Sample!

LEVEL 2

Pattern & Relationship

Student Worksheets
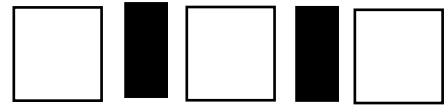
Contents

A. Types of Patterns

There are many types of patterns, for example, your name is a pattern of letters.

l. Match the types of patterns and the pictures.

a) Natural pattern

b) Music pattern

c) Action pattern

d) Number pattern

e) Object pattern

f) Shape pattern

g) Colour pattern
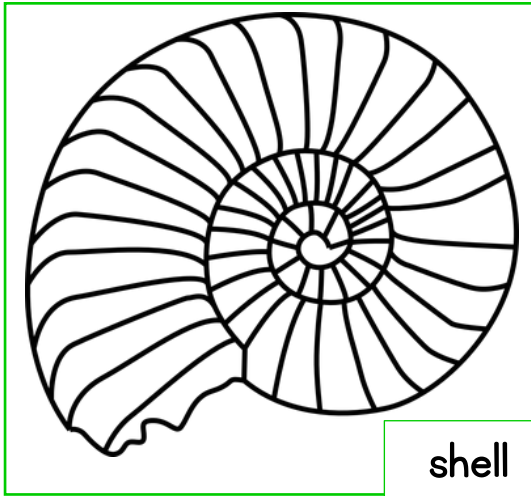
2, 4, 6, 8, 10

H H H H H H

3

B. Patterns in Nature
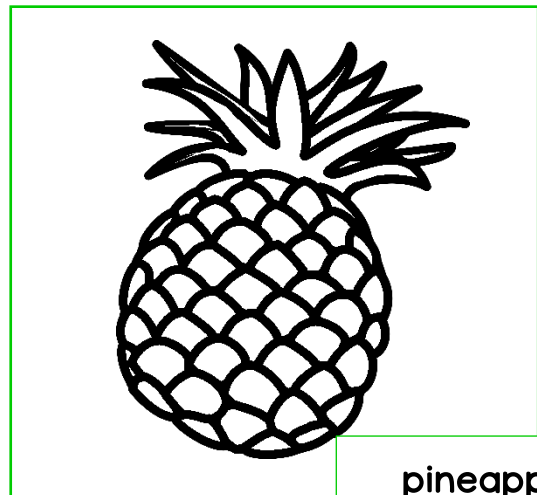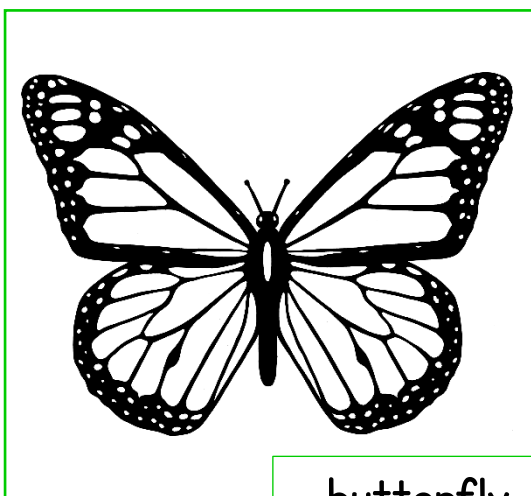
1. Draw over some of the patterns.
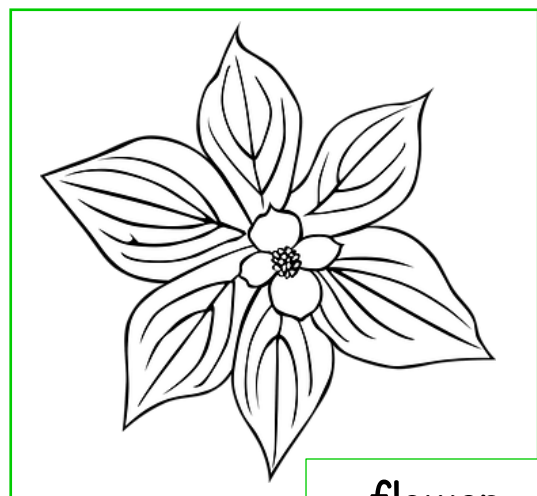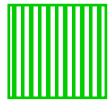
shell

web

zebra

pineapple

butterfly

flower

4

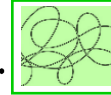2. Do you recognise these living things? Discuss in your group.
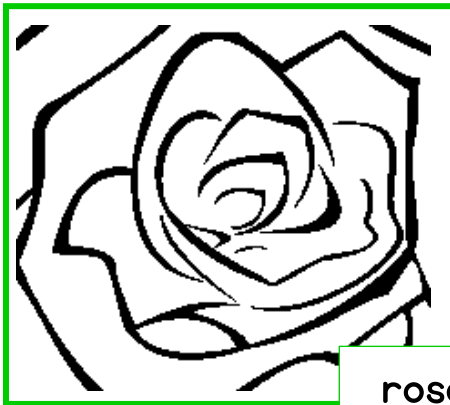
C. Linear and Non-linear Patterns

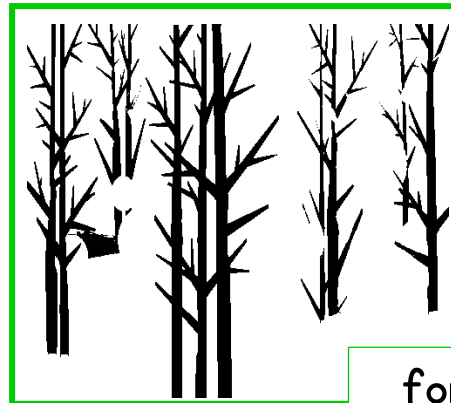Linear patterns have straight lines or nearly straight lines.
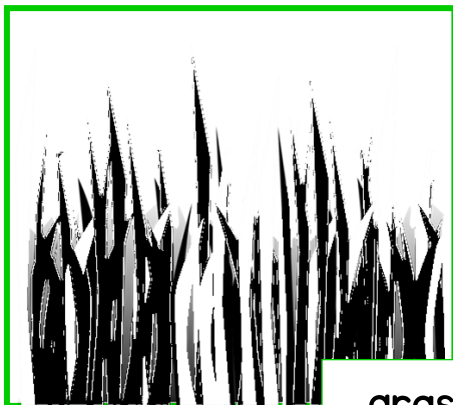
Non-linear patterns do not have straight lines.

1. Are these patterns linear or non-linear? Write L for linear and N for non-linear.
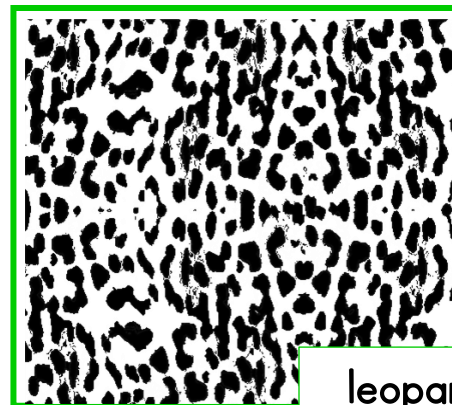
rose

forest

grass

leopard

Assessment Brief 2

Course: Pattern & Relationship
Course Code: M2N06
Assessment: Collection of Work
Title: **Finding & Identifying Patterns**
Weighting: Collection of Work 100%

Guidelines

You will be expected to:

1. Identify different patterns, including picture patterns, object patterns, number patterns, etc.
2. Identify number patterns, e.g. increase in steps of two.

Assessment criteria

- Exercises and tasks must be complete and correct.
- Answers must be set out in a logical way.
- Patterns include letter patterns, object patterns, colour patterns, shape patterns, number patterns and rhythm.
- Patterns include skip counting, e.g. in twos, in fives.
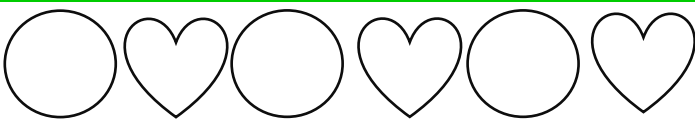- Patterns must be identified and completed where required.

Submission date:

Declaration of Authenticity: I confirm that this is my own original work.

Signed: Date:

1. Find the patterns in each row.   Write the patterns.

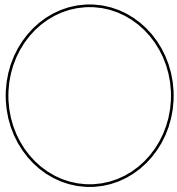|	What is the pattern?
H 2 H 2 H 2 H 2	H 2
A B A B A B A B	
○ ♡ ○ ♡ ○ ♡	
4 4 4 4 4 4 4 4	
/ / * * / / * * / /	
8 8 □ 8 8 □ 8 8 □	
F 7 F 7 F 7 F 7	
YESYESYESYES	

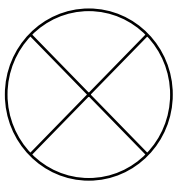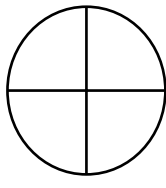2. Your phone number is a number pattern. Write it down.

_____

1. Look at the patterns. What shapes come next? Write the letters.

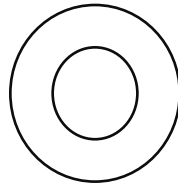**A**　　　　**B**　　　**C**　　　**D**

2. Complete the pattern:

10. Look at the patterns. Circle the vegetable that comes next in each row.

HEALTHY FOOD
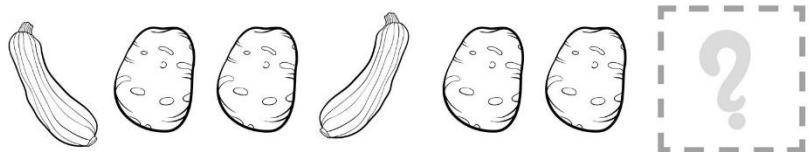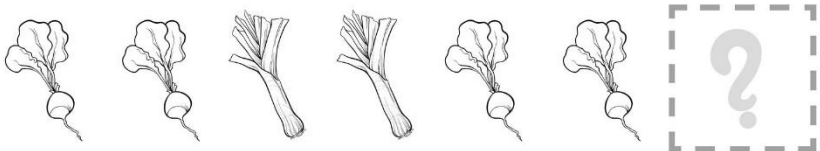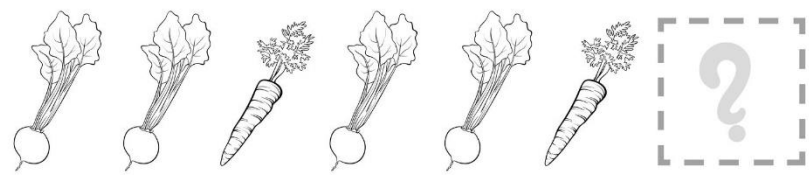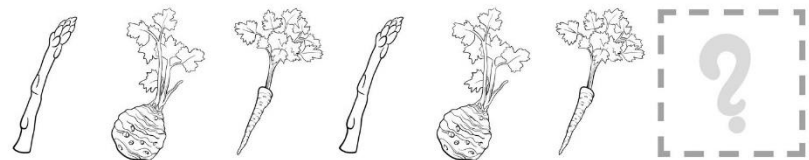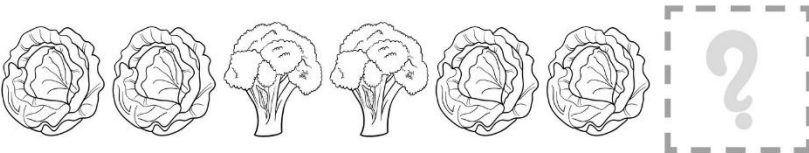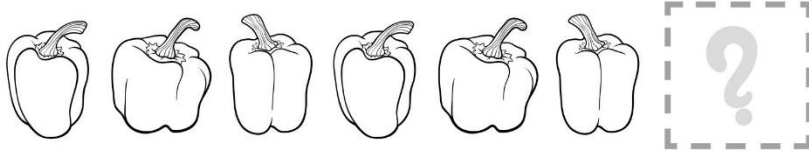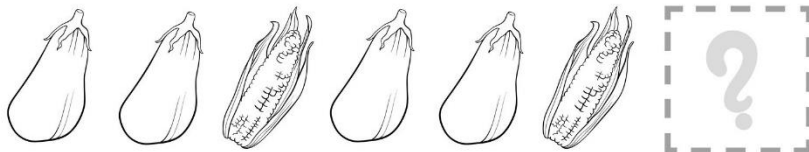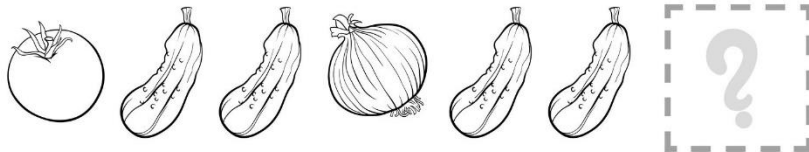
Complete the patterns.
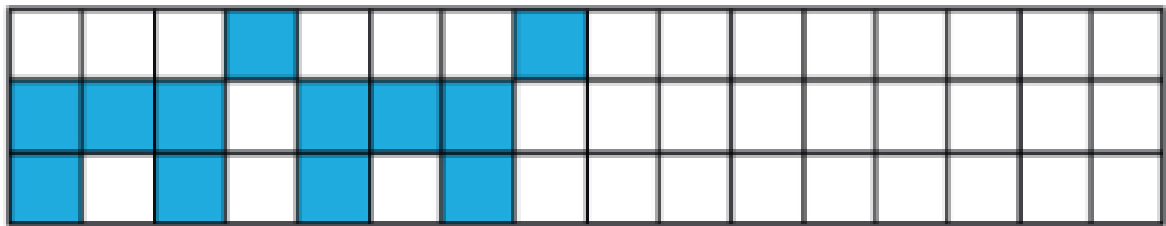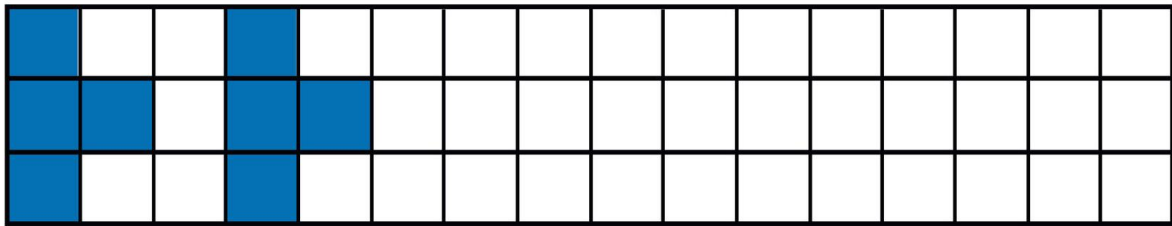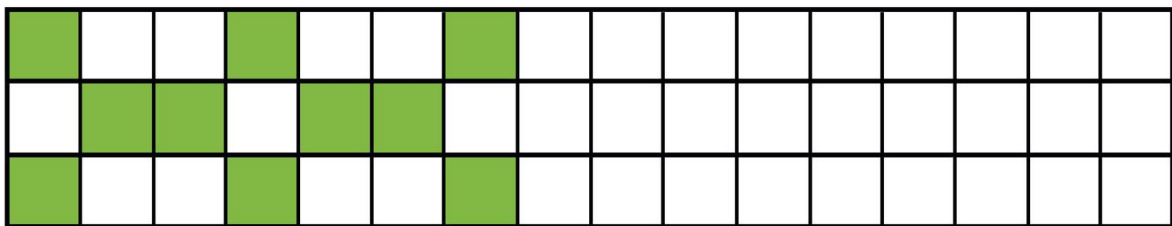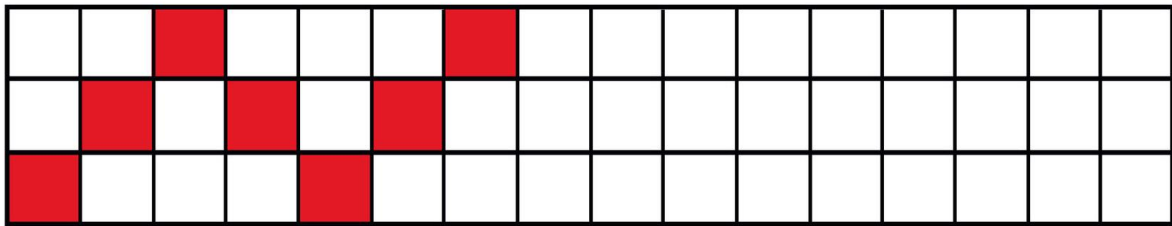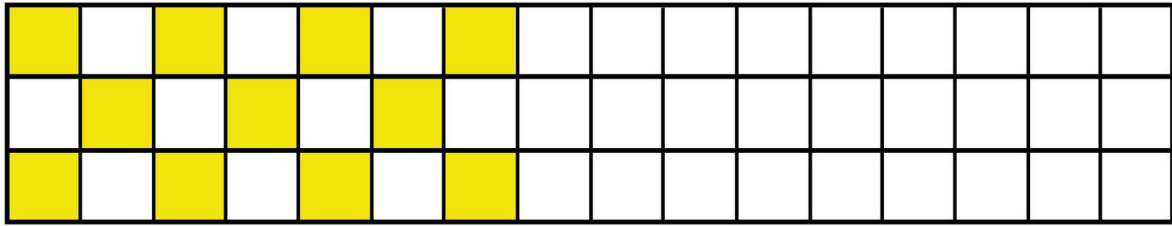
A. Completing number patterns

1. Copy the number patterns. Add the next number too.

1	5	1	5	1	5	1	
1	2	3	1	2	3	1	
7	5	7	5	7	5	7	
6	5	6	5	6	5	6	

2. Complete the patterns.

3 5 7 3 5 7 _ 5 7 3 _ 7 3 5 _

2 4 6 8 _ 4 6 _ 2 4 _ 8 2 _ 6 8

8 9 10 8 9 _ 8 _ 10 _ 9 10

1 3 5 7 _ 3 5 _ 1 3 _ 7 1 _ 5 7

7 8 9 7 _ 9 7 8 _ 7 8 9 _ 8 _

12

4. Write the number that comes before and after each of these:

before		after
	2	
	5	
	8	
	4	
	3	
	7	
	9	
	6	

5. Write the date in numbers. Is there a pattern?

_____

_____

_____

_____

13

3. These are the dates of the town meetings.
- Date of first meeting: July 6
- Date of second meeting: July 13
- Date of third meeting: July 20
- Date of fourth meeting: July 27

Do you notice a pattern? What is it?

_____

_____

4. Read the pattern descriptions. (A to D) Write the descriptions next to the number patterns.

0, 2, 4, 6, . . . Answer: _____

30, 25, 20, 15, . . . Answer: _____

1, 4, 16, 64, . . . Answer: _____

10,000, 1000, 100, 10, . . . Answer: _____

A. Subtract 5 from the previous number.

B. Divide the previous number by 10.

C. Add 2 to the previous number.

D. Multiply the previous number by 4.

Colouring the Patterns

Colour the patterns using this key.

1	2	3	4

Example:

Colour in using 1, 1, 2, 2

Colour in using 3, 4, 3, 4

Colour in using 4, 1, 4, 1

Colour in using 2, 2, 3, 3
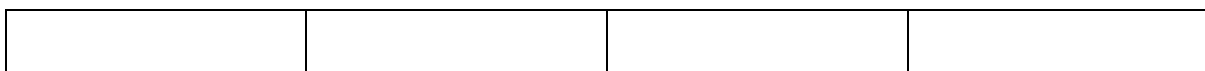
Colour in using 4, 3, 2, 4
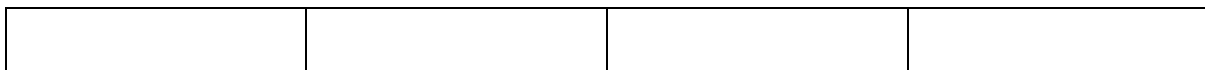
Colour in using 4, 4, 4, 2
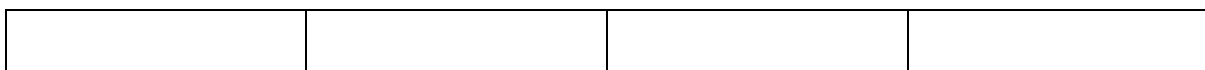
Designing a pattern

l. Cut out the shapes below and design a pattern. Stick the shapes you have chosen below.

16
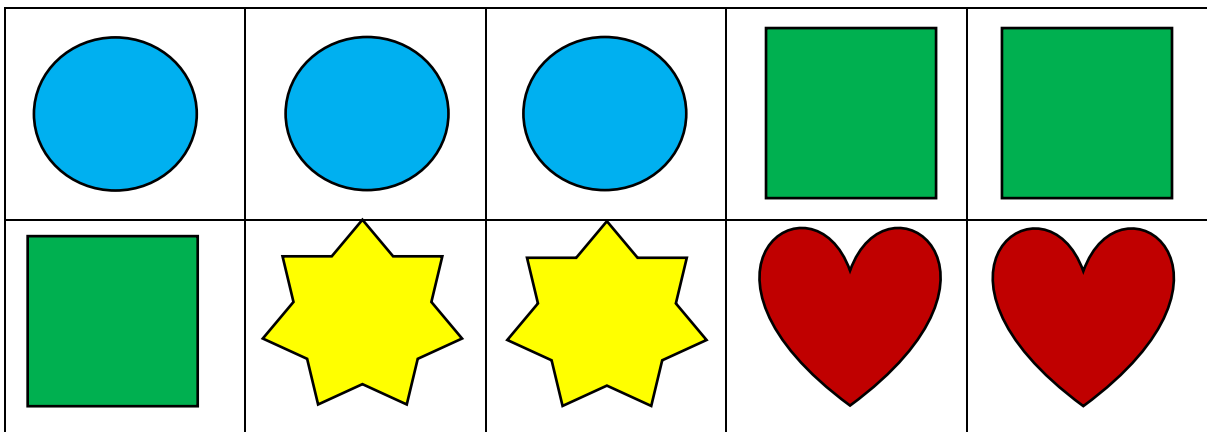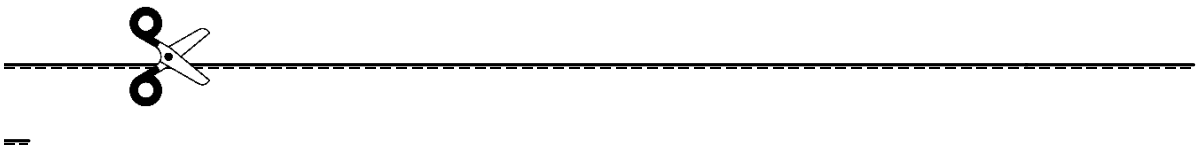
Designing your own patterns

You are going to design a pattern. Think about these things:

1. Will your pattern be linear or non-linear?

2. What colours will you use?

3. Will you use different shapes?

4. What size will your pattern be?

5. How many of each shape / colour will you use?

6. What would you use the pattern for?

7. How could you describe your pattern with numbers?

Complete the patterns by adding shapes, colours or whatever you like!
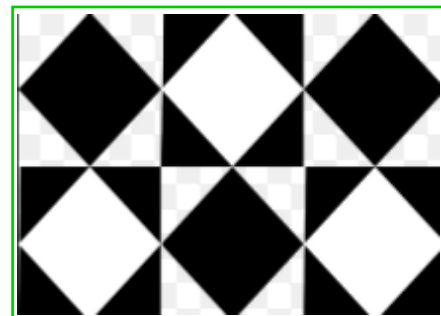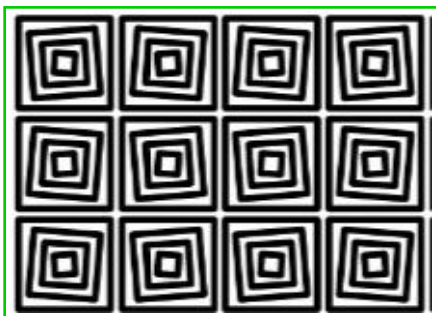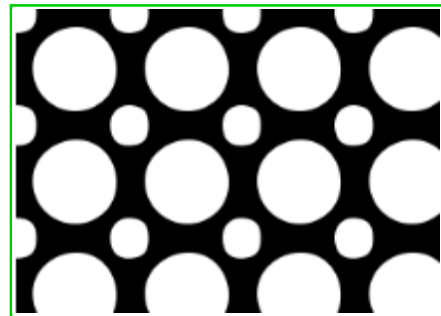
Mapping of Learning Outcomes

(PR1) Identify a range of regular/linear and irregular/non-linear patterns, e.g. musical rhythms and phrases, in the natural and built environment, heart beats Pages 8 to 9 (common patterns), Pages 10 to 14 (types of patterns), Pages 15 to 20 (patterns in nature), Pages 21 to 24 (patterns in everyday life), Pages 25 to 26 (linear and non-linear patterns), Page 27 (regular and irregular patterns), Pages 30 to 40 (finding the numbers), Page 41 (finding letter patterns), Page 42 (finding rhythm patterns), Pages 45 to 49 (completing shape patterns), Pages 50 to 55 (completing various patterns), Pages 56 to 58 (copying patterns), Pages 59 to 61 (completing letter patterns)

(PR2) Identify number patterns, e.g. increases in steps of two Page 10 and 12 (identifying number patterns), Page 34 (identifying number patterns), Page 52 (completing number patterns), Pages 62 to 73 (completing number patterns), Page 74 (rolling the dice – identifying possible number patterns)

(PR3) Use number to describe pattern e.g. clapping out a rhythm, visual descriptions– two yellows, one red Pages 77 to 78 (using numbers to describe patterns), Pages

79 to 80 (predicting number patterns, using numbers to complete patterns), Page 81 (completing colour patterns by using number patterns), Pages 82 to 84 (using numbers to describe patterns), Pages 85 to 86 (using numbers to describe patterns), Page 87 (describing patterns with numbers or words), Page 88 (using numbers to describe patterns and completing them), Page 89 (using the lunar phases to write a number pattern), Page 90 (using numbers to describe patterns in word problems)

(PR4) Design a simple pattern with a limited range of variables Pages 93 to 96 (designing patterns, using numbers and symbols), Page 97 (designing own patterns using variables), Page 98 (practicing designs), Page 99 (designing final pattern)