

Mars Home Learning Grid w/b 15<sup>th</sup> June 2020

**Big Question: Where does our food come from?**

Activities this week will help you to investigate how plants grow and lifecycles, farming in Scotland and The Borders, and food grown around the world. There are also opportunities for you to create dishes and prepare food.

<b>What do you know already about Food and Farming?</b>	<b>Scotland's Farming Year – Spring</b>	<b>What's in Season?</b>	<b>From Farm to Fork</b>
<p>Prior Knowledge</p> <p>Some of you may have previously undertaken a topic in school about farming or learnt about where our food comes. I'm sure that most of you will have worked with Sally Fleming or visited The Hirsell. Earlier in the year, Sally came to speak to us about land use and what crops they grew.</p> <p>Read through the statements attached below and think about whether each one is true or false. Perhaps you could talk about them with a sibling or adult at home. Why do you believe the statement to be true or false – try to justify (give reasons for) your decision. (Answers can be found on the week 13 Answer sheet)</p> <p>Test your farming knowledge with this <a href="#">CBBC Quiz</a>.</p> <p>Can you <a href="#">guess where each of the fruits in this quiz are grown?</a></p> <p>Further information and resources can be found on the website below: <a href="https://www.theschoolrun.com/home-work-help/food-and-farming">https://www.theschoolrun.com/home-work-help/food-and-farming</a></p>	<p><a href="https://www.youtube.com/watch?v=Mxly-hiGbM">https://www.youtube.com/watch?v=Mxly-hiGbM</a></p> <p>Watch this video about the tasks that have been undertaken by Scottish farmers during Spring.</p> <p>Use what you have learned to write definitions to explain the following:</p> <ol style="list-style-type: none"><li>1. Ewe</li><li>2. Calf</li><li>3. Livestock farmers</li><li>4. Arable farmers</li><li>5. Precision Farming</li><li>6. Nutrients</li><li>7. Crop Rotation</li><li>8. Fertiliser</li><li>9. Deep ridging</li></ol> <p>Do you know what farmers will be busy with in the summer months? You can find out <a href="#">here</a>.</p> <p>Also look out for information on your class Facebook page about two local farms – Jacksons at Jedburgh and Clackmae Farm (near Earlston) – which provide farm tours and regular updates.</p>	<p>Although we may always be able to buy strawberries in the shops, they are at their freshest and cheapest in the summer months. This is called being “in season”.</p> <p>This <a href="#">video</a> explains some of the benefits of eating in season.</p> <p>Investigate foods that are available or ‘in season’ at different times of the year and local to your area. Google “Fruits and Vegetables in Season” or look at this <a href="#">Scottish Seasonality Calendar</a>. Try to find examples of fruit, veg, meat and fish.</p> <p>Design a poster/chart, a short video or any other creative way you like, to show in season produce either for the month of June or all year round.</p>	<p>Use the <a href="#">Tesco YouTube Channel</a> to select an item of food that we eat regularly &amp; find out about its journey, from farm to fork.</p> <p>Can you write a recount of the process from the food's perspective?</p> <p>Include details of your exciting journey and remember to include details and information of what you saw and how you felt at different stages of your journey.</p> <p>See this example as a <a href="#">WAGOLL</a>.</p> <p style="text-align: center;"><b>OR</b></p> <p>Create a Fact File for a fruit or veg by researching the following questions:</p> <ul style="list-style-type: none"><li>• Where is it grown today?</li><li>• What kind of climate does it need to grow well?</li><li>• Where did it originally come from?</li><li>• When did it become a popular food around the world?</li><li>• Where is it exported (sent to other countries) to?</li></ul>

### Maths on the Farm

Mathematics has enabled farming to be more economically efficient and has increased productivity. Farmers use mathematics as a system of organisation to effectively utilise their time and manage their money. Farmers use numbers every day for a variety of tasks, from measuring and weighing, to land marking.

Can you think of 5-10 specific jobs on the farm that would require the farmer to utilise numeracy and maths skills?

You might be interested in these 'Maths in Real Life – Food and Farming' videos:

<https://www.youtube.com/watch?v=BWhKJJQdcGo>

<https://www.youtube.com/watch?v=WchFs52YpQU>

Have a go at the attached mixed operations worksheet from the Royal Highland Education Trust. *(Numbers 6 and 8 use ratio and percentage, we haven't covered those areas of maths this year so don't worry if you find them tricky, can you solve the others?)*

<https://www.rhet.org.uk/media/1516/maths-worksheet-rev1.pdf>

### Adding Fractions More than 1

Last week we looked at adding fractions that were less than 1 whole. To continue this learning, let's look at adding fractions more than 1 whole. (If you have not completed the previous fractions task from week 12, please do that first)

Use this BBC Bitesize link to watch the videos.

<https://www.bbc.co.uk/bitesize/articles/zdbmt39>

There are 2 videos as well as follow up tasks you can complete. You also need to remember our learning of equivalent fractions from a few weeks ago.

Both activities have answers for you to self – assess your learning. How did you do? What did you do well? What do you still need to work on?

More information on this can be found [here](#)  
Look in Week 5, Lesson 3 (adding mixed numbers)

### Farmer Gump's Fields

You may use a calculator for this problem but try to show your workings and the steps you take.

Farmer Gump has two problems. His first problem is to work out how much fencing he needs to buy for his fields, so his sheep don't escape. His second problem is to work out how many sheep each field can hold—each sheep needs a minimum of 10m<sup>2</sup> of grass!

The fields and their dimensions can be seen in the attached image.

Remember

Perimeter = 2 x (L + B)

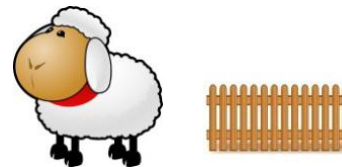
Area = L x B

### Farmer's Market

Sheep cost £65 each.

Fencing is £16 per metre.

How much will it cost Farmer Gump altogether?



### River Crossing

The fox, the hen and the corn.

Once upon a time a farmer went to market and bought a fox, a hen and a sack of corn.

The farmer came to a river which needed to be crossed by boat. He could take only one of his purchases - the fox, or the hen, or the sack of corn - in the boat at a time.

If left together on the riverbank, the fox would eat the hen, or the hen would eat the corn.

Can you find a way for the farmer to get all of them across the river safely?



Possible solutions to this problem can be found [here](#).

## Gourmet Burger Builder

### [Create the Best Burger](#)

Use the website above to create your own dream gourmet burger online. This website allows you to choose your ingredients as you go along with helpful hints and tips. You can then generate a customized recipe at the end to cook with your family! It practices skills such as chopping, peeling, grating, forming meat patties and food hygiene.

Further tips can be found [here](#) in this Education Scotland Food Skills video.

### Ice Cream in a Bag

If you fancy dessert, why not have a go at making your own ice cream in a bag! Select your flavour and ingredients and start making ice cream. You may need an adult to help you and someone else to help so your arms don't get tired!

### [Ice Cream in a Bag](#)

## Life Cycles of Plants

Take a tomato and cut it into thin slices. Plant these slices in soil and keep them on a sunny windowsill, remember to keep watering them. Observe this over time, record the changes you see every day, measure the stems and keep a note if you can.

You could also try to grow plants from other seeds you find in your foods eg. Apples, peppers, avocado, or melon. You could also try growing vegetables from scraps!

<https://www.youtube.com/watch?v=4MgRuLV-3Dk>

Research the life cycle of your favourite edible plant or a plant that you have grown. How does it look at these stages – seed, seedling, flowering, growing fruit. How is the seed dispersed so that the cycle can start again? Can you show the plants' lifecycle by creating a diagram or a video? You could even try a simple animation!

<https://www.youtube.com/watch?v=RIZhv7AckXE> -

## What Does Our Body Do With Food?

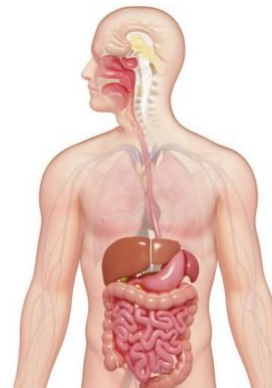
Our body uses the food we eat to create energy. In order to do this our food must be *digested*.

Look at this BBC guide all about the Digestive System

<https://www.bbc.co.uk/bitesize/topics/z27kng8>

Look at the labelling activity at the end of the grid. Can you use the information from the videos to correctly label each part of the digestive system?

The answers are in this week's answer sheet



## Au Restaurant

Language Challenge – can you research how to order your favourite meal in another language?

First you will need to find out how to say your favourite food / dish. (The internet may help you to translate)

The video links below contain restaurant vocabulary that would help you to order food in French.

Perhaps you could involve your family and pretend you are at a restaurant for lunch or dinner. Take turns to be the waiter / waitress and the diner / customer.

Bon Appetit!

<https://www.youtube.com/watch?v=nuwbPDoQT7Q>  
<https://www.youtube.com/watch?v=jYjsb1NfM8>  
<https://www.youtube.com/watch?v=UOK3yXylNac>

### PE: COPYCAT

This will help to improve your motor skills, co-ordination and sequencing, as well as your memory!

Make an outline of 6 boxes on the floor with masking tape or shoes. Ask a partner to do the same. Face each other.

One of you is the leader, and the other person the follower.

Make a sequence of jumps between different boxes, try 3 moves first. The follower copies your sequence.

Now try 4, then 5 moves.

	You	

	Partner	

### Chalk Course



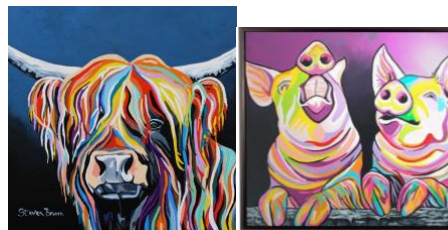
Make a chalk course on your pavement or driveway.

Stones would also work, or use actual objects like a skipping rope laid out.

### Expressive Arts

Scottish artist Steven Brown is famous for his paintings of Highland cattle. They hang on walls all over the world! Steven's colourful McCoo paintings are hugely popular.

Here are a few examples of his work;



Can you create your own Steven Brown inspired artwork using things you may find on a farm? Here are some steps to get your started;

1. Decide what animal/plant you are going to draw and sketch out the outline.
2. Look at the shadows, texture, features of your animal/plant. What do you need to include?
3. Choose exactly 6 bright colours to use for your painting and lay them down in long strokes.
4. Keep adding colour until your design is finished.
5. Share your finished project onto your class Facebook Page!

### Rainbow Food

Whole School Challenge

Create a rainbow using fresh food! Get creative, what foods could you use for red, orange, yellow, blue, indigo and violet? Do you need to cut up, chop, peel, slice any of your food in order to make it into a rainbow shape? Perhaps you want to cut out shapes using a shaped cutter or a knife with the help of an adult. Maybe you want to use more than one food for one colour e.g. red strawberries and raspberries.

Use a map or atlas to find out the 'food miles' the different ingredients have travelled. Investigate which foods have travelled the furthest.

Take a picture, share with us on Facebook or through email then enjoy eating your fresh and tasty Rainbow Food.



## SUPPORTING / ADDITIONAL RESOURCES

### Where does our food come from?

#### Literacy

- <https://www.youtube.com/watch?v=MYxly-hiGbM> – Scotland’s Farming Year – Spring
- <https://www.youtube.com/watch?v=CqWWw2VhJdg&t=23s> – Scotland’s Farming Year – Summer
- <https://www.youtube.com/watch?v=bgDiaYFIlol> – Scotland’s Farming Year – Autumn
- <https://www.youtube.com/watch?v=l19fgJ5qn0w> – Scotland’s Farming Year – Winter
- <https://www.youtube.com/watch?v=aqF3EuFm7vQ> - Eating Seasonally
- <https://foodanddrink.scot/resources/seasonality-calendar/> - Scottish Seasonality Calendar
- [https://www.youtube.com/playlist?list=PLbPWPsvL8htk0B5pGQJx5\\_s-6IUNjoa0E](https://www.youtube.com/playlist?list=PLbPWPsvL8htk0B5pGQJx5_s-6IUNjoa0E) - Tesco YouTube Channel
- <https://www.bbc.co.uk/programmes/articles/3WCN1cstkF0p36m3RVM6YZx/the-forgotten-celery> - The Forgotten Celery (WAGOLL example)

#### Numeracy

- <https://www.youtube.com/watch?v=BWhKJJQdcGo> – Food and Farming, Maths in Real Life
- <https://nrich.maths.org/11175> - River Crossing Problem (NRich)
- <https://nrich.maths.org/11175/solution> - River Crossing Solution
- <https://www.bbc.co.uk/bitesize/subjects/znwqftr> - Second Level Maths and Numeracy (Learn and Revise)

#### Other

- <https://www.youtube.com/watch?v=4MgRuLV-3Dk> - Growing from food scraps
- <https://www.youtube.com/watch?v=RIZhv7AckXE> - Life cycle animation example
- <https://www.youtube.com/watch?v=pGU1AOYkFnA> - Harvest wheat in Scottish Borders
- <https://www.youtube.com/watch?v=ZqafIt7MkqY> - Planting spuds in the Borders
- <https://www.youtube.com/watch?v=b6Xmtp0wz9s> George – Grain Chain growing wheat
- [https://www.youtube.com/playlist?list=PLbPWPsvL8htk0B5pGQJx5\\_s-6IUNjoa0E](https://www.youtube.com/playlist?list=PLbPWPsvL8htk0B5pGQJx5_s-6IUNjoa0E) - Tesco YouTube Videos
- <https://www.youtube.com/watch?v=Qmla9NLFbVU> - Technology for future farming
- [https://www.youtube.com/watch?v=B4ZR\\_4XK5TI](https://www.youtube.com/watch?v=B4ZR_4XK5TI) - Introducing Food Miles
- <https://www.youtube.com/watch?v=c0mUV4zz9E4> - Big Mac Food Miles
- <https://www.bbc.co.uk/bitesize/clips/ztnjpv4> - Farming in southern uplands
- <https://www.foodafactoflife.org.uk/>
- <https://www.youtube.com/user/EatHappyProject>
- <https://www.youtube.com/user/rhetinfo>
- <https://www.steampoweredfamily.com/activities/make-plastic-from-milk/> - Make your own toys from Milk – a fun, reasonably simple (if not a bit messy) Science experiment.
- <https://www.bbc.co.uk/bitesize/tags/zncsscw/year-6-and-p7-lessons/1> - BBC Bitesize daily lessons suitable for P7

### What do you know already about Food and Farming? (Prior Knowledge)

Read through the following statements and decide if you think they are TRUE or FALSE?

- |  |   |
|--|---|
| <ol style="list-style-type: none"><li>1. There are about 280,000 farms in Britain.</li><li>2. Cattle in the UK have passports that keep a record of their birth and where they get moved to.</li><li>3. Almost half of the food in the world ends up being thrown away as waste.</li><li>4. About 75% of the world's population doesn't drink cow's milk as they are 'intolerant' of it which means they can't digest the lactose in it after they stop being a baby.</li><li>5. Nearly 30% of fruits and vegetables don't get sold in the supermarkets because they don't look nice enough or are the wrong shape.</li><li>6. Bananas can travel over 5,000 miles before they reach our supermarkets.</li><li>7. Archaeologists have found evidence of the first signs of farming as long ago as 12,000 years.</li><li>8. Today, in the UK, over 80% of the countryside is farmland.</li><li>9. Farms used to employ lots of people to help do the day-to-day jobs; today machines like tractors and milking machines are used instead.</li><li>10. Some people grow their own food on allotments. Allotments are small pieces of land rented out to people so that they can grow things on them. There are over 300,000 allotment plots in the UK.</li></ol> | <ol style="list-style-type: none"><li>11. Many people try to eat seasonal food. This is food that is ready to pick during that season, rather than food that has been stored or perhaps travelled a long way from where it was produced. For example, in the UK, people may eat courgettes in the summer months, but more leeks and potatoes in the winter months.</li><li>12. In the UK it is recommended that we eat between 5 and 7 servings of fruit and vegetables per day.</li><li>13. In parts of Europe it is recommended that people eat up to 9 servings of fruit and vegetables per day.</li><li>14. If you used all the edible meat from one cow you could make over 1000 burgers.</li><li>15. Between 400 and 800 bars of chocolate can be made from one cocoa tree.</li></ol> |
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# MATHS WORKSHEET



1. On a farm there are 350 cows. Each day 11,300 litres of milk are produced. How many of litres of milk does each cow produce? Round your answer to the nearest whole number.

A calculator may be used.

2. However, due to pregnancies (having calves) only 290 cows are milked at any one time. Using your answer from question 1, what is the total litres of milk produced from the milking cows each day?

3. A farmer takes 6 Highland cows to a show. The entry fee is £3 per cow. One cow wins bronze, two cows win silver and three cows win gold. Calculate the farmers profits.

Gold prize = £10  
Silver prize = £5  
Bronze prize = £2



4. A 16kg bag of cow feed is made up of: 2/8 Wheat, 3/8 Maize, 1/8 Barley, 2/8 Oats

a) If you are making up a bag of cow feed how many kilograms do you need of:

- i) Wheat
- ii) Maize
- iii) Barley

b) If each cow requires 4kg of feed per day then how many days will one bag of feed last per cow?

5. The cows need to be milked three times a day.

The first session starts at 03:00am and finishes at 05:30am. The second session starts at 12:30pm and finishes at 14:15pm. The last session starts at 19:45 and finishes at 21:00.

How long does the farmer spend milking the cows that day?

6. In a farm there are 200 Highland cows. There are 140 brown coloured cows, 25 black coloured cows, 20 red coloured cows and 15 white coloured cows.

- a) Express in a ratio the number of brown coloured cows to red coloured cows. Simplify your answer.
- b) Express in a ratio the number of black coloured cows to white coloured cows

7. A farmer grows tomatoes on his farm and is trying to keep costs low.

Which shop is the cheapest for the farmer to buy 40 tomato seeds?

Anderson's = £1.80 for 20 seeds  
Marshall's = £0.80 for 10 seeds  
Country Corner = £0.50 for five seeds

8. In Farmer Watsons farm he has a vegetable patch where he grows different vegetables for the public to buy.

His vegetable patch is composed of 40% potatoes, 25% leeks, 30% strawberries and 5% carrots.

Express each percentage of vegetables in its simplest form.



## LO: To calculate the area and perimeter of rectangles

Calculate the **area** and the **perimeter** of the fields below.

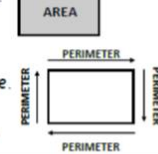
**Area** is the space contained inside a shape.  
(Measured in squared units of measure)

For a rectangle:  $A = l \times w$

**Perimeter** is the distance around the shape.

For a rectangle:  $P = 2 \times (l + w)$

Or =  $(2 \times l) + (2 \times w)$



Farmer Gump has two problems. His **first problem** is to work out how much fencing he needs to buy for his fields so his sheep don't escape. His **second problem** is to work out how many sheep each field can hold—each sheep needs a minimum of 10m<sup>2</sup> of grass!

## Farmer Gump's Fields

NOT TO SCALE

1)  P = A =	2)  P = A =
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3)  P = A =	4)  P = A =
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5)  P = A =	6)  P = A =
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7)  P = A =	<p>How much fencing does Farmer Gump need? How much will it cost?</p> <p>How many sheep can Farmer Gump get to fill his fields? How much will they cost?</p>
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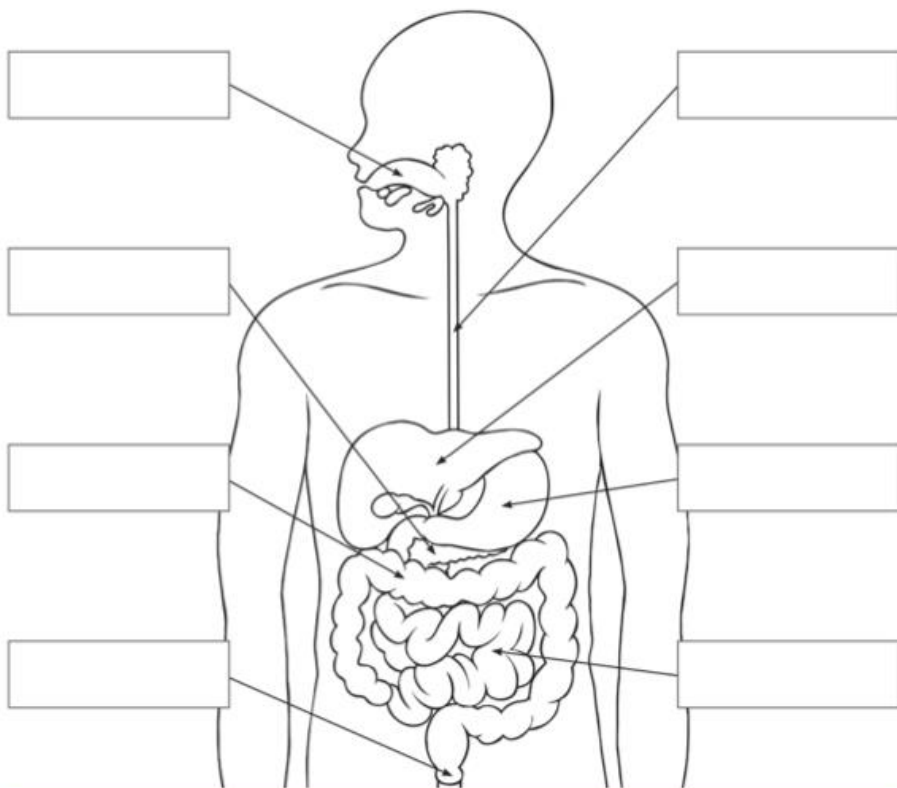
**Farmer's Market**

Sheep cost £65 each.

Fence is £16 per metre.

# Human Digestive System Labeling

Cut out the labels and stick them on to the correct digestive parts in this diagram.



visit [twinkl.com](https://www.twinkl.com)



<b>esophagus</b> <small>twinkl.com</small>	<b>anus</b> <small>twinkl.com</small>	<b>liver</b> <small>twinkl.com</small>	<b>small intestine</b> <small>twinkl.com</small>
<b>large intestine</b> <small>twinkl.com</small>	<b>mouth</b> <small>twinkl.com</small>	<b>pancreas</b> <small>twinkl.com</small>	<b>stomach</b> <small>twinkl.com</small>