RHET

The Royal Highland Education Trust

Collie Tales

Suggested participants - Early, First and Second Level

What this pack contains:

- All the resources to undertake our 'Collie Tales' activity with your class.
- Learning Intentions, Success Criteria and Suggested Experiences & Outcomes.
- Learning for Sustainability links.
- DYW links.
- Lesson plan.
- Suggested additional activities.

Learning Outcomes

- We are learning to estimate answers to calculations or problems.
- We are learning to round whole numbers.
- We are learning to calculate profit and loss.
- We are learning to estimate and measure length correctly.
- We are learning to calculate areas.
- We are learning to name, identify and classify a range of simple 2D shapes and 3D objects.

Success Criteria

- I can collect and interpret data.
- I can discuss how and why data is collected.
- I can display data in a way others can understand.
- I can discuss what farm businesses can do to become more sustainable.

Experiences and Outcomes

Estimation and rounding

- MNU 0-01a I am developing a sense of size and amount by observing, exploring, using and communicating with others about things in the world around me.
- MNU 1-01a I can share ideas with others to develop ways of estimating the answer to a calculation or problem, work out the actual answer, then check my solution by comparing it with the estimate.
- MNU 2-01a I can use my knowledge of rounding to routinely estimate the answer to a problem then, after calculating, decide if my answer is reasonable, sharing my solution with others.

Money

- MNU 2-09c I can use the terms profit and loss in buying and selling activities and can make simple calculations for this.
- MNU 2-09a I can manage money, compare costs from different retailers, and determine what I can afford to buy.

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Experiences and Outcomes

Measurement

- **MNU 0-11a** I have experimented with everyday items as units of measure to investigate and compare sizes and amounts in my environment, sharing my findings with others.
- **MNU 1-11a** I can estimate how long or heavy an object is, or what amount it holds, using everyday things as a guide, then measure or weigh it using appropriate instruments and units.
- **MNU 2-11b** I can use the common units of measure, convert between related units of the metric system and carry out calculations when solving problems.

Properties of 2D shapes and 3D objects

- **MTH 0-16a** I enjoy investigating objects and shapes and can sort, describe and be creative with them.
- **MTH 1-16a** I have explored simple 3D objects and 2D shapes and can identify, name and describe their features using appropriate vocabulary.

Fractions, decimal fractions and percentages

- **MNU 2-07a** I have investigated the everyday contexts in which simple fractions, percentages or decimal fractions are used and can carry out the necessary calculations to solve related problems.

Number and number processes

- **MNU 0-02a** I have explored numbers, understanding that they represent quantities, and I can use them to count, create sequences and describe order.
- **MNU 1-02a** I have investigated how whole numbers are constructed, can understand the importance of zero within the system and can use my knowledge to explain the link between a digit, its place and its value.

Data and analysis

- **MNU 0-20b** I can match objects, and sort using my own and others' criteria, sharing my ideas with others.
- **MNU 1-20b** I have used a range of ways to collect information and can sort it in a logical, organised and imaginative way using my own and others' criteria.

Learning for Sustainability

- **Goal 4** Quality education: 4.7 ensure that all learners acquire the knowledge and skills needed to promote sustainable development.

Developing the Young Workforce

Entitlement opportunities to engage in profiling that supports learning and the development of skills for work and future career choices.

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Collie Tales Lesson Plan

Introduction

- Share/discuss the learning intentions and success criteria.
- Use our Collie Tales videos to take a look around some different farms and find out more about some of the maths farmers use on a daily basis.
- Watch a short video of some working collie dogs and find out how they work together as a team.

Suggested discussion points

- What types of dogs help farmers?
- Why are the dogs so important on the farm?
- What type of maths do you think a farmer might use?
- In each of the collie tales videos, the questions below are posed. You can revisit these in the classroom to undertake further learning.

Early/First Level

Discover more with Pip!

- How tall are the trees? Use this worksheet to measure the height of a tree in your school grounds.
- Which leaves are the largest? Use this sheet to work out what types of leaves you have in the playground. You work out the area of the leaf by tracing the shape onto graph paper and counting the squares and graphing the results of all the leaf sizes in the class.
- How tall is the barley? You can use rulers to measure the height of different areas of grass in the school grounds.
- How many seeds were there on the barley plant? Do some counting and barley maths with the Count with Pip SWAY.
- How many straw bales are there?/What shape are the bales? Use this 'Count the bales' SWAY to do some calculations with bales and use concrete materials like Lego/wooden bricks to investigate shapes and weights.

Discover more with Tweed!

- How many hens are there?/What size are the eggs?/ How many eggs have the hens laid today?
- How many toes do hens have on each foot? How high can Tweed jump? How many sheep are in the trailer?
- Tweed can squeeze through small gaps! Can you replicate the gap he managed to get through in the classroom?
- How long does Tweeds' ball take to travel 10m in the river? You can measure out 10 m in the playground and see how long it takes to roll a ball the distance. Is this faster or slower than the river speed?

Second Level

Meet Sweep

- What weight is each sheep?
- How many sheep can fit in a trailer?
- What is the total weight of the flock of sheep?
- What percentage of the trailer is full?

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Second Level

Meet Gem

- How much vaccine does one sheep need?
- How much does a typical sheep weigh?
- How much does it cost to look after sheep each year?

Our 'Costs in keeping sheep SWAY' contains some data sets and questions you can use in the classroom.
You can find out more about maths on farms in general with some additional information and ideas here.

Family Learning

Meet Jura

- How much milk do cows produce?
- How much food do dairy cows need to eat?
- How much do we pay for milk!
- How long does the robot take to milk the cows?
- What is the average milk production?
- How old is a cow when she has her first calf?
- How many litres of milk does a calf receive each day?

There is further information about dairy maths in our 'How is milk produced' SWAY.

Learning

- **Maths and Numeracy outcomes:** The ability to recognises the number of objects in a group/the ability to count on and back/ the ability to compare and describe heights/the ability to collect and organise objects/the ability to estimate an answer/ the ability to investigate and share understanding of the importance of numbers in learning, life and work/the ability to compare costs and determine affordability/the ability to calculate profit and loss accurately.

Additional tasks

- Our maths on the farm video visits a sheep farm to meet the farmer and discover more about the maths he uses.
- Our 'Measurement, data and analysis with peas!' resource contains information and some calculations around pea farming.

More information

- We have a number of maths resources for different ages and stages available to download.

Social media

Please tag **therhet.bsky.social (Bluesky)** or **@TheRoyalHighlandEducationTrust (Facebook)** in your lesson photos/comments.