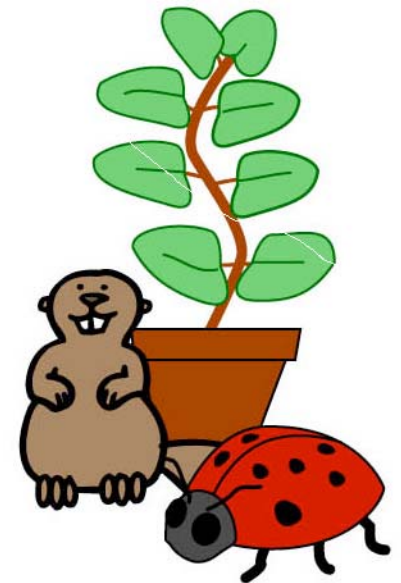


Extension Activities

Plants and Animals

Maths Extension Activities



Maths Extension Activities

The Maths extension activities can be used to consolidate or extend the skills taught as part of the project.

Step	Title	Notes
1	Pet Pictogram	Worksheet to make of a pictogram using teacher support sheet Pet Data.
2	How Much? How Many?	Worksheets based around maths puzzles involving addition, multiplication, division.
3	Useful. Not Useful.	Carroll diagram worksheet.

Resources
<p>Provided</p> <ul style="list-style-type: none"> • Pet Pictogram. (+ data to use for pictogram) • How Much? How Many? • How Many Fish? • Keeping a Pet • How Many? • Useful, Not Useful <p>Suggested</p> <p>Pictures of animals or insects or animal/insect words.</p>

Vocabulary															
<table> <tr> <td>pattern</td> <td>complete</td> <td>construct</td> </tr> <tr> <td>classify</td> <td>criteria</td> <td>Carroll</td> </tr> <tr> <td>Venn</td> <td>properties</td> <td>pictogram</td> </tr> <tr> <td>cost</td> <td>altogether</td> <td>multiplication</td> </tr> <tr> <td>division</td> <td>problem</td> <td></td> </tr> </table>	pattern	complete	construct	classify	criteria	Carroll	Venn	properties	pictogram	cost	altogether	multiplication	division	problem	
pattern	complete	construct													
classify	criteria	Carroll													
Venn	properties	pictogram													
cost	altogether	multiplication													
division	problem														

Expectations
<p>Most students will be able to</p> <ul style="list-style-type: none"> • Classify objects using one or more criteria • Collect data and make a simple table • Make a pictogram • Solve simple money problems <p>Some students will be able to</p> <ul style="list-style-type: none"> • Solve mathematical problems • Follow instructions independently • Construct a pictogram where the symbol represents several units • Solve money problems using multiplication or division

Activity 2

How Much? How Many?

The focus of the activity is for the students to use their knowledge of money in everyday problem solving activities.

Objectives	Lesson Activities	Outcomes	Notes
Students are able to recognize solutions to problems as addition, multiplication or division calculations.	<p>If appropriate recap on previous classroom money based activities. Choose from the appropriate worksheet. See Notes. Decide on the differentiation of activity based on type of work – worksheet or individual cards, and complexity of task.</p> <ul style="list-style-type: none">• Introduce the activity using the enlarged worksheet.• Read one of the problems with the students.• Ask a student to suggest a method of solving the problem. <p><i>Either</i> work through the problem with the students as a group. <i>Or</i> let the students work independently using the suggested method to solve the problem.</p> <ul style="list-style-type: none">• Check the answer is correct. <p>Using the chosen method of differentiation students now complete their set tasks.</p>	Students are able to solve mathematical problems or puzzles with support.	<p>The activity can be used as a development of previous money based teaching and learning activities. Decide on the purpose of the activity- addition, multiplication or division. Select the appropriate worksheet. How Much? How Many? How many Fish? Keeping a Fish. How Many? Enlarge the worksheet. The sheets can either be used as a worksheet or laminated and divided into individual work cards.</p>

Activity 3

Useful. Not Useful

The focus of the activity is for the students to be able to classify objects according to one criterion, progressing to two criteria and to display results on a Carroll diagram.

Objectives	Lesson Activities	Outcomes	Notes
<p>Students learn to sort objects using a Carroll diagram.</p>	<ul style="list-style-type: none"> • Show the students the animal/insect keywords. • Discuss where the insects would be found. • Discuss whether the animal/insects would be considered useful or not useful in the garden. • Show the students the enlarged Useful. Not Useful Carroll diagram. • Select one of the animal/insect keywords. • Ask the students to decide if the animal/insect was useful or not. • Identify where the animal/insect would live. • Choose a student to place the animal/insect keyword on the Carroll diagram. • Ask the students if they agree with the decision. • Choose a student to explain the reason for the decision. • Give the students their own copy of the Useful. Not Useful Carroll diagram. • Students record the first animal/insect on their Carroll diagram. • Repeat with another animal/insect keyword. <p>Younger students may need support to complete the whole Carroll diagram. Devise another Carroll diagram to assess students' understanding.</p> <p>Older students</p> <ul style="list-style-type: none"> • Give the students the list of animal/insects that they then use to independently complete the Carroll diagram. • When the students have completed the Carroll diagram they share and explain their results with others in their group. 	<p>Students are able to sort using two criteria.</p> <p>Students are able to complete a Carroll diagram with support.</p> <p>Students are able to interpret discrete data.</p> <p>Students are able to complete a Carroll diagram independently.</p>	<p>Use the photocopier to enlarge a blank Useful. Not Useful Carroll diagram.</p> <p>Have available suitable animal/insect names from the main project guide keywords.</p> <p>Prepare a follow on activity using different sorting criteria.</p>

Extension Activity Resources

Title	Resource
Pet Pictogram	Worksheet to create a pictogram using a symbol to represent several units.
Pet Data	Teacher resource sheet to support pictogram activity.
How Much? How Many?	Money problem worksheets using addition, multiplication and division calculations.
How Many Fish?	Money problem worksheets using division calculations.
Keeping a Pet	Money problem worksheets using addition calculations.
How Many?	Problem worksheets using division calculations.
Useful. Not Useful.	Worksheet for the students to use to make a Carroll diagram.

Name _____ Date _____

Pet Pictogram

Cat	
Dog	
Tropical Fish	
Goldfish	
Rabbit	
Hamster	
Gerbil	
Guinea Pig	
Mice	
Pony	
Snake	
Bird	
Spider	
Stick Insects	
Tortoise	

Pet Data

Teacher Support Sheet

	Totals for 1 symbol represents 2 units.	Totals for 1 symbol represents 5 units.	Totals for 1 symbol represents 3 units.	Totals for 1 symbol represents 4 units.
Cat	10	10	6	12
Dog	12	15	9	12
Tropical Fish	8	5	3	8
Goldfish	6	5	6	4
Rabbit	16	10	12	16
Hamster	10	5	9	8
Gerbil	8	5	3	4
Guinea Pig	6	5	6	8
Mice	2	0	3	0
Pony	2	0	6	4
Snake	0	0	3	0
Bird	4	5	6	8
Spider	0	5	0	4
Stick Insects	4	10	3	12
Tortoise	2	5	3	4

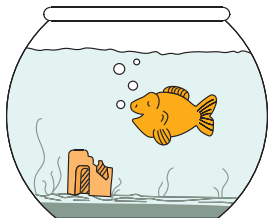
How Many Fish?

1 fish costs 50p.
I have £3.50
How many fish can I buy?

1 fish costs 50p.
I have £4.50
How many fish can I buy?

1 fish costs 25p.
I have £2.50
How many fish can I buy?

1 fish costs £1.50p.
I have £6
How many fish can I buy?



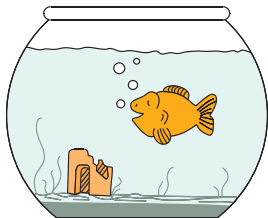
How Many Fish?

1 fish costs 20p.
I have £1
How many fish can I buy?

1 fish costs 50p.
I have £3
How many fish can I buy?

1 fish costs 25p.
I have £2
How many fish can I buy?

1 fish costs £20p.
I have £2
How many fish can I buy?



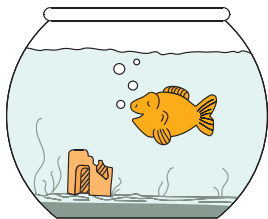
How Many Fish?

1 fish costs 20p.
I have £2
How many fish can I buy?

1 fish costs 50p.
I have £4.50
How many fish can I buy?

1 fish costs 25p.
I have £2.50
How many fish can I buy?

1 fish costs £1.50p.
I have £6
How many fish can I buy?



Keeping a Pet

A hamster costs £2
A cage costs £5
Bedding costs £1.50
Hamster food costs £1 a bag

How much money do I need to buy a hamster
as a pet?

A puppy costs £20
A basket costs £5
Bedding costs £3
Puppy food costs £1 a bag

How much money do I need to buy a puppy
as a pet?

A rabbit costs £3
A hutch costs £5
Bedding costs £1.50
Rabbit food costs £1 a bag

How much money do I need to buy a rabbit
as a pet?

A cat costs £10
A basket costs £5
Bedding costs £2.50
Cat food costs £1.50 a bag

How much money do I need to buy a cat as a
pet?

Keeping a Pet

A parrot costs £25
A cage costs £15
Water bottle costs £2
Parrot food costs £5 a bag

How much money do I need to buy a parrot
as a pet?

A mouse costs £3
A cage costs £8
Bedding costs £2
Mouse food costs £1 a bag

How much money do I need to buy a mouse
as a pet?

A rabbit costs £3
A hutch costs £5
Bedding costs £1.50
Rabbit food costs £1 a bag

How much money do I need to buy a rabbit
as a pet?

A cat costs £10
A basket costs £5
Bedding costs £2.50
Cat food costs £1.50 a bag

How much money do I need to buy a cat as a
pet?

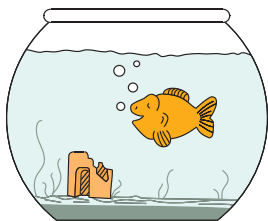
How Much? How Many?

A fish tank costs £5
Fish food costs £1
Fish cost £1, £2, £3
I have £10
How many fish can I buy?

A fish tank costs £6
Fish food costs £1
Fish cost £2, £3, £4
I have £15
How many fish can I buy?

A fish tank costs £5
Fish food costs £1
Fish cost £1, £2, £3
I have £20
How many fish can I buy?

A fish tank costs £5
Fish food costs £1
Fish cost £1, £2, £3
I have £15
How many fish can I buy?



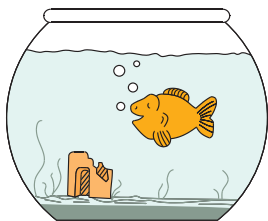
How Much? How Many?

A fish tank costs £5
Fish food costs £1.50
Fish cost 50p, £1, £1.50, £2
I have £10.50
How many fish can I buy?

A fish tank costs £6
Fish food costs £1.50
Fish cost £1, £1.50, £2, £3, £4
I have £15
How many fish can I buy?

A fish tank costs £7
Fish food costs £1
Fish cost £2, £3, £4
I have £20
How many fish can I buy?

A fish tank costs £7
Fish food costs £1
Fish cost £1, £2, £3
I have £15
How many fish can I buy?



How Many?

A tin of cat food lasts for 3 days.
How many tins will I need for 12 days?

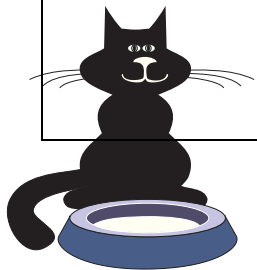
A tin of cat food lasts for 4 days.
How many tins will I need for 8 days?

A tin of cat food lasts for 4 days.
How many tins will I need for 12 days?

A tin of cat food lasts for 2 days.
How many tins will I need for 14 days?

A tin of cat food lasts for 4 days.
How many tins will I need for 20 days?

A tin of cat food lasts for 2 days.
How many tins will I need for 10 days?



How Many?

A tin of cat food lasts for 2 days.
How many tins will I need for 6 days?

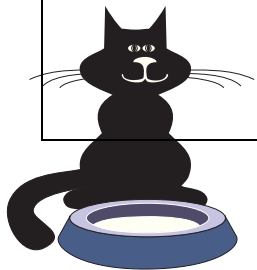
A tin of cat food lasts for 3 days.
How many tins will I need for 9 days?

A tin of cat food lasts for 2 days.
How many tins will I need for 12 days?

A tin of cat food lasts for 3 days.
How many tins will I need for 21 days?

A tin of cat food lasts for 4 days.
How many tins will I need for 16 days?

A tin of cat food lasts for 2 days.
How many tins will I need for 16 days?



Name _____ Date _____

Useful. Not Useful

	soil	not soil
useful		
not useful		