Math Wizards

Grade 2 Data Management & Probability

Teacher's Notes

Ontario Mathematics Curriculum Grades 1 to 8, 1997
Strand: Data Management and Probability
Grade: 2

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Developed by T. Tasker

Overall Expectations:
- sort and classify objects and data using concrete materials
- collect and organize data
- create and interpret displays of data, and present and discuss the information
- demonstrate an understanding of probability and demonstrate the ability to apply probability in familiar day-to-day situations

This resource is based on Data Management & Probability Friday's. That is, every Friday a break from the current mathematical unit is taken and Data Management & Probability is studied. Therefore there are 34 activities, one for almost every Friday of the year. This method can also help make the five mathematic strands more manageable.

Resource Overview

Graphing and Interpretation	Activity 1 meteorology	Activity 2 school graph	Activity 3 leaf graph	Activity 4 flower graph	Activity 5 bug graph
	Activity 6 cars in lot	Activity 7 box of smarties	Activity 8 tally to graph	Activity 9 tally to graph	Activity 10 class survey
	Activity 11 survey of friends	Activity 12 glyph	Activity 13 graph glyph	Activity 14 glyph	Activity 15 graph glyph
Sort and classify	Activity 16 just sort	Activity 17 identify rule resort	Activity 18 identify rule resort	Activity 19 leaf attributes	Activity 20 mitten attributes
	Activity 21 snowmen attributes	Activity 22 sock attributes	Activity 23 Venn Diagram Buttons	Activity 24 Venn Diagram Shapes	
Probability	Activity 25 coin tossing	Activity 26 coin tossing	Activity 27 dice rolling	Activity 28 dice rolling	Activity 29 rolling a special die and graphing
	Activity 30 rolling a special die and graphing	Activity 31 rolling two die and graphing	Activity 32 spinner	Activity 33 spinner	

Materials Box

The materials to implement this data management resource are easily and inexpensively made. Below is a list of those materials that you will need, organized by activity.

Activity SEVEN	- smarties
Activity TWELVE	- construction paper - scissors - glue
Activity THIRTEEN	- glyphs from last week
Activity FOURTEEN	- construction paper - scissors - glue
Activity FIFTEEN	- glyphs from last week
Activity SIXTEEN	- beads or buttons
Activity TWENTY-THREE TWENTY-FOUR	- sorting objects, commercial or home made coloured pasta To make coloured pasta: Materials: 1) different shaped pasta 2) various colours of food colouring 3) jar 4) tin foil Method: 1) Put the pasta and the food colouring into the jar. 2) Close the jar lid tight and shake. 3) Once colouring is evenly spread onto the pasta, spread out onto tin foil to dry.
Activity TWENTY-FIVE	- nickels
Activity TWENTY-SIX	- quarters
Activity TWENTY-SEVEN	- six sided die
Activity TWENTY-EIGHT	- twelve sided die
Activity TWENTY-NINE THIRTY THIRTY-ONE	- cardstock - scissors - glue
Activity THIRTY-TWO THIRTY-THREE	- commercial spinners OR CD spinners (building instructions follow this list of materials)

CD Spinner Instructions

Materials:
1) foam core board (available at stationary stores)
2) ruler
3) exacto knife
4) pencil
5) hammer
6) #8-32 x 3/4 bolt
7) glue
8) back up plate (washer)
9) #8-32 x 3/4 nut
10) an unwanted CD
11) velcro
12) full white sheet labels (example: Avery 08165 for inkjet printers)
13) Clear CD / DVD labels
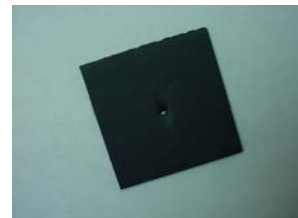14) cardboard
15) scissors
16) 4mm-.7 nut

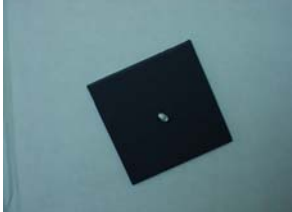| Directions	
1) Cut two 7.5cm x 7.5cm squares of foam core with an exacto knife.	
2) Mark the centre of one square on both sides, and on one side of the second square.	
3) Hammer the bottom of the bolt into the centre of ONE foam core square to form a hole in which the bolt may be inserted.	
4) Lightly hammer the head of the bolt into the SECOND foam core square so that it makes a small dimple.	

|	
5) Insert the bolt through the FIRST foam core square (through the hole).	
6) Glue the dimple foam core square and place the dimple over the head of the bolt. This piece will help to keep the spinner flat.	
7) Place one metal washer over the bolt and then screw on the medium hexagonal nut tightly.	
8) Print off the spinner templates that follow these directions onto the full white sheet labels (example: Avery 08165 for inkjet printers) OR decorate your own CD labels. You may choose to use the clear CD labels to place over top the decorated label for protection. (When printing the spinner templates select print current page or print pages x to y options)	
9) Attach one side of the velcro to the base and the other side to your CD. Remember while placing the velcro to keep things centred and that the velcro pieces match up. The bolt should come up through the hole in the CD.	
10) Place the second metal washer over the bolt. This will reduce the friction between the CD and the pointer.	
11) Print off the pointer templates that follow these directions onto the full white sheet labels (example: Avery 08165 for inkjet printers). Peel and stick the full label onto cardboard (cereal box guage is appropriate) and cut out the pointers. Punch a hole through the centre of the pointer. OR trace pointer onto cardboard and cut out. You may choose to decorate it in your own way.	

| 12) Place the pointer over the bolt and then screw on the small hexagonal nut just enough to prevent the pointer from flying off. | |

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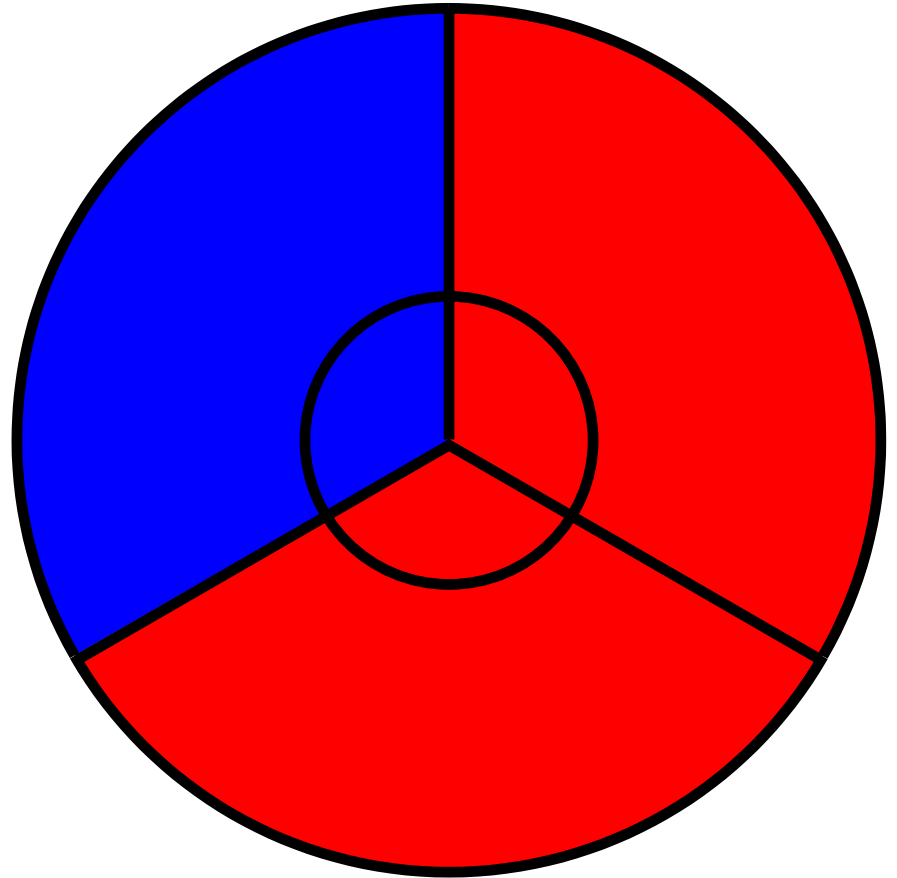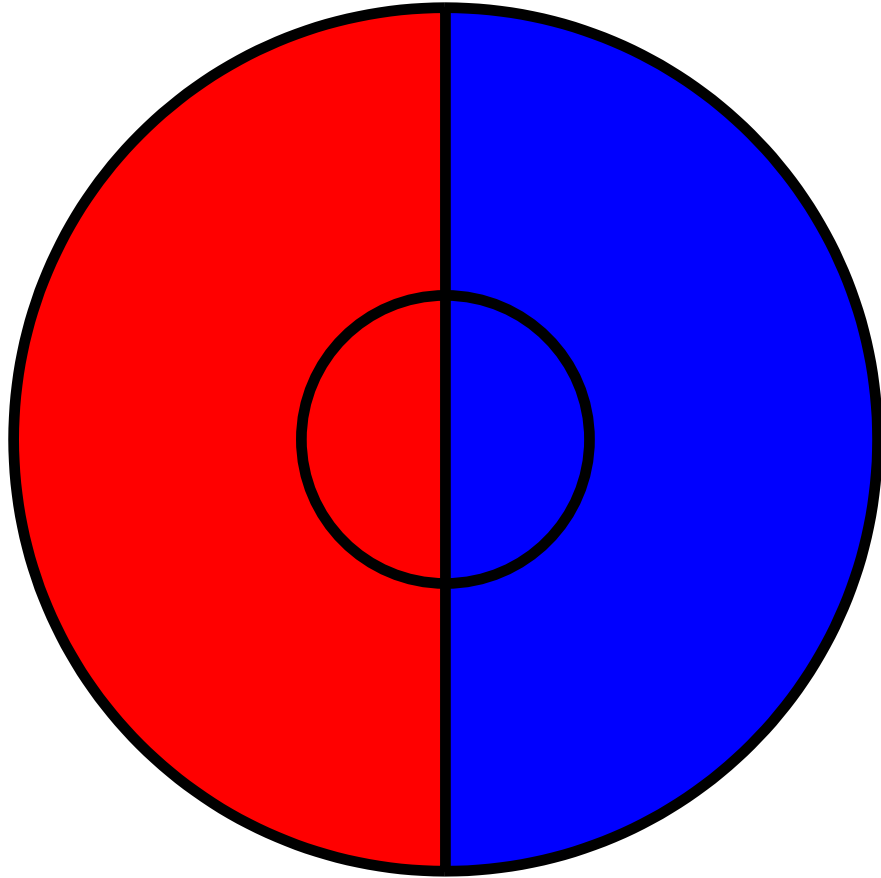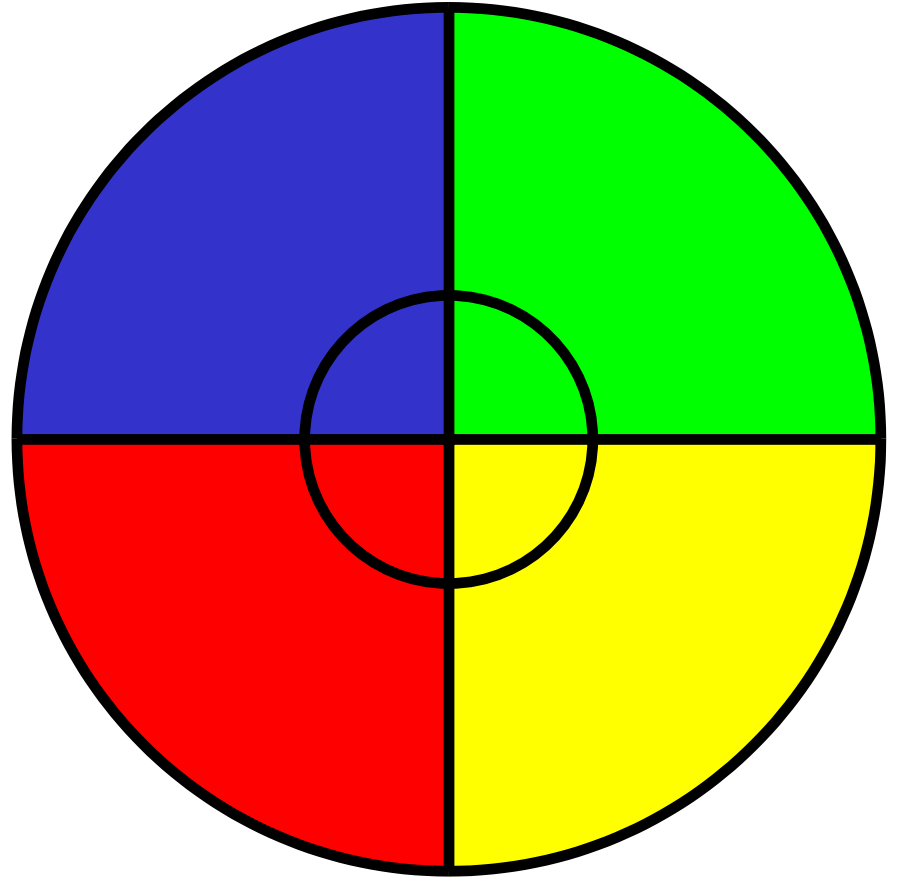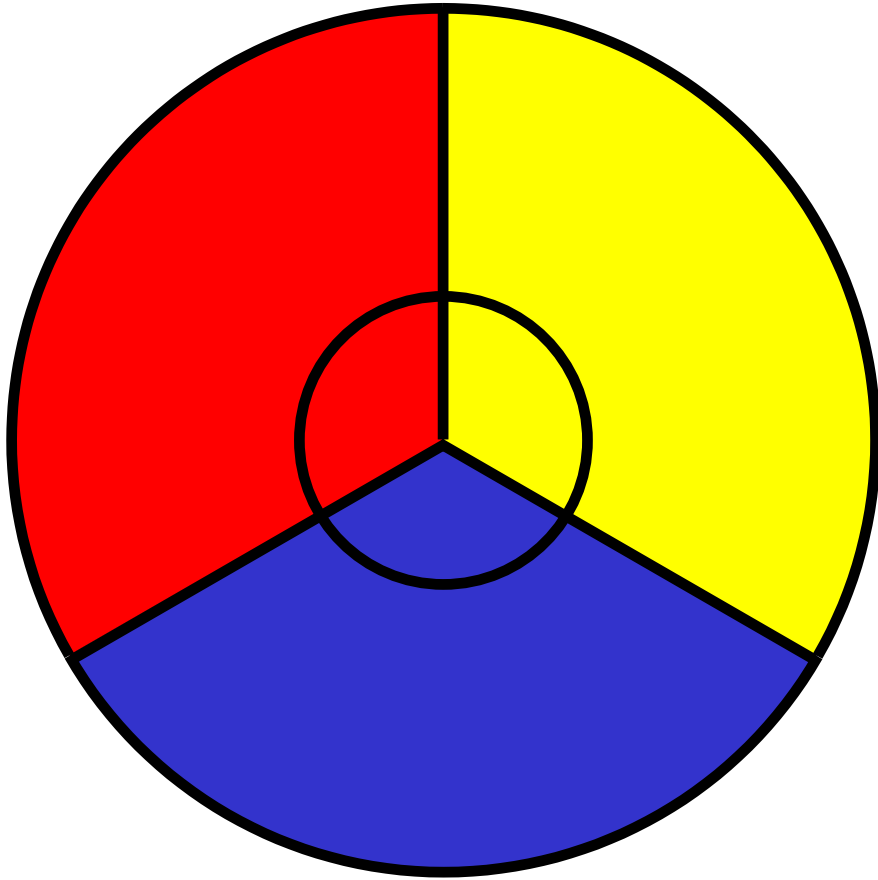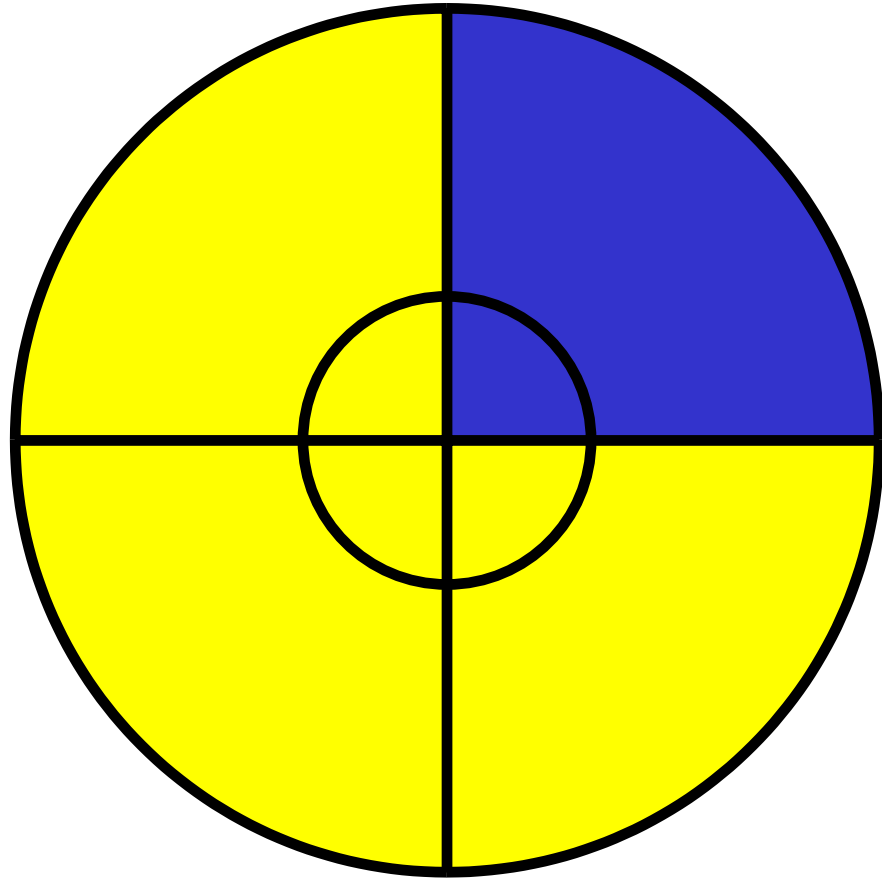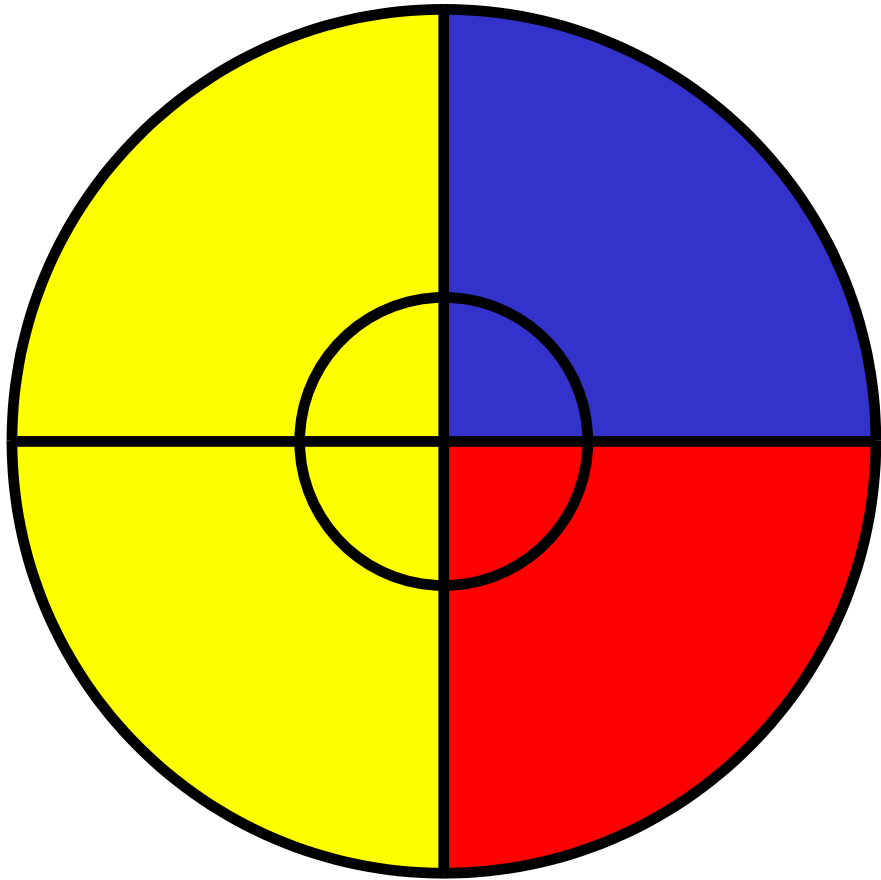
Grade 2 Data Management & Probability

Meteorology

Name:_____

Data Management and Probability
Let's be Meteorologists!

Let's record our weather

Monday	Tuesday	Wednesday	Thursday	Friday
Have students draw the weather for that day.	**This activity should be done at the beginning of each day.**			

Let's graph our weather! **Create a bar graph below.**

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Sunny '															
Cloudy															
Rainy															
Sun and Cloud															
Snowy †															
Windy															

Data Management and Probability
Let's be Meteorologists: SEPTEMBER

Let's record our weather

Monday	Tuesday	Wednesday	Thursday	Friday

Let's graph our weather!

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Sunny '															
Cloudy															
Rainy															
Sun and Cloud															
Snowy †															
Windy															

Data Management and Probability
Let's be Meteorologists: OCTOBER

Let's record our weather

Monday	Tuesday	Wednesday	Thursday	Friday

Let's graph our weather!

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Sunny '															
Cloudy															
Rainy															
Sun and Cloud															
Snowy †															
Windy															

Grade 2 DMactivity001 covers:

D6:collect first-hand data from their environment (eg. the number of days of sun, rain, snow during the month of November)

Data Management and Probability
Let's be Meteorologists: NOVEMBER

Let's record our weather

Monday	Tuesday	Wednesday	Thursday	Friday

Let's graph our weather!

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Sunny '															
Cloudy															
Rainy															
Sun and Cloud															
Snowy †															
Windy															

Grade 2 DMactivity001 covers:

D6:collect first-hand data from their environment (eg. the number of days of sun, rain, snow during the month of November)

Data Management and Probability
Let's be Meteorologists: DECEMBER

Let's record our weather

Monday	Tuesday	Wednesday	Thursday	Friday

Let's graph our weather!

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Sunny '															
Cloudy															
Rainy															
Sun and Cloud															
Snowy †															
Windy															

Grade 2 DMactivity001 covers:
D6:collect first-hand data from their environment (eg. the number of days of sun, rain, snow during the month of November)
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Data Management and Probability
Let's be Meteorologists: JANUARY

Let's record our weather

Monday	Tuesday	Wednesday	Thursday	Friday

Let's graph our weather!

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Sunny '															
Cloudy															
Rainy															
Sun and Cloud															
Snowy †															
Windy															

Grade 2 DMactivity001 covers:
D6:collect first-hand data from their environment (eg. the number of days of sun, rain, snow during the month of November)
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Data Management and Probability
Let's be Meteorologists: FEBRUARY

Let's record our weather

Monday	Tuesday	Wednesday	Thursday	Friday

Let's graph our weather!

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Sunny '															
Cloudy															
Rainy															
Sun and Cloud															
Snowy †															
Windy															

Grade 2 DMactivity001 covers:
D6:collect first-hand data from their environment (eg. the number of days of sun, rain, snow during the month of November)

Data Management and Probability
Let's be Meteorologists: MARCH

Let's record our weather

Monday	Tuesday	Wednesday	Thursday	Friday

Let's graph our weather!

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Sunny '															
Cloudy															
Rainy															
Sun and Cloud															
Snowy †															
Windy															

Data Management and Probability
Let's be Meteorologists: APRIL

Let's record our weather

Monday	Tuesday	Wednesday	Thursday	Friday

Let's graph our weather!

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Sunny '															
Cloudy															
Rainy															
Sun and Cloud															
Snowy †															
Windy															

Data Management and Probability
Let's be Meteorologists: MAY

Let's record our weather

Monday	Tuesday	Wednesday	Thursday	Friday

Let's graph our weather!

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Sunny '															
Cloudy															
Rainy															
Sun and Cloud															
Snowy †															
Windy															

Data Management and Probability
Let's be Meteorologists: JUNE

Let's record our weather

Monday	Tuesday	Wednesday	Thursday	Friday

Let's graph our weather!

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Sunny '															
Cloudy															
Rainy															
Sun and Cloud															
Snowy †															
Windy															

Grade 2 DMactivity001 covers:
D6:collect first-hand data from their environment (eg. the number of days of sun, rain, snow during the month of November)
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Grade 2 Data Management & Probability

Name:_____

Data Management & Probability
Activity TWO

Today we will be completing a bar graph on the next page. Remember to:
- identify the four parts of the graph (*title, labels, scale, data*)
- create an appropriate title for the graph; and
- make sure all the columns are properly labelled

When you have completed the graph, answer the following questions:

1) What does Merlin have most of?_____
_____

2) What does Merlin need to buy?_____
_____

3) How many pencils and erasers does Merlin have altogether?
_____
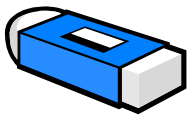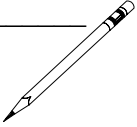
Merlin is preparing to go back to school. He needs you to help him organize his school supplies. Would you show Merlin how to graph his school supplies so that he can easily see what he has of each kind?

7				
6				
5				
4				
3				
2				
1				
	eraser		scissors	

Data Management & Probability
Activity THREE

Today we will be completing a bar graph on the next page. Remember to:
- identify the four parts of the graph (*title, labels, scale, data*)
- create an appropriate title for the graph; and
- make sure all the columns are properly labelled

When you have completed the graph, answer the following questions:

1) What does Merlin have most of?_____
_____

2) What does Merlin have least of? _____
_____

3) How many oak and maple leaves does Merlin have altogether
_____
_____
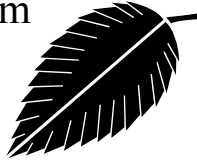
Merlin is raking the leaves in his yard. He needs you to help him sort the leaves into different bins. Would you show Merlin how to graph his leaves so that he can easily see how many he has of each kind?

→ _____

7				
6				
5				
4				
3				
2				
1				
	oak	maple	elm	willow

Data Management & Probability
Activity FOUR

Today we will be completing a bar graph on the next page. Remember to:
- identify the four parts of the graph (*title, labels, scale, data*)
- create an appropriate title for the graph; and
- make sure all the columns are properly labelled

When you have completed the graph, answer the following questions:

1) What does Merlin have most of?_____
_____

2) What does Merlin have least of?_____
_____

3) How many sunflowers and roses does Merlin have altogether?
_____
_____
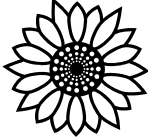
Merlin has some beautiful flowers in his garden. He needs you to help him organize the flowers in his garden. Would you show Merlin how to graph the flowers he finds so that he can easily see how many he has of each?

7				
6				
5				
4				
3				
2				
1				
	rose	tulip	marigold	sunflower
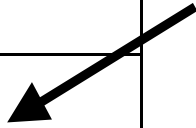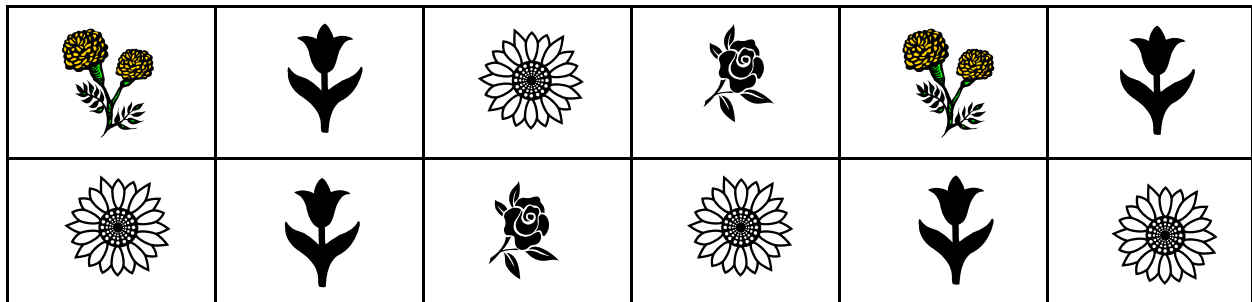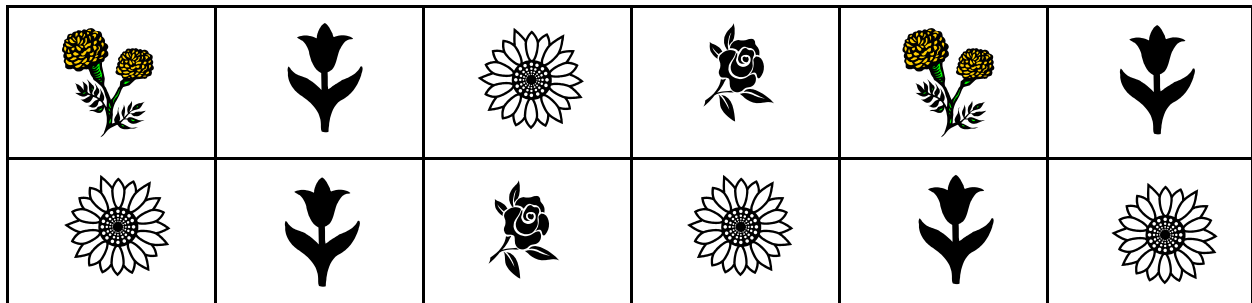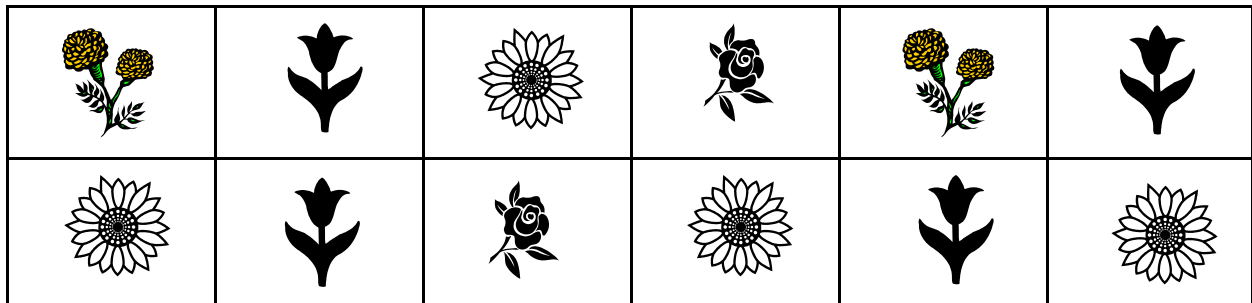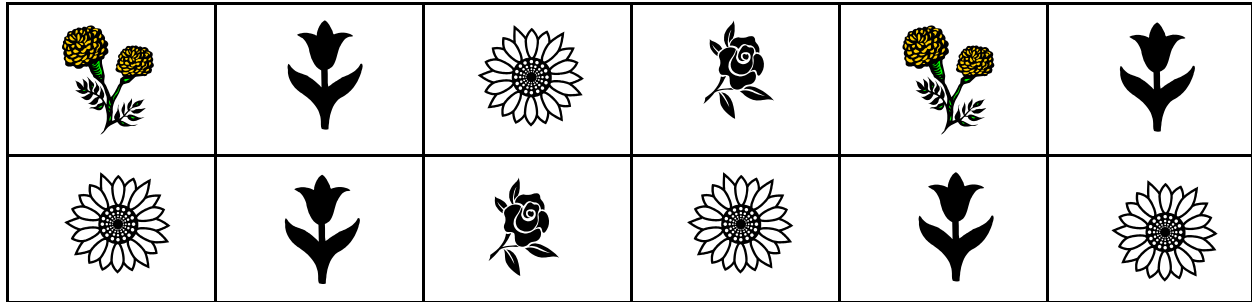
Data Management & Probability
Activity FIVE

Today we will be completing a bar graph on the next page. Remember to:
- identify the four parts of the graph (*title, labels, scale, data*)
- create an appropriate title for the graph; and
- make sure all the columns are properly labelled

When you have completed the graph, answer the following questions:

1) What does Merlin have most of?_____
_____

2) What does Merlin have least of?_____
_____

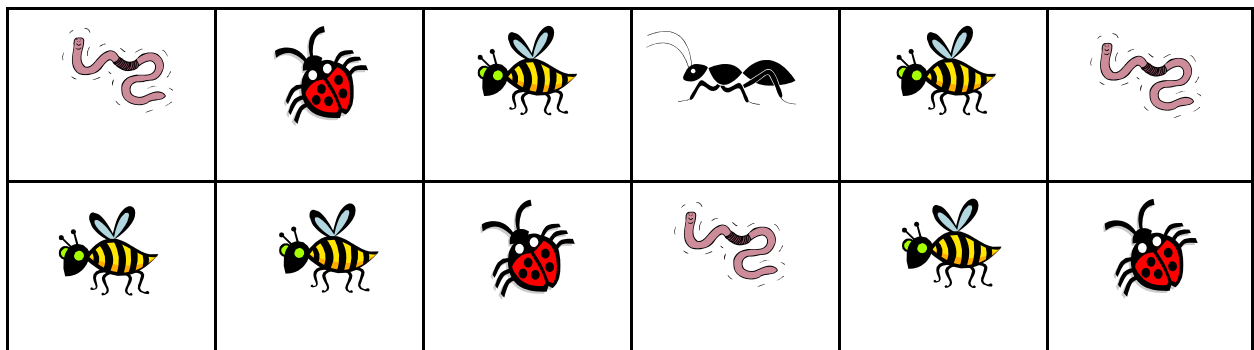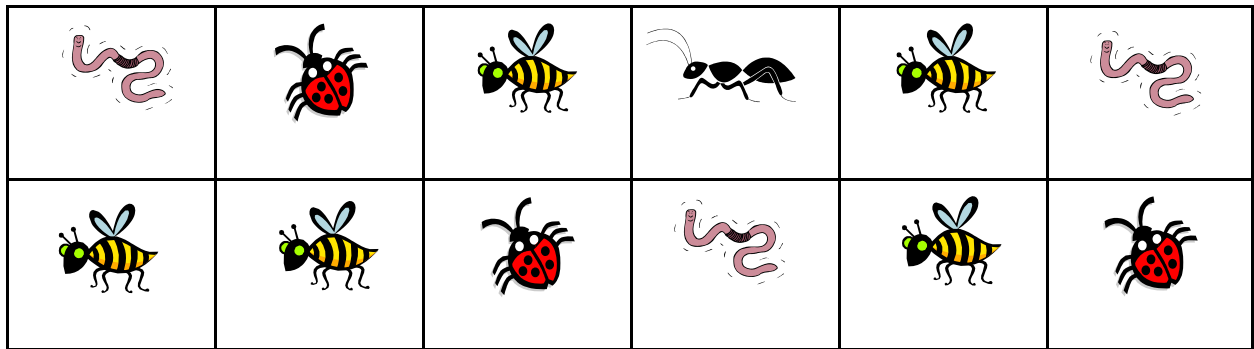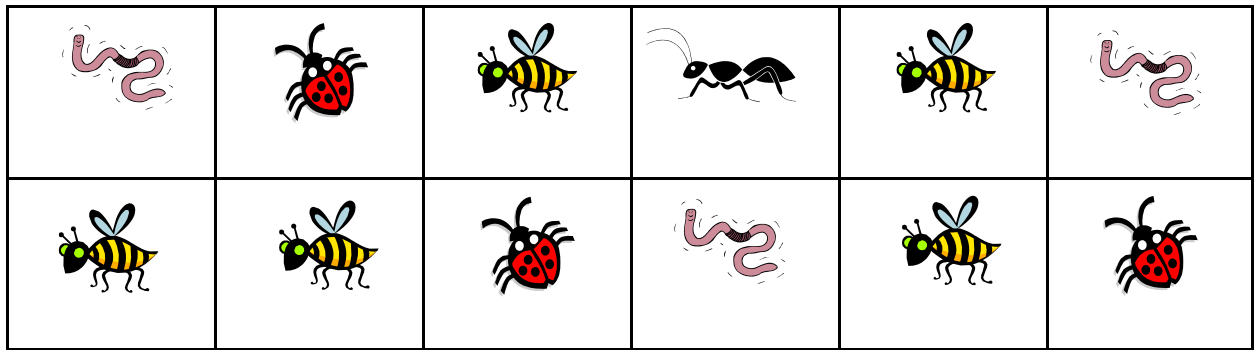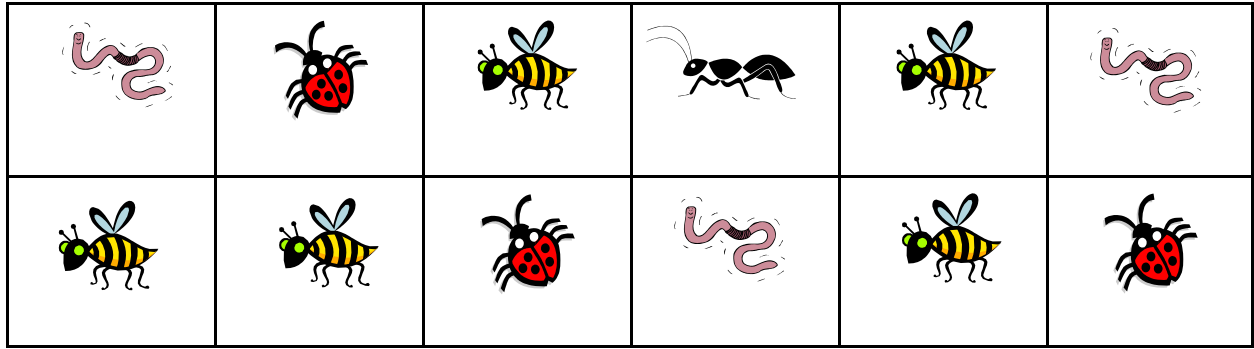3) How many worms and ants does Merlin have altogether? _____
_____
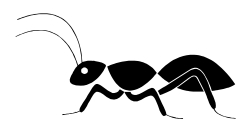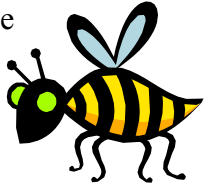
Merlin has noticed some bugs in his garden. He needs you to help him sort through the different bugs in his garden. Would you show Merlin how to graph the bugs so that he can easily see how many he has of each kind?

→ _____

|				
7				
6				
5				
4				
3				
2				
1				
		lady bug	earthworm	bee

Data Management & Probability
Activity SIX

There are lots of cars in the school parking lot. Merlin wants to know what colour of car is the most popular at your school. Take a trip to the parking lot, count and tally the colour of cars in the chart below.

Colour	Tally Marks	Total
Red		
Gold		
Blue		
Green		
Black		
Silver		
White		
Brown		

From your tally chart make a graph.

red														
gold														
blue														
green														
black														
silver														
white														
brown														
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
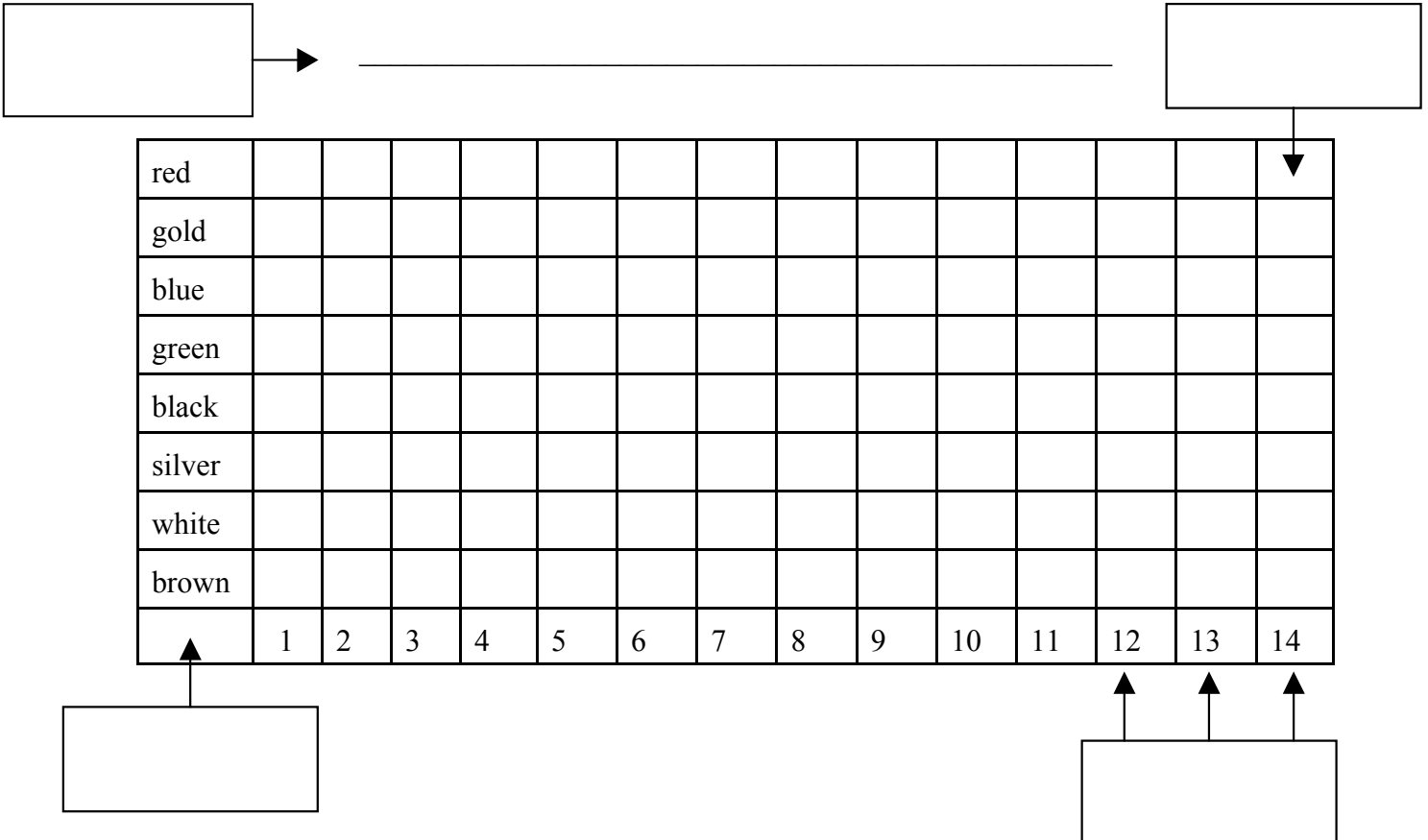
1) Which colour of car was the most popular?

_____

_____

2) Which colour of car was the least popular?

_____

_____

3) How many blue and gold cars are there altogether?

_____

– _____

4) How many green and brown cars are there altogether?

_____

– _____

4) Merlin wants his car to be original and different. Which colour would you suggest to Merlin?_____

Why?

_____

_____

Draw a picture of the parking lot using the data you collected.
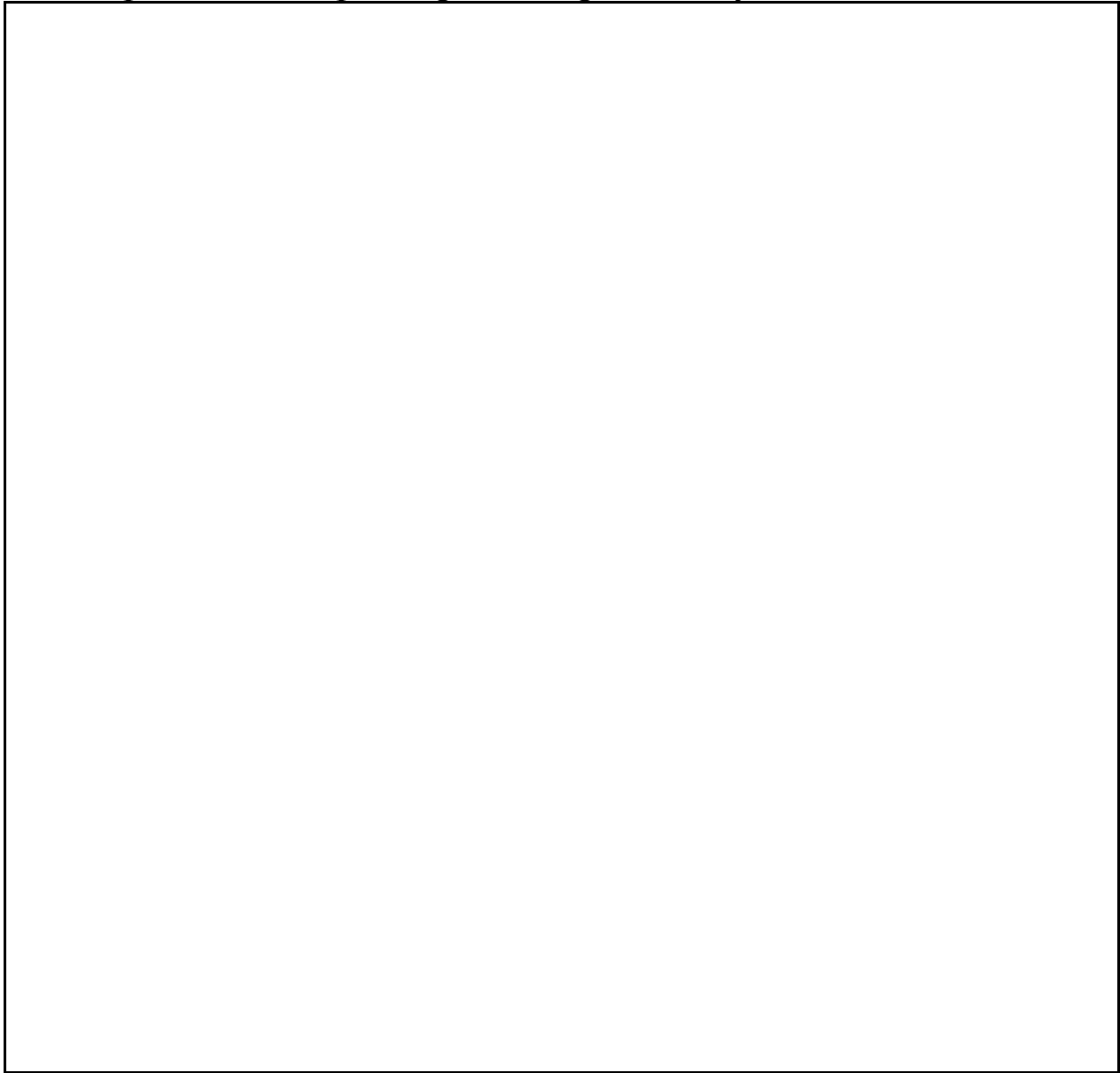
Describe your picture and how the data helped you draw it:
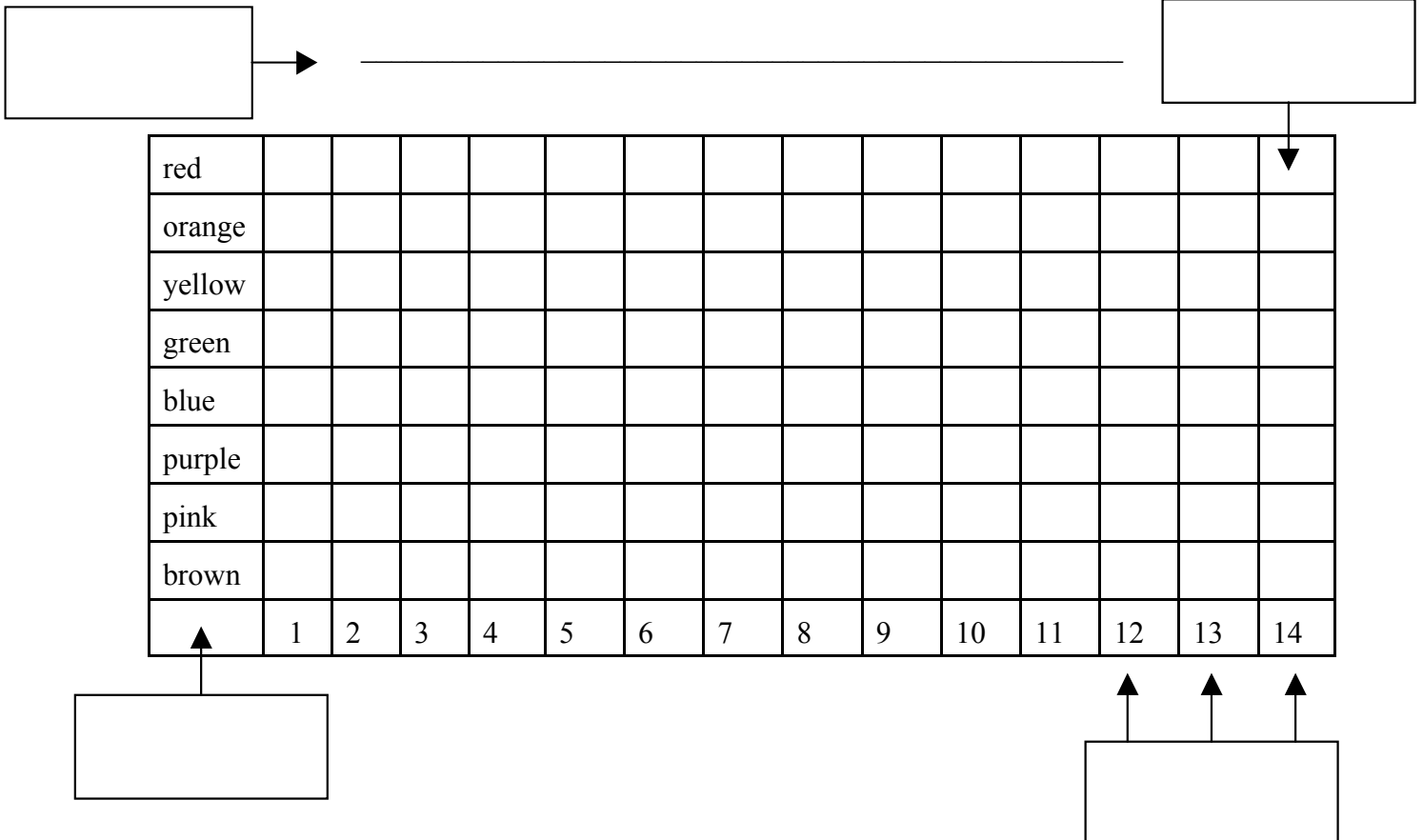
_____

_____

_____

_____

Data Management and Probability
Activity SEVEN

Merlin has lots of smarties but he wants to know how many he has of each colour. Count and tally the smarties in the chart below.

Colour	Tally Marks	Total
Red		
Orange		
Yellow		
Green		
Blue		
Purple		
Pink		
Brown		

From your tally chart make a graph.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
red														
orange														
yellow														
green														
blue														
purple														
pink														
brown														

1) Which colour of smartie was found the most?

_____

_____

2) Which colour of smartie was found the least?

_____

_____

3) How many yellow and blue smarties are there altogether?

_____

_____

4) How many green and brown smarties are there altogether?

_____

_____

4) If you were to eat the red ones last, how many smarties would there be left?

_____

_____

_____

Draw a picture of the box of smarties using the data you collected.

Describe your picture and how the data helped you draw it:

_____

_____

_____

_____

_____

_____

Data Management & Probability
Activity EIGHT

There is a beautiful apple orchard beside Merlin's castle and yesterday he picked a bushel of apples. He made a tally chart of the different kinds of apples.

McIntosh Apples	Granny Smith Apples	Red Delicious Apples	Snow Apples
✝✝✝✝ ✝✝✝✝ ✝✝	✝✝✝✝ ✝✝✝	✝✝✝✝	✝✝✝✝

Using Merlin's tally chart, make a bar graph on the chart paper below.

Ask Merlin three questions about the graph:

1) _____

_____

_____

2) _____

_____

_____

3) _____

_____

_____

Data Management & Probability
Activity NINE

There is a beautiful pond beside Merlin's castle and yesterday he watched all the little fish swim about. He made a tally chart of the different kinds of fish.

Gold Fish	Trout	Carp	Sun Fish
~~||||~~ ||||	~~||||~~		||||	~~||||~~ |||

Using Merlin's tally chart, make a bar graph on the chart paper below.

Ask Merlin three questions about the graph:

1) _____

_____

_____

2) _____

_____

_____

3) _____

_____

_____

Data Management & Probability
Activity TEN

Today we will be conducting a class survey. As a class, let's follow the steps below to guide you in the construction of your survey.

Step ONE:

Our survey question is:

_____
_____

We want to know this because:

_____
_____

The choices in the survey include:

_____
_____

Step TWO:

Let's survey the class and record our data in the tally chart below. Make sure you put your choices on the top of each column.

Step THREE:

Graph the data using the chart paper below:

Step FOUR:

How can we use this information now?

_____

_____

_____

Data Management & Probability
Activity ELEVEN

Today you will be conducting a survey of some of your friends. Follow the steps below to guide you in the construction of your survey.

Step ONE:

My survey question is:

_____
_____

I want to know this because:

_____
_____

The choices I provide include:

_____
_____

Step TWO:

Survey your friends and record your data in the tally chart below. Make sure you put your choices on the top of each column.

Step THREE:

Graph your data using the chart paper below:

Step FOUR:

How can you use this information now?

_____

_____

_____

Data Management & Probability
Activity TWELVE

Answer the following questions:

What is your favourite time?	
What is your favourite day?	
What is your favourite month?	
What is your favourite season?	

Today we are going to create a glyph. A glyph is a picture that is actually a graph. It originates from ancient hieroglyphics.

Today our glyph will be in the form of a watch. Each question you were asked above will be represented by a different part of the watch.

Your favourite time will be represented by the time shown on the face of the watch.

Your favourite day will be represented by the colour of your watch bands. For example, if your favourite day is Sunday, your watch band would be white.

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
red	orange	yellow	green	blue	purple	white
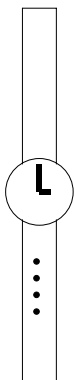
Your favourite month will be represented by the number of holes in your watch band. For example, if your favourite month is April, your watch band would have four holes.

Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	2	3	4	5	6	7	8	9	10	11	12

Your favourite season will be represented by the colour of your watch hands. For example, if your favourite season is winter, your watch hands would be black.

Fall	Winter	Spring	Summer
Red	Black	Blue	Green

Look at the watch below:

The person's favourite time is THREE O'CLOCK (time)
The person's favourite day is SUNDAY (white watch band)
The person's favourite month is APRIL (four holes)
The person's favourite season is WINTER (black watch hands)

Make your own watch with construction paper. When you're finished draw your watch in the space below.
** Hang the glyphs up on a wall for next week's activity.**

Data Management & Probability
Activity THIRTEEN

Using our glyphs from last week, let's graph the information about our favourite days, months and seasons.

Title: _____

	mon. red	tues. orange	wed. yellow	thurs. green	fri. blue	sat. purple	sun. white
10							
9							
8							
7							
6							
5							
4							
3							
2							
1							

Title: _____

	Jan 1	Feb 2	March 3	April 4	May 5	June 6	July 7	Aug 8	Sep 9	Oct 10	Nov 11	Dec 12
10												
9												
8												
7												
6												
5												
4												
3												
2												
1												

Title:_____

	1	2	3	4	5	6	7	8	9	10
fall red										
winter black										
spring blue										
summer green										

What is the most favourite day? _____

What is the least favourite day? _____

What is the most favourite month? _____

What is the least favourite month? _____

What is the most favourite season? _____

What is the least favourite season? _____

Is it easier to read the glyphs or graphs? _____

Why?

_____

_____

_____

Data Management & Probability
Activity FOURTEEN

Answer the following questions:

How old are you?	
What is your favourite subject?	
How many brothers and sisters do you have?	
What colour eyes do you have?	
What colour hair do you have?	

Today we are going to create a glyph. A glyph is a picture that is actually a graph. It originates from ancient hieroglyphics.

Today our glyph will be in the form of a snowman. Each question you were asked above will be represented by a different part of the snowman.

Your age will be represented by how many balls are in the snowman. For example if you are 7 your snowman will have 3 balls.

Age 6	Age 7	Age 8
2 balls	3 balls	4 balls

Your favourite subject will be represented by the colour of the snowman's scarf. For example, if your favourite subject is music, your snowman's scarf will be black.

Phys. Ed.	Art	Language	Science	Math	Social Studies	Music
red	orange	yellow	green	blue	purple	black

The number of brothers and sisters you have will be represented by the number of buttons on your snowman. For example, if you have 3 brothers and sisters, your snowman will have three buttons.
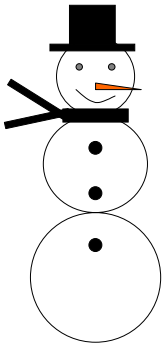
The colour of your eyes will be represented by the colour of your snowman's eyes. For example, if you have grey eyes, your snowman will have grey eyes.

Blue eyes	Green eyes	Brown eyes	Grey eyes
blue	green	brown	grey

The colour of your hair will be represented by the colour of your snowman's hat. For example, if you have black hair, your snowman will have a black hat.

Blond hair	Red hair	Black hair	Brown hair
yellow hat	red hat	black hat	brown hat

Look at the snowman below:

The person is SEVEN years old (3 balls)
The person's favourite subject is MUSIC (black scarf)
The person has THREE brothers and sisters (three buttons)
The person has GREY eyes (grey eyes)
The person has BLACK hair (black hat)

Make your own snowman with construction paper. When you're finished, draw your snowman in the space below.
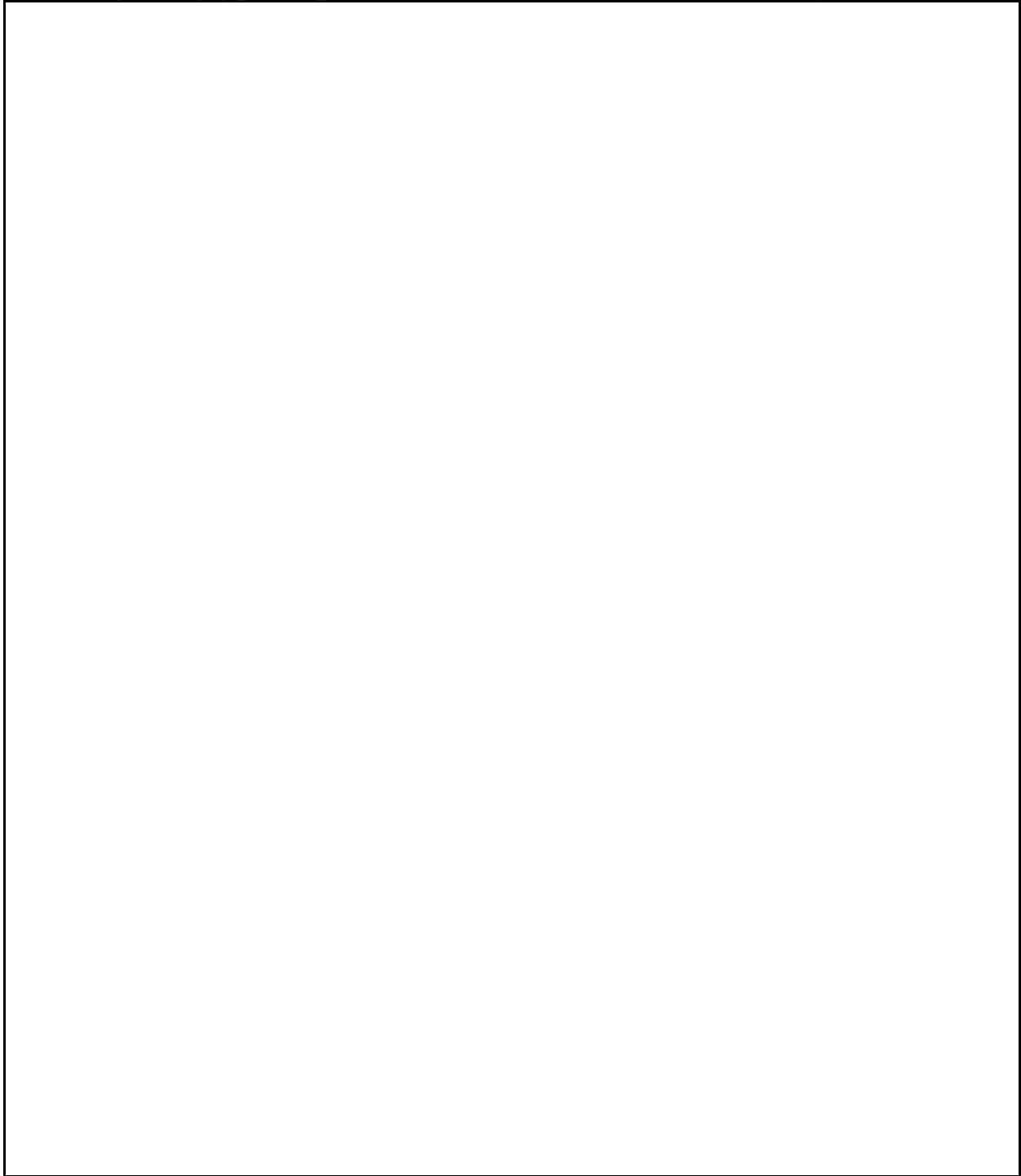
** Hang the glyphs up on a wall for next week's activity.**

Data Management & Probability
Activity FIFTEEN

Using our glyphs from last week, let's graph the information about our selves.

Title: _____

	1	2	3	4	5	6	7	8	9
age 6									
age 7									
age 8									

Title:_____

9							
8							
7							
6							
5							
4							
3							
2							
1							
(Scarf)	Phys.Ed (red)	Art (orange)	Language (yellow)	Science (green)	Math (blue)	Social Studies (purple)	Music (black)

Title: _____

9							
8							
7							
6							
5							
4							
3							
2							
1							
	1 sibling	2 siblings	3 siblings	4 siblings	5 siblings	6 siblings	7 siblings

Title: _____

	1	2	3	4	5	6	7	8	9
blue eyes									
green eyes									
brown eyes									
grey eyes									

Title:_____

	1	2	3	4	5	6	7	8	9
blond hair									
red hair									
black hair									
brown hair									

Write down three things you've learned about the students in our class from these graphs:

1)_____
_____
2)_____
_____
3)_____
_____

Data Management & Probability
Activity SIXTEEN

** You could use buttons or beads for this activity.**

Merlin has left you a cup of buttons. He would like your help sorting them. Sort your magical buttons and then draw and write about what you did.

Draw your sort:

Describe your sort in words:

_____
_____
_____
_____
_____

Data Management & Probability
Activity SEVENTEEN

Look at the following sort:
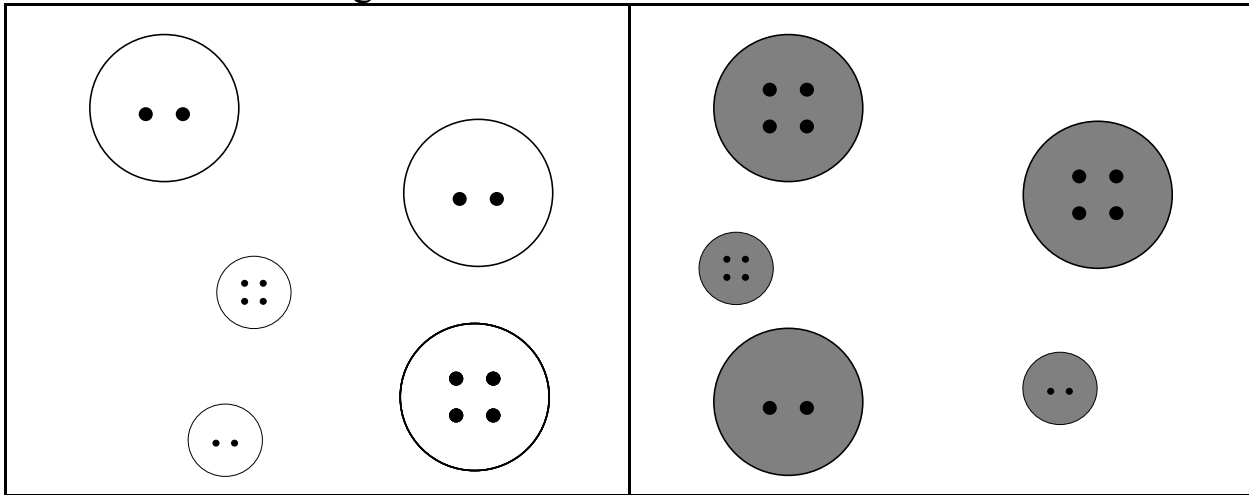
What rule did Merlin use to sort the buttons?

_____

_____

_____

Name the different attributes the buttons have:

_____

_____

Sort the buttons in a different way:
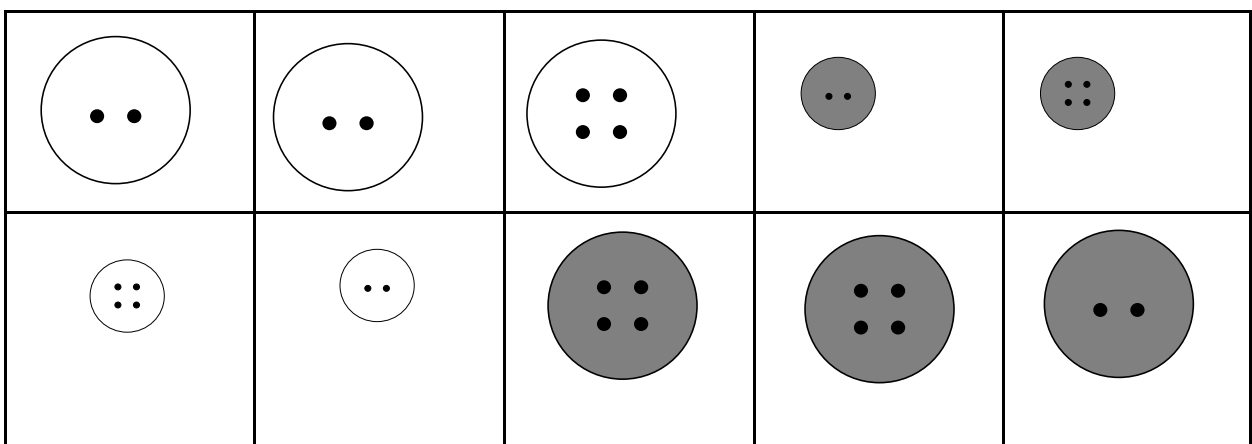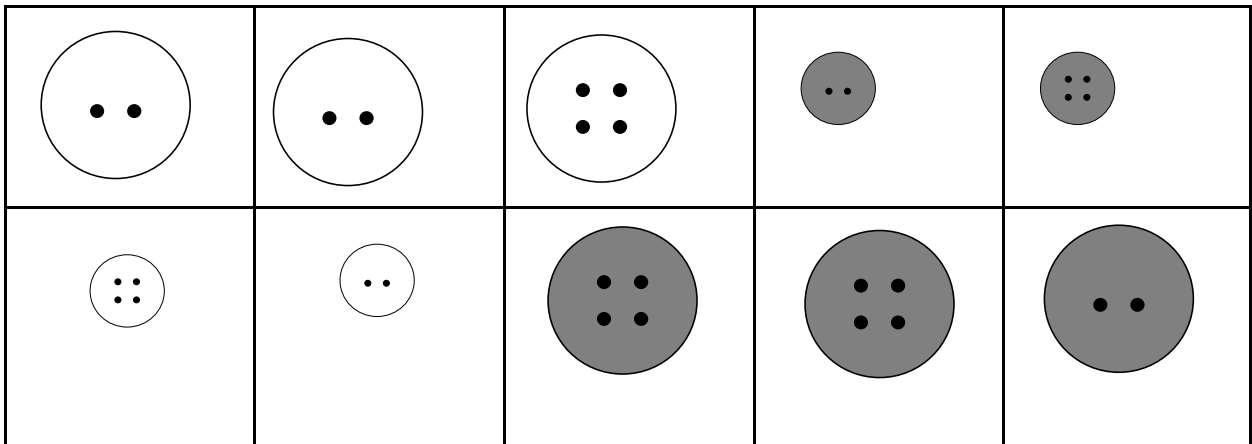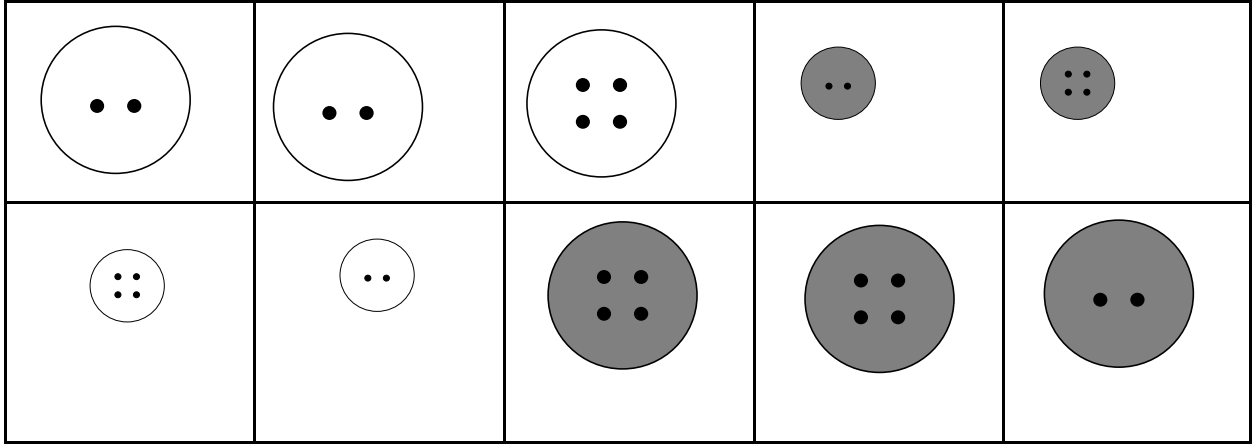
Data Management & Probability
Activity EIGHTEEN

Look at the following sort:
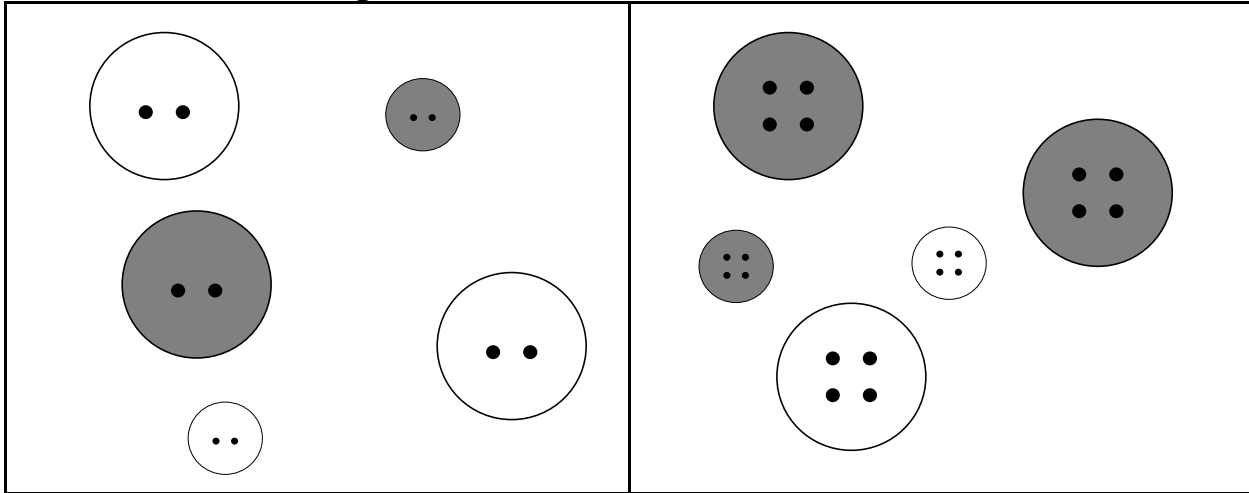
What rule did Merlin use to sort the buttons?

_____

_____

_____

Name the different attributes the buttons have:

_____

_____

Sort the buttons in a different way:
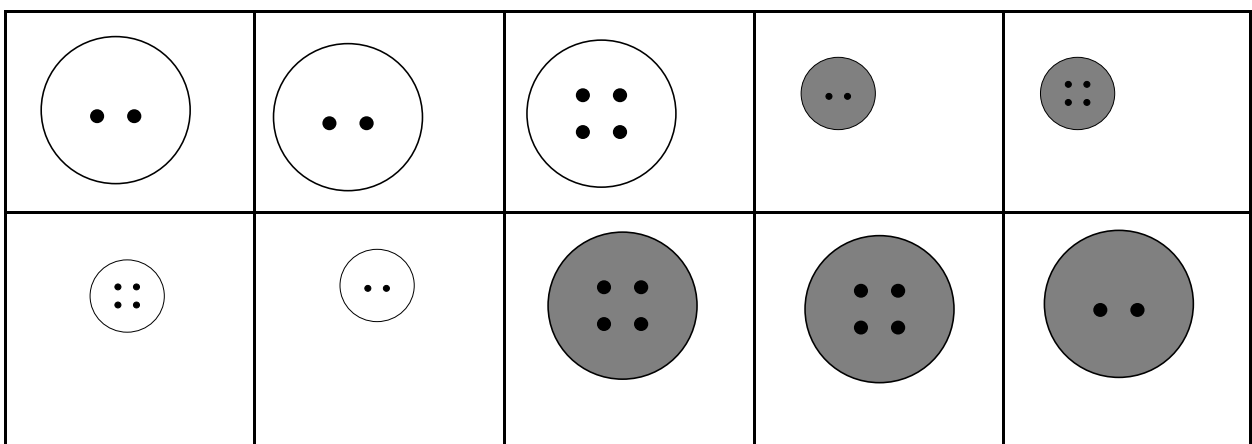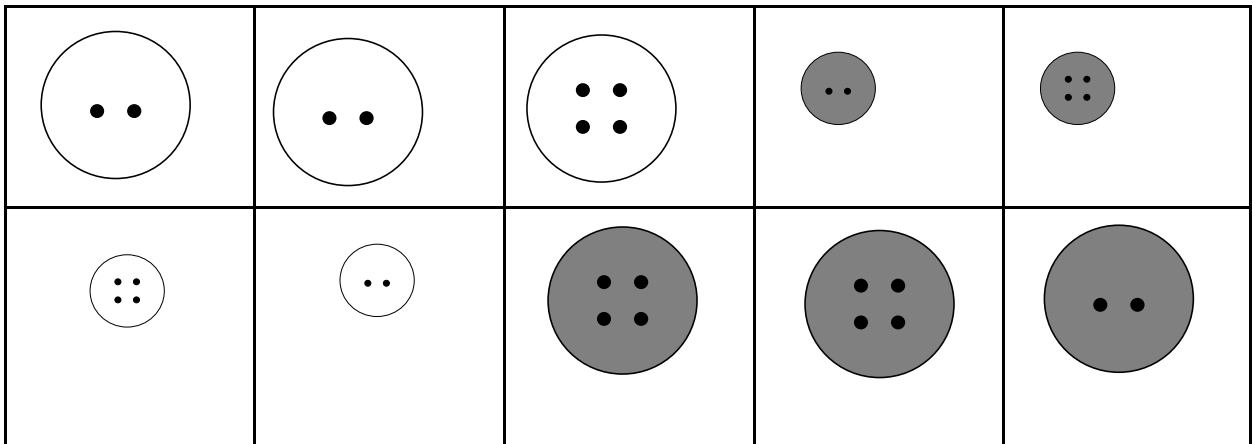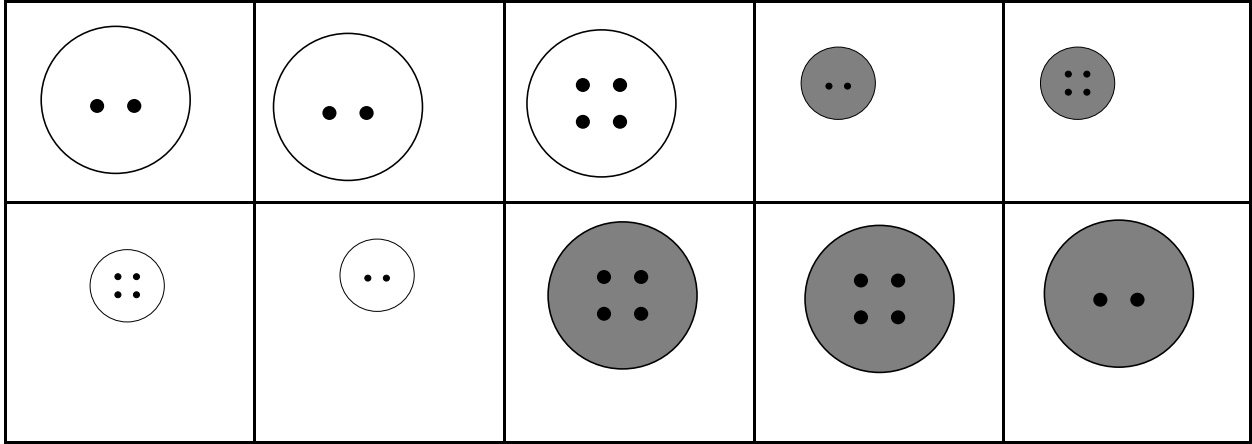
Data Management & Probability
Activity NINETEEN

1) Read the chart and decorate the oak leaves.

	Acorn	No acorn
Brown leaf	Nutty Windy Rustle	Fall Crunchy
Green leaf	Breezy Flutter	Summer
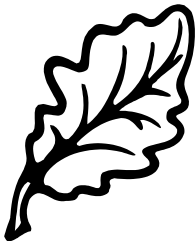
Summer	Fall	Flutter	Rustle

Windy	Nutty	Breezy	Crunchy

2) Name the different attributes_____

_____

3) What is the most common combination of attributes?_____

_____

4) What does the chart tell you?_____

_____

_____

Data Management and Probability
Activity TWENTY

1) Read the chart and decorate the mittens.

	Zigzag	Snowflake
Blue	Michael Megan	Sarah Victoria
Red	Laura	Mark Ethan
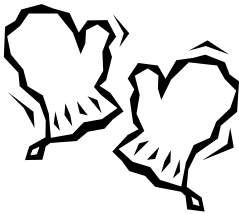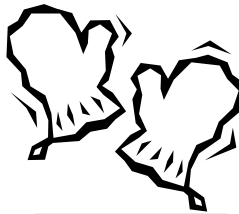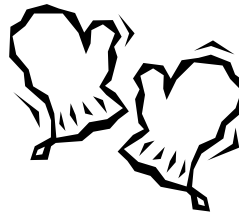
Laura	Ethan	Michael	Victoria
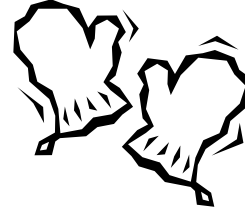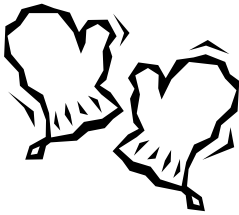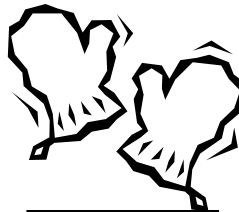
Megan	Sarah	Mark

2) Name the different attributes_____
_____

3) What is the least common combination of attributes?_____
_____

4) What does the chart tell you?_____
_____
_____

Data Management & Probability
Activity TWENTY-ONE

1) Read the chart and decorate the snowmen.

	Scarf	Green ribbon
Hat	Brrr! Icicle	Snowy Frigid
No hat	Chilly	Jack Frost Frosty

Chilly	Frosty	Brrr!	Snowy

Frigid	Jack Frost	Icicle

2) Name the different attributes_____
_____

3) What is the least common combination of attributes?_____
_____

4) What does the chart tell you?_____
_____
_____

Data Management & Probability
Activity TWENTY-TWO

1) Read the chart and decorate the socks

	Black cuff	White cuff
Green sock	Cordelia Megan	Eric Jennifer
Blue sock	Valerie Sarah	Jonathon

Cordelia   Eric   Jennifer   Valerie

Megan   Sarah   Jonathon

2) Name the different attributes_____
_____

3) What is the least common combination of attributes?_____
_____

4) What does the chart tell you?_____
_____
_____

** Do an example at the carpet with coloured pasta (see materials for recipe) or use sorting objects.**

Help Merlin sort his buttons into a DOUBLE Venn diagram.
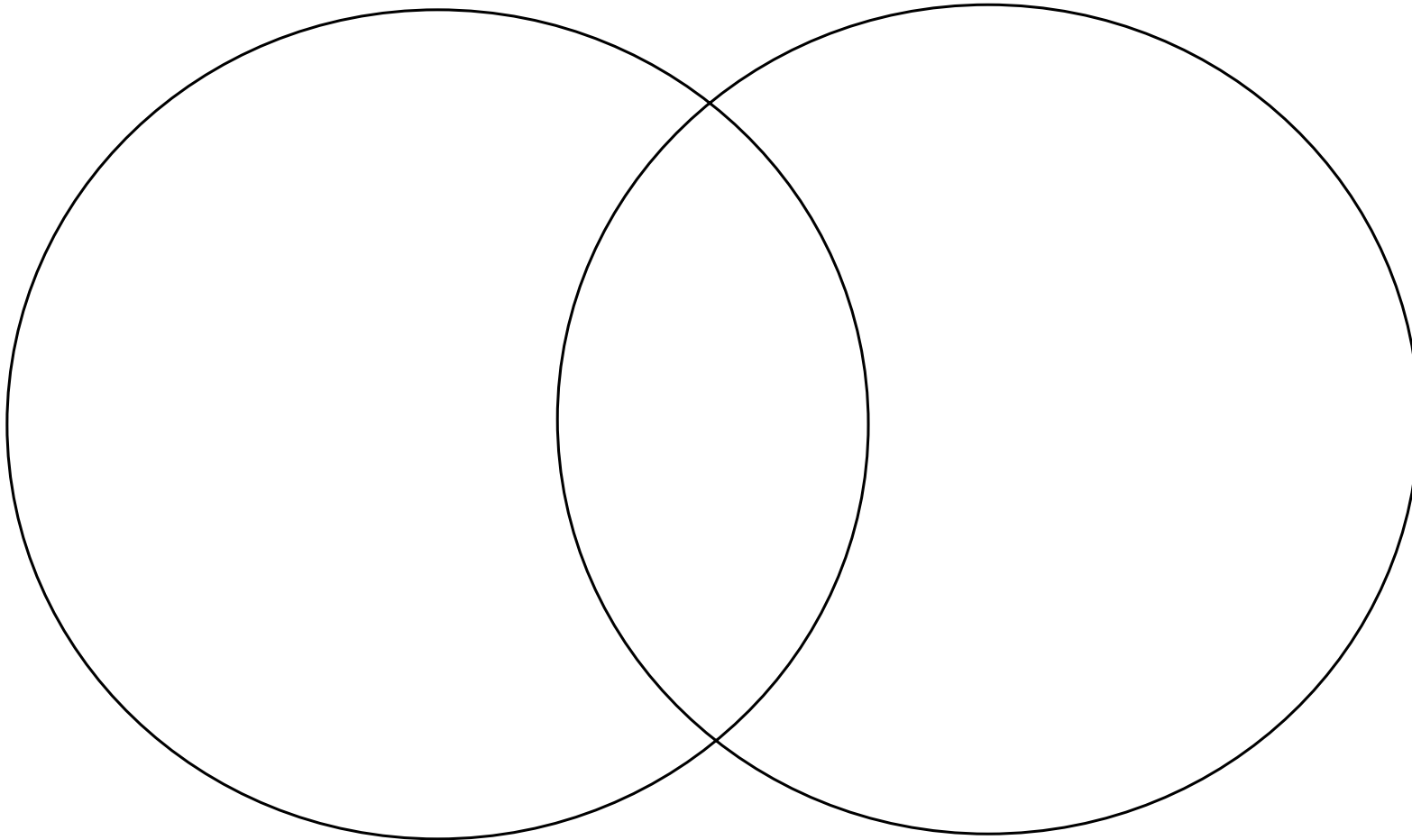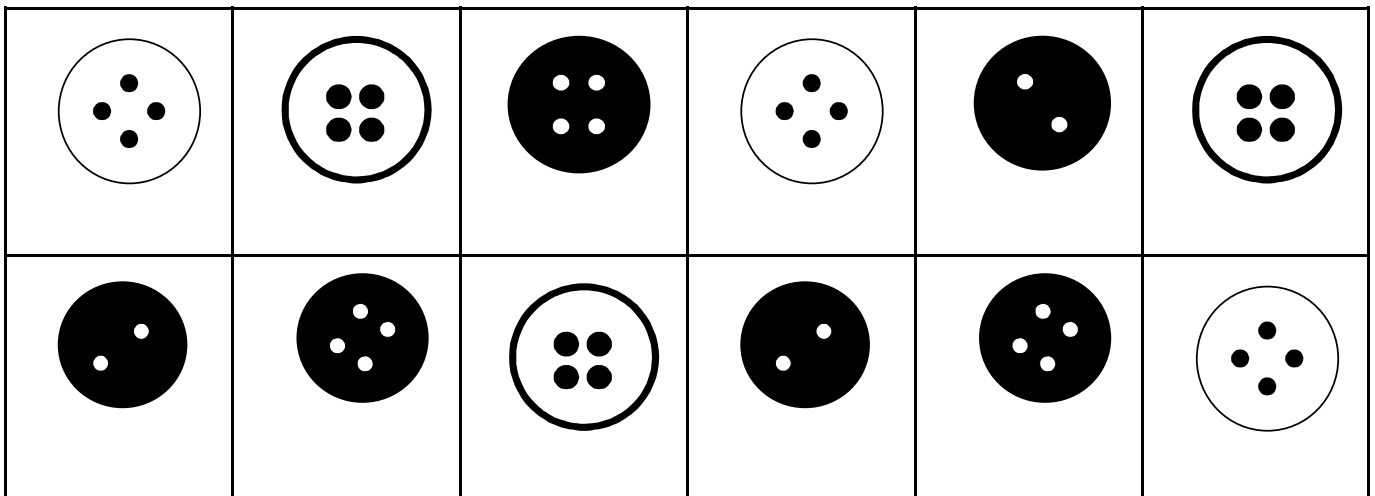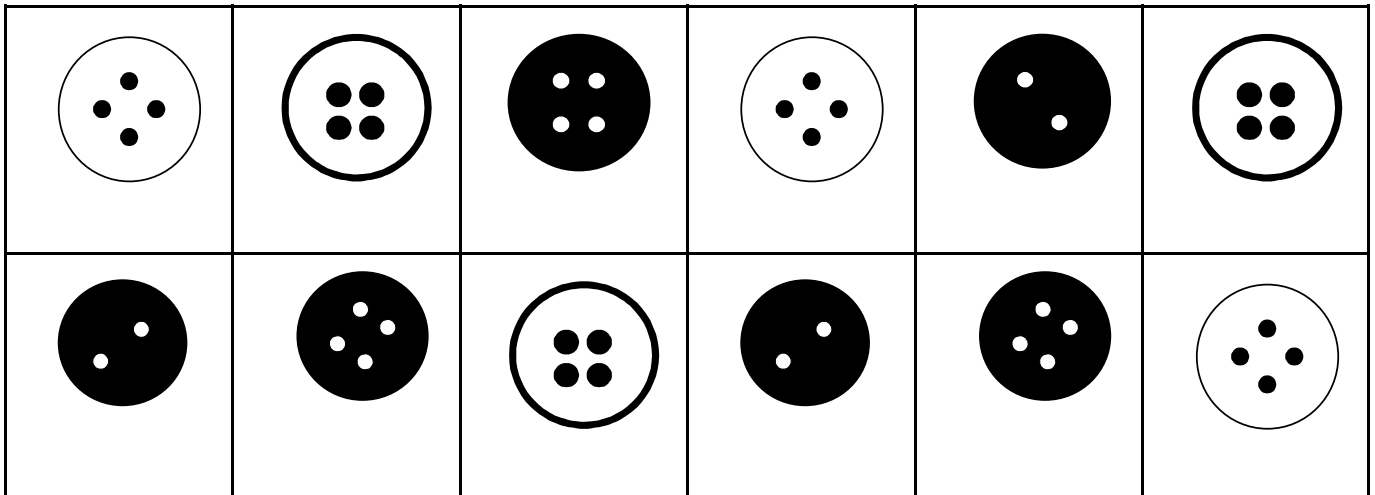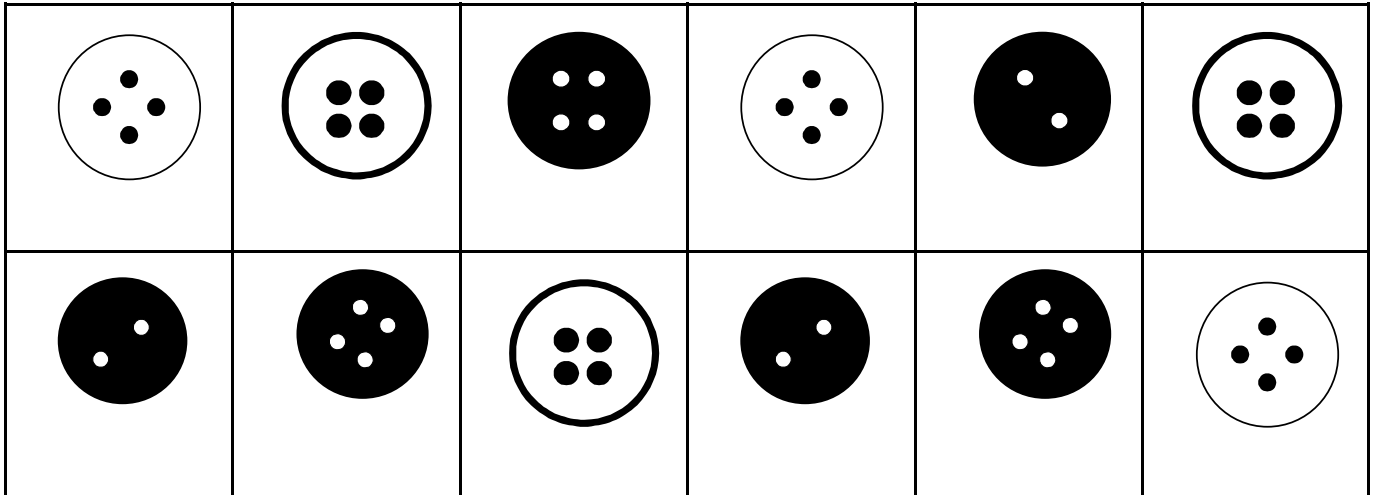
Data Management & Probability
Activity TWENTY-FOUR

** Do an example at the carpet with coloured pasta (see materials for recipe) or use sorting objects.**

Help Merlin sort his shapes into a DOUBLE Venn diagram.
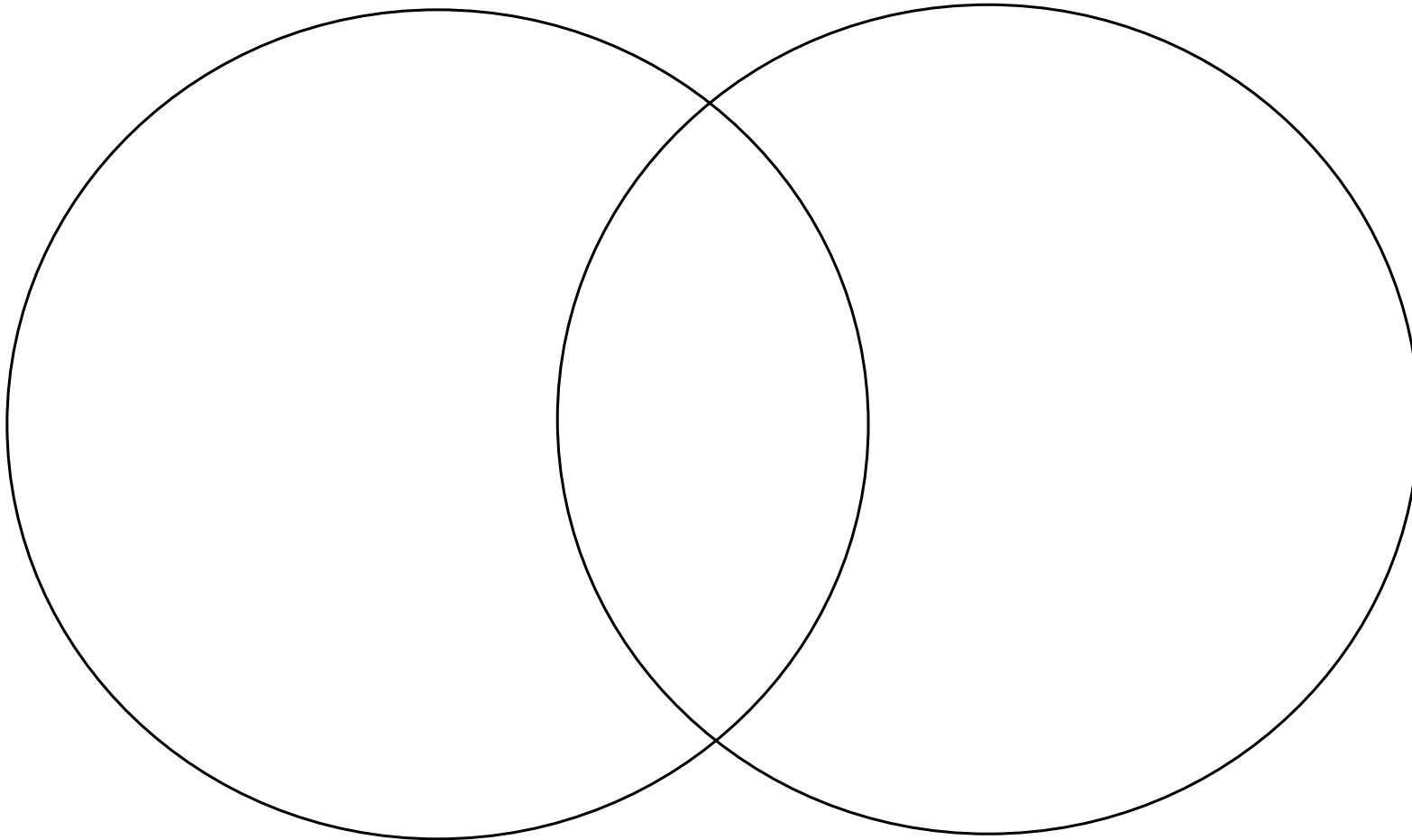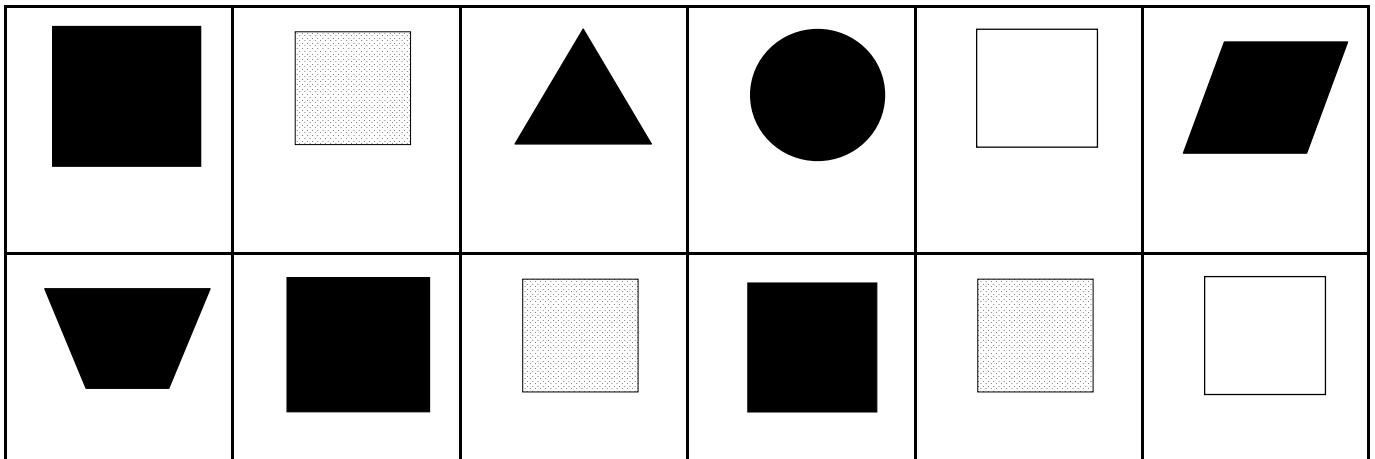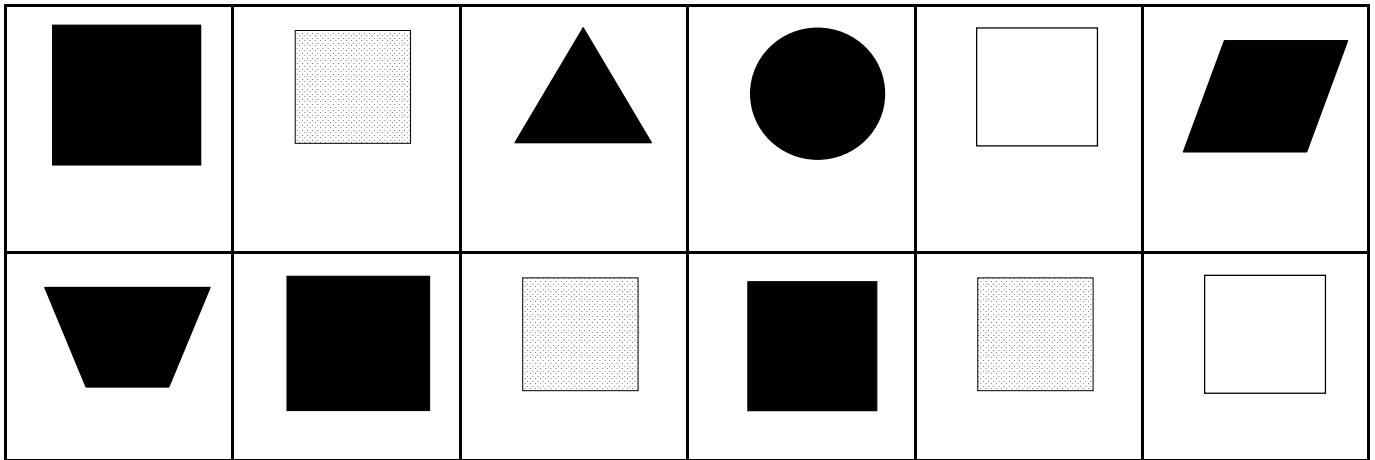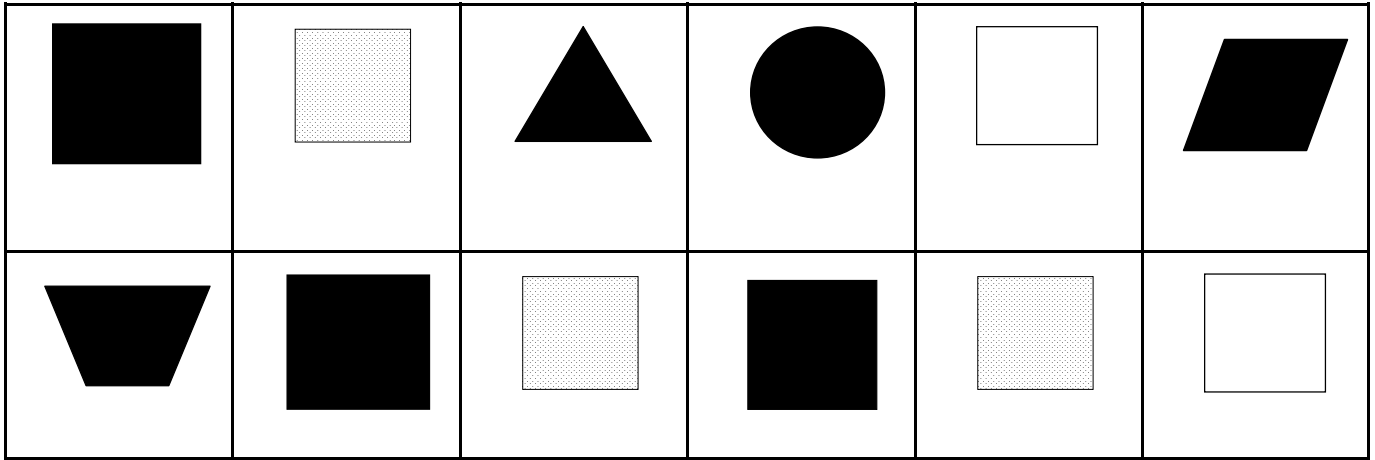
Data Management & Probability
Activity TWENTY-FIVE

Coins have two sides. One side is called "heads" because it has a picture of Queen Elizabeth's head and the other side is called "tails." Different types of coins have a different tail picture. All Canadian nickels have beavers.

Which side is luckier? Circle one.

Heads	Tails

Toss the coin TEN times. Record your results in the tally chart below.

	Tally Marks	Total
Heads		
Tails		

Which side came up the most?_____

Did you predict correctly? _____

Data Management & Probability
Activity TWENTY-SIX

Coins have two sides. One side is called "heads" because it has a picture of Queen Elizabeth's head and the other side is called "tails". Different types of coins have a different tail picture. All Canadian quarters have caribou.

Which side is luckier? Circle one.

Heads	Tails

Toss the coin TEN times. Record your results in the tally chart below.

	Tally Marks	Total
Heads		
Tails		

Which side came up the most?_____

Did you predict correctly? _____

Were your results with the quarter similar to your results with the nickel last week?

_____

_____

Data Management & Probability
Activity TWENTY-SEVEN

Today, Merlin has left you a magic die. He would like you to conduct some probability experiments with the die. Record your results in the tally charts provided and be sure to answer all the questions.

Roll the die TEN times. Record it in the chart below.

Die	Tally Marks	Total
1		
2		
3		
4		
5		
6		

1) Which number was rolled the most?_____

2) Which number was rolled the least?_____

3) How many 2's and 5's altogether?_____

4) Do you think there is an equal chance of rolling any number on the die? _____

5) Explain:

_____
_____
_____
_____
_____

Data Management & Probability
Activity TWENTY-EIGHT

Today, Merlin has left you a magic die. He would like you to conduct some probability experiments with the die. Record your results in the tally charts provided and be sure to answer all the questions.

Roll the die FORTY times. Record it in the chart below.

Die	Tally Marks	Total
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		

1) Which number was rolled the most?_____

2) Which number was rolled the least?_____

3) How is the 12 sided die different from the 6 sided die?

_____

_____

Data Management & Probability
Activity TWENTY-NINE

Merlin has given you a special die on the condition that you make a BAR GRAPH showing what you rolled. Roll the die TWENTY times.

12			
11			
10			
9			
8			
7			
6			
5			
4			
3			
2			
1			
	🦋	🐝	🐞

Look at the die carefully and fill in the following chart.

Picture	🦋	🐝	🐞
Number of sides			

What side is most likely to come up? _____

Why?

_____
_____
_____

What side is least likely to come up? _____

Why?

_____
_____
_____

Data Management & Probability
Activity THIRTY

Merlin has given you a special die on the condition that you make a
BAR GRAPH showing what you rolled. Roll the die TWENTY times.

12			
11			
10			
9			
8			
7			
6			
5			
4			
3			
2			
1			
	🍁	🍂	🌿

Look at the die carefully and fill in the following chart.

Picture	🍁	🍂	🌿
Number of sides			

What side is most likely to come up? _____

Why?

_____
_____
_____

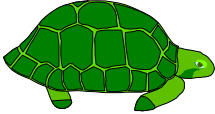What side is least likely to come up? _____

Why?

_____
_____
_____

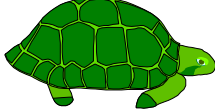# Data Management & Probability
Activity THIRTY-ONE

Merlin has given you a special die on the condition that you make a
BAR GRAPH showing what you rolled. Roll the die TWENTY times.

12			
11			
10			
9			
8			
7			
6			
5			
4			
3			
2			
1			

Look at the die carefully and fill in the following chart.

Picture			
Number of sides			

What side is most likely to come up? _____

Why?

_____

_____

_____

What side is least likely to come up? _____

Why?

_____

_____

_____

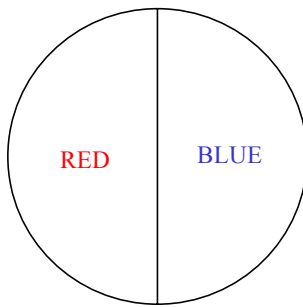What is special about this die?

_____

_____

_____

Data Management & Probability
Activity THIRTY-TWO

** Do an example probability experiment with the spinners at the carpet. You will need to have one base and one labelled CD for each student (see materials box for building instructions). **

Merlin wants us to do a probability experiment with a spinner. He has left us a spinner with a top that looks like the picture on the right.
Spin the spinner 30 times and record your results in the tally chart below.

My Prediction
I think the spinner will land more often on the colour:

_____

RED   BLUE

Colour	Tally
RED	
BLUE	

Complete the following questions:

1) What colour did the spinner land on the most?_____

2) Did you predict correctly?_____

3) Is there an equal chance of landing on the red side or the blue side?_____

4) Why might the spinner land on one side more than the other?
_____
_____
_____

Data Management & Probability
Activity THIRTY-THREE

** Do an example probability experiment with the spinners at the carpet. You will need to have one base and one labelled CD for each student (see materials box for building instructions). **

Merlin wants us to do a probability experiment with a spinner. He has left us a spinner with a top that looks like the picture on the right.
Spin the spinner 30 times and record your results in the tally chart below.

My Prediction
I think the spinner will land more often on the colour:

_____

RED   BLUE

Colour	Tally
RED	
BLUE	

Complete the following questions:

1) What colour did the spinner land on the most?_____

2) Did you predict correctly?_____

3) Draw an unfair spinner below and describe why it is unfair

_____
_____
_____
_____
_____

Grade 2 DMactivity033 covers:
D11:explore through simple games and experiments the likelihood that an event may occur
D12:investigate simple probability situations (eg. flipping a coin, tossing a dice)
D13: use mathematical language (eg. likely, unlikely, probably) in informal discussion to describe probability
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