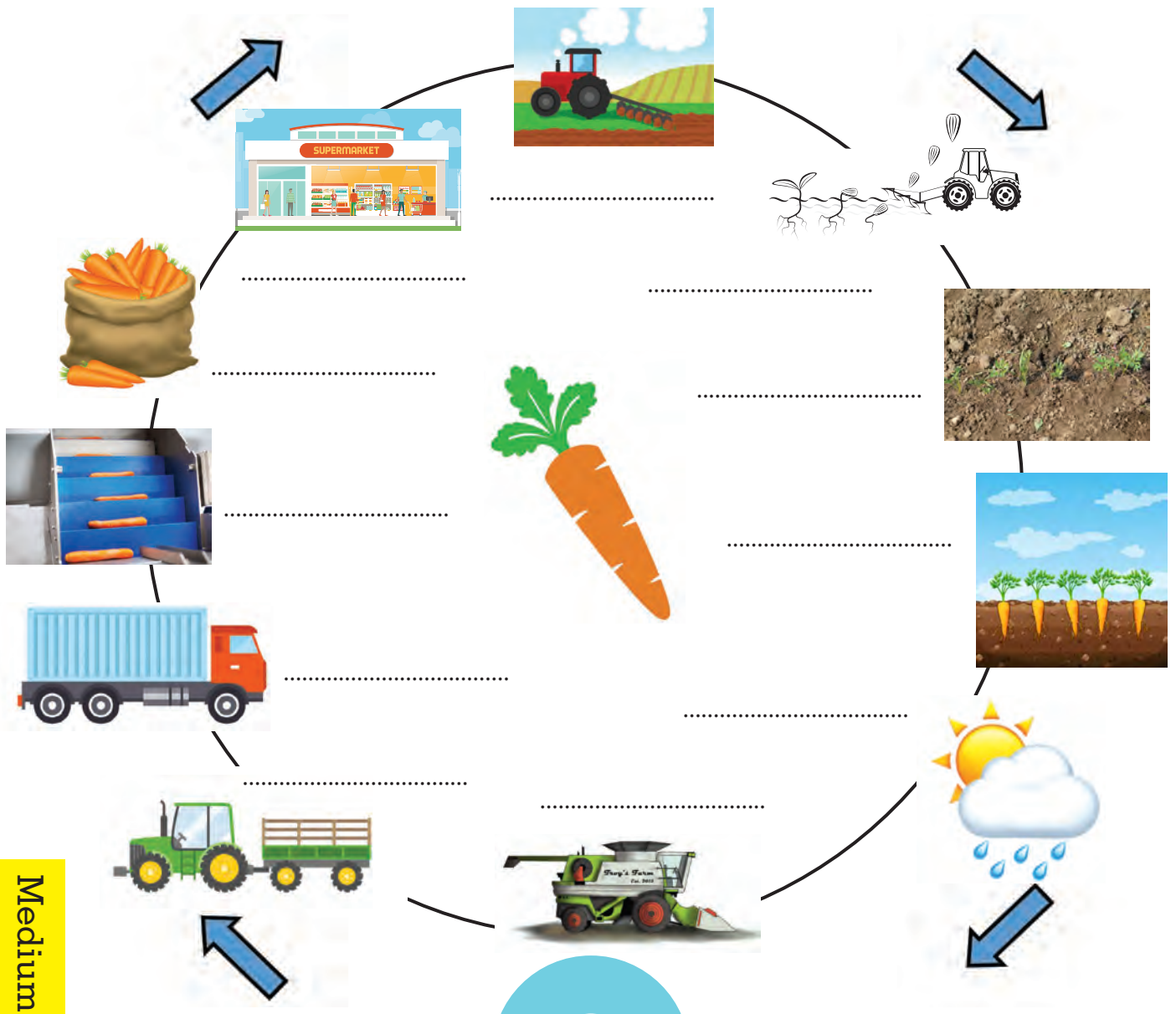
Difficult



Finally, it's time to harvest our crops and process them . . .

Kathryn

The images on this page show the steps that happen to a crop before it ends up on your plate. Using what you've learnt from earlier in the booklet, can you write what's happening in each of the pictures?



Medium



Steve

. . . and think about how they're going to be used.

From field to fork

Can you put the below pictures into the correct order by numbering them 1-3?



.....



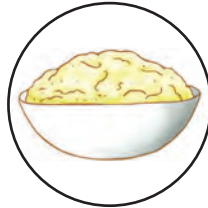
.....



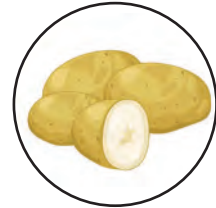
.....



.....



.....



.....



.....



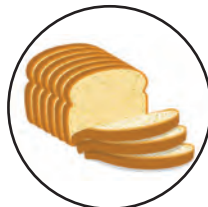
.....



.....



.....



.....



.....

Medium



Mark

Unfortunately a lot of food bought in the UK ends up being wasted



Food waste quiz! (multiple choice)

Difficult

1. How many millions of tonnes do you think food waste totals in the UK per year, according to DEFRA? 3.5 / 10.2 / 8.6
2. Of the total food waste in the UK, what percentage roughly do you think is made up from household waste? 35%, 48%, 64%

The answer is enough food to fill the space of the Royal Albert Hall in London 130 times over!

Here are some simple steps families could take to reduce the amount of food that gets wasted at home?

Buy and cook only what you need, make a meal plan!

Don't throw away leftovers, get creative!

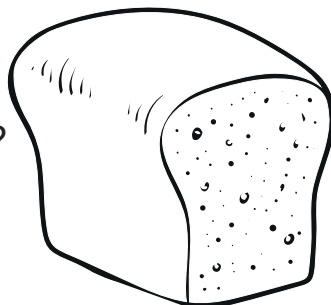
Keep your sliced bread in the freezer and take out what you need

Can you think of more?

.....

Commonly wasted foods include:

Can you colour these in?



Easier



Nick

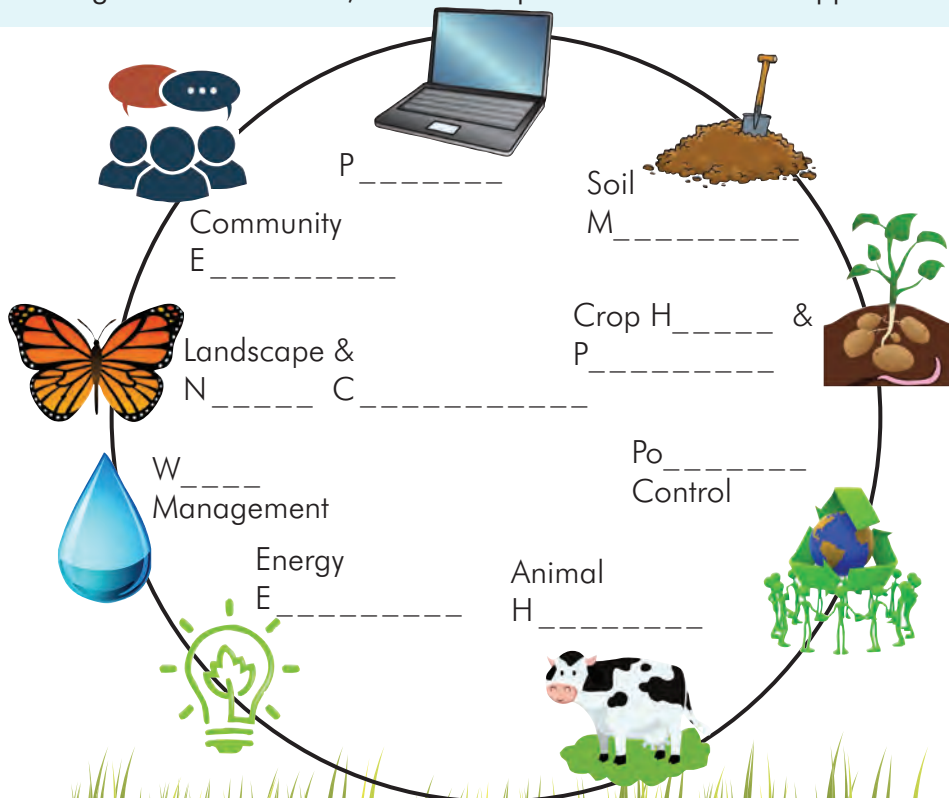
The future of food and farming faces a challenge as population continues to grow at the same time as important resources like water, soil and mineral fertilisers are being used up quicker than they reproduce.

Agronomists work with their farming customers to help them farm sustainably. Sustainability means “meeting the needs of the present, without compromising the ability of future generations to meet their own needs.” In other words, “we shouldn’t use up everything today that people of tomorrow will also need (UN).” A good example of this is thinking about a money box. If you are given pocket money, if you spend too much too quickly, your money will run out. However if you spend it slowly, it will last and you won’t run out before you get your next pocket money!

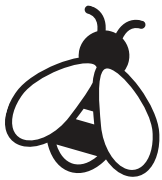
Sustainable farming is all about taking a whole farm approach, using the best of modern techniques alongside tried and tested traditional methods (Linking Environment And Farming, LEAF). Can you fill in the blanks to reveal what this model is called?

I _____ F _____ M _____ (IFM)!

Have a go at naming the sections below, that make up the IFM whole farm approach.



Difficult



Our crops wouldn't grow without pollinators like this little honey bee. This busy little worker and his friends have been busy buzzing all over our activity book.

How many of them did you spot?

Answer:

Easier

Colour me in!



Easier

Did you enjoy this activity book and want to find our more about food and farming?

Get in touch with us for more information or to find out which events we'll be at next – please email info@agrii.co.uk or speak to your usual Agrii contact.

ANSWERS TO QUIZZES:

Page 1 Bio Diesel and Cotton **Page 2** Tractor, Cultivator, Seeds, Earthworm, Roots, Water **Page 3** Maize, Barley, Oilseed Rape, Wheat, Pea
Page 4 From left to right; Sheep, Cow, Chicken, Pig **Page 6** Cabbage, broccoli, corn, potatoes, pumpkin, beetroot, lettuce, peas, onions
Page 7 1. All but yoghurt on right 2. Cows, sheep **Page 8** 1. Nitrogen, Potassium, Boron, Sulphur, Potassium, Calcium, Zinc 2. Corn
Page 9 Chickens: grains, vegetables Cows: grass, grains, soya Sheep: grass, other plants, legumes Pig: grass, vegetables, roots, most things!
Page 10 Herbicides, Blackgrass, Diseases, Pesticides, Fungicide, Pests **Page 11** 1. Aphid 2. Fox 3. Pigeon 4. Deer 6. Fleabeetle 7. Goose 8. Mouse 9. Slug Spells: Honeybees
Page 12 Beetles, Lacewing, Ladybird
Page 13 1. Nutrients, Hedgerows, Habitats; 2. Songbirds: Barn/hedgerow, Mice: Barn/field/farmhouse, Owl: Barns, Newts: Pond/ditch, Beetles: Buffer strip
Page 14 Rainfall, Speed and direction, Sunshine, Leaf **Page 15** Cultivating the land, planting seeds, crop emerging/sprouting, growing crop, helped by rain and sunshine, harvested, out of field on trailer, transported to factory, processed on production line, finished bag of carrots, supermarket
Page 16 1 – 3, 1, 2. 2 – 1, 3, 2. 3 – 2, 3, 1. 4 – 1, 3, 2 **Page 17** 1: 10.2, 2: 64%. Can you think if more? Feed animals like chickens or pigs with scraps, don't put too much on your plate!
Page 18 1: Integrated Farm Management. 2: Planning, Soil Management, Crop Health & Protection, Pollution Control, Animal Husbandry, Energy Efficiency, Water Management, Landscape & Nature Conservation, Community Engagement.