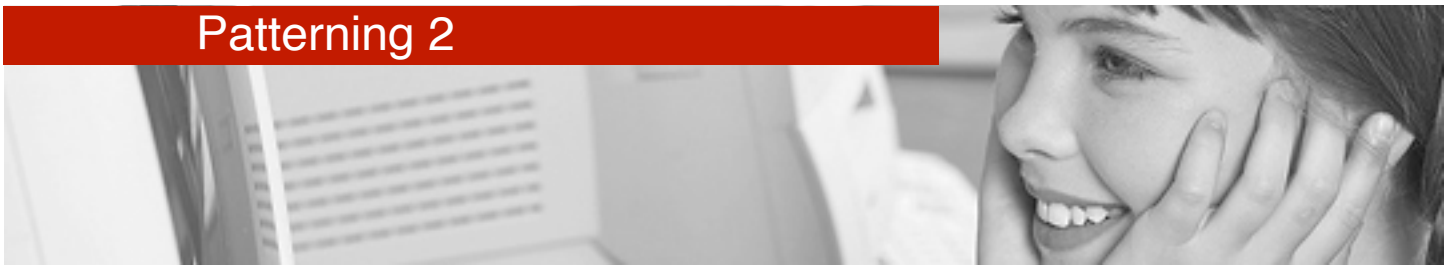
Patterning 2



Patterning 2

Patterning 2 builds upon the skills introduced in the first program, while introducing new key concepts in compelling and challenging ways. Patterning problems in this program become more complex, as they are now based on two attributes which change. Additionally, students are exposed to a wider variety of patterns - geometric transformations and numerical sequences. The program also tests more detailed pattern descriptions, ultimately leading students to build their own patterns. **Patterning 2** features hundreds of colorful graphics and exciting auditory awards which are sure to engage the minds of students. A series of audio instructions and help buttons ensure that students will navigate these activities easily and with confidence. Designed specifically for Grade 2 students, **Patterning 2** effectively builds upon the basic principles of patterning by introducing new concepts in clear and interesting ways.

Targeted Skills

- Complete Geometric, Pictorial and Numerical Patterns Where Two Attributes Change
- Identify Missing Entries in Geometric, Pictorial and Numerical Patterns Where Two Attributes Change
- Descriptions of Given Geometric, Pictorial and Numerical Patterns Where Two Attributes Change
- Complete Basic Numerical Patterns on Number Charts

Teacher Dashboard

The Teacher Dashboard tracks student progress throughout each program and records the percentage score for every activity completed. This feature provides an overview of how well a student is progressing and allows the teacher to identify strengths and weaknesses.

- Records students' results automatically as they work.
- Prints reports quickly and easily for sharing with parents and staff.
- Provides summary reports by subject or detailed reports by activity.
- Allows teachers to print reports for individual students or an entire class.
- Stores student marks in one central location for all programs.

Program Outline

The program is broken down into 5 main units, which can all be accessed from the main menu. On the following pages, each of these different units are broken down. The main menu units are:

1. What is Missing?
2. What Comes Next?
3. Make the Pattern
4. Talking About Patterns
5. Number Charts

Patterning 2

1. What is Missing?

ACTIVITY NAME	INSTRUCTION	REQUIRED SKILLS
Fill in the Blanks	Fill in the missing numbers in these patterns.	Fill in a missing entry in a numerical pattern.
Numbers	Type the missing number to complete each pattern.	
Letters	Look at the pattern and type the letter that belongs where the red X is.	Fill in a missing entry in a letter pattern.
Shapes	Look at the pattern and click the shape that belongs where the red X is.	Fill in a missing entry in a geometric pattern.
Students	Your teacher arranges the desks in a pattern that goes GIRL, GIRL, BOY. Fill in the missing entries from the pattern.	Fill in missing entries in a word pattern.

2. What Comes Next?

ACTIVITY NAME	INSTRUCTION	REQUIRED SKILLS
Counting by Ones	Counting by ones, which number comes before / after this number?	Determine the next entry for a given numerical pattern.
Counting by Twos	Counting by twos, which number comes before / after this number?	
Numbers (2 activities)	Type the next number in each pattern.	
Next Three Numbers (2 activities)	Select the correct group of 3 numbers that continues the pattern above.	Determine the next 3 entries for a given numerical pattern.
Flowers	Look at the pattern of flowers at the top of the screen, then click on the flower that comes next.	Determine the next entry for a given pictoral pattern.
Blocks	Look at the pattern of blocks and determine which blocks would come next in the sequence.	Determine the next entry for a given geometric pattern.
Triangles (2 activities)	Look at the pattern of triangles at the top of the screen, then click on the triangle that comes next.	

3. Make the Pattern

ACTIVITY NAME	INSTRUCTION	REQUIRED SKILLS
Clothes	Listen to the pattern and click on the group of 3 items of clothing that continues the pattern.	Create a pictoral pattern from a spoken sequence.
Letters	Listen to the letter patterns and type each pattern you hear.	Create a letter pattern from a spoken sequence.
Increasing Patterns	Click on the numbers in order to make the pattern requested. (eg. “Up by 3’s”)	Create a numerical pattern from a printed description.
Decreasing Patterns		
Match the Numbers	Match the missing numbers with their patterns by clicking on them.	Complete a numerical pattern.

4. Talking About Patterns

ACTIVITY NAME	INSTRUCTION	REQUIRED SKILLS
Addition or Subtraction?	Read the pattern at the top of the screen and click on addition if it is going up or subtraction if it is going down.	Determine whether a printed numerical pattern is based on addition or subtraction.
Describe the Color Pattern	Click on the geometric pattern that matches the typed pattern at the top of the screen.	Match a printed description with a geometric pattern.
Describe the Shape Patterns	Pick the correct description for each geometric pattern shown.	
Fruit Loops	Various questions about how fruit loops are arranged in a bowl.	Recognize a pattern in a pictoral arrangement.
Describe the Number Patterns	Match the number pattern with its description.	Match a printed description with a numerical pattern.

5. Number Charts

ACTIVITY NAME	INSTRUCTION	REQUIRED SKILLS
Number Charts	Look at the pattern on the number chart and then click on the next 10 numbers of the pattern.	Use a hundreds chart to continue a given numerical pattern.

Data Management 2

Data Management 2

Data Management 2 is an effective program for reinforcing basic skills, while introducing new concepts. This sorting problems in this program require students to sort and record their data on objects with two different attributes. Students are also introduced to more detailed survey questions, and learn how to choose an appropriate survey question. The program also teaches the basic elements of a graph, while introducing students to other forms of one-to-one correspondence graphing, as circle graphs, line graphs, bar graphs and pictographs. Finally, the program introduces the students to relating basic probability concepts to simple real world games. Colorful graphics and a series of audio instructions and help buttons ensure that students will navigate these activities easily and with confidence. Designed specifically for Grade 2 students, **Data Management 2** is an excellent and exciting way to build these important skills.

Targeted Skills

- Counting and Measuring by Two Attributes
- Sorting by Two Attributes
- Conduct Surveys, Obtain Data from Graphs
- Graphing - One-to-One Correspondence
- Predict Outcome of Simple Probability Games

Teacher Dashboard

The Teacher Dashboard tracks student progress throughout each program and records the percentage score for every activity completed. This feature provides an overview of how well a student is progressing and allows the teacher to identify strengths and weaknesses.

- Records students' results automatically as they work.
- Prints reports quickly and easily for sharing with parents and staff.
- Provides summary reports by subject or detailed reports by activity.
- Allows teachers to print reports for individual students or an entire class.
- Stores student marks in one central location for all programs.

Program Outline

The program is broken down into 5 main units, which can all be accessed from the main menu. On the following pages, each of these different units are broken down. The main menu units are:

1.1 - Counting

1.2 - Surveying

1.3 - Sorting

1.4 - Graphing

2.1 - Probability

Data Management 2

1.1 - Counting

ACTIVITY NAME	INSTRUCTION	REQUIRED SKILLS
Flowers	How many flowers are: red / yellow / purple / green in the middle / not green in the middle / in total?	Count objects based on two attributes.
Athletes	How many athletes are: playing basketball / holding baseball bats / boys / girls / black hair / brown hair / in total / in wheelchairs /	Count objects based on one attribute.
Food Groups	Click on the group with the stated combination of pizza slices, hot dogs and drinks.	Count groups of objects based on one attribute.
People Eating	How many people are: eating sandwiches / eating pizza / wearing hats & eating sandwiches / not wearing hats & not eating, etc.	Count objects based on two attributes.
Coins	How many pennies / 5 cent coins / 10 cent coins / 25 cent coins / total coins are there?	Count and compare objects based on one attribute.

1.2 - Surveying

ACTIVITY NAME	INSTRUCTION	REQUIRED SKILLS
Surveying Questions	Tells students what the goal of the question is (yes or no, graphing data, etc), and asks them to pick the best question from a list.	Determine good questions for generating a finite number of responses.
Good and Bad Questions	Are these good or bad survey questions for displaying the data on a bar graph?	
Rock Stars	Look at the picture of rock stars. How many are: boys / girls / wearing jackets / dancing / not wearing hats, etc.	Gather data from pictoral evidence based on one attribute.
Fire Fighters	Look at the picture of fire fighters. How many are: wearing red / wearing hats / in total / holding axes, etc.	
The Weather in June	Look at this weather calendar. How many: cloudy / sunny / rainy days were there in June? Was it sunny on more days than it rained? / Was it cloudy on more days than it was sunny? / Was it sunny on Wed June 10? / Did it rain on a Saturday in June? etc.	Collect and count data from a calendar.

Data Management 2

1.3 - Sorting

ACTIVITY NAME	INSTRUCTION	REQUIRED SKILLS
Attributes	Look at four groups of objects and choose the two attributes that were used to sort them.	Identify two attributes that were used to sort presorted groups.
What Do They Have in Common?	Look at the group of shapes above - what do they have in common?	
Shapes	Look at these shapes. You must sort the shapes into 4 groups based on their attributes.	Use two attributes to sort objects.
Fish	Look at the fish. You must sort the fish into 4 groups based on their attributes.	
Cars	Look at the cars. You must sort the cars into 4 groups based on their attributes.	
Letters	Look at the letters. You must sort the letters into 4 groups based on their attributes.	

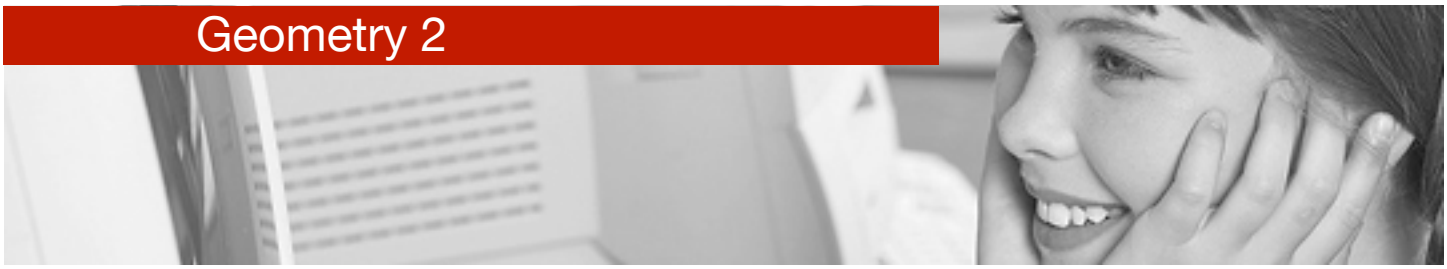
1.4 - Graphing

ACTIVITY NAME	INSTRUCTION	REQUIRED SKILLS
Basketball Season	Answer various questions about reading and comparing data from a given pictograph.	Read pictographs with one-to-one correspondence.
Class Savings		
Halloween	Answer various questions about reading and comparing data from a given bar graph.	Read bar graphs with one-to-one correspondence.
Birthdays		
Make a Graph!	Your teacher does a survey of the class to figure out the most popular fruit. As you see the results of the survey, fill in the blank squares of the graph by clicking on them.	Construct a bar graph based on one-to-one correspondence.
Favorite Color	Answer various questions about reading and comparing data from a given pie chart.	Read pie charts with one-to-one correspondence.
Class Tests	Answer various questions about reading and comparing data from a given line graph.	Read line graphs with one-to-one correspondence.

2.1 - Probability

ACTIVITY NAME	INSTRUCTION	REQUIRED SKILLS
Books	Various questions about the probability of picking books of various colors from a group of books.	Count and group given pictoral data as a basis for probability experiments. Predict the probability that an event will occur.
Crayons	Various questions about the probability of picking crayons of various colors from a group of crayons.	
Bag of Candy	Various questions about the probability of picking candies of various colors from a bag of candy.	
Group of People	Various questions about the probability of picking a particular person from a group of people.	
Fun and Games	Various probability questions based around coin flips, picking cards, etc.	
Weather	Various probability questions based around future weather.	
Probability Numbers	Determine probability of various probability experiments - rolling die, guessing numbers, picking things at random.	Express simple probability calculations in numerical form.

Geometry 2



Geometry 2

Geometry 2 effectively builds upon the concepts introduced in Geometry 1, along with introducing several new key geometric concepts. Through a wide variety of multi-sensory activities, the students will be introduced to more complex 2D shapes and 3D figures and will learn how to use concrete measures, such as counting sides and vertices, to compare shapes and figures. New concepts such as lines of symmetry, transformations (flips, slides and turns) and working with a grid are thoroughly introduced in the program. Colorful shapes, figures and graphics, such as maps and grids, ensure that students will be interested to use this compelling program. A series of audio instructions and help buttons ensure that students will navigate these activities easily and with confidence. Designed specifically for Grade 2 students, **Geometry 2** is an effective way to reinforce basic geometric principles, while clearly introducing more complex concepts.

Targeted Skills

- Names of 2D Shapes (square, rectangle, circle, triangle, pentagon, hexagon, octagon)
- Names of 3D Figures (cone, cube, cylinder, sphere, pyramids, prisms)
- Properties of 2D Shapes and 3D Figures
- Build 3D Figures from Nets
- Compare 2D Shapes and 3D Figures
- Identify Symmetrical Objects and Divide Objects Symmetrically
- Directional Relationships (inside, to the right, beside, over, etc.)
- Describe Directional Relationships Along a Grid
- Identify Flips, Slides and Turns

Teacher Dashboard

The Teacher Dashboard tracks student progress throughout each program and records the percentage score for every activity completed. This feature provides an overview of how well a student is progressing and allows the teacher to identify strengths and weaknesses.

- Records students' results automatically as they work.
- Prints reports quickly and easily for sharing with parents and staff.
- Provides summary reports by subject or detailed reports by activity.
- Allows teachers to print reports for individual students or an entire class.
- Stores student marks in one central location for all programs.

Program Outline

The program is broken down into 7 main units, which can all be accessed from the main menu. On the following pages, each of these different units are broken down. The main menu units are:

1. 2D Naming
2. 3D Naming
3. 2D Properties
4. 3D Properties
5. Symmetry
6. Flips, Turns (Reflections), Slides
7. Directions

Geometry 2

1. 2D Naming

ACTIVITY NAME	INSTRUCTION	REQUIRED SKILLS
What Shape is This? (2 activities)	Click on the name of the shape that you see.	Identify 2D shapes.
Pick the Shape (2 activities)	Click on the shape that you hear.	
Shape Matching	Match the shape with its name.	
Shape Hunt	Find and click on all the shapes that match the shape that you hear.	
Shape Counting	Count the number of shapes that match the shape that you hear and press enter.	

2. 3D Naming

ACTIVITY NAME	INSTRUCTION	REQUIRED SKILLS
What Figure is This? (2 activities)	Click on the name of the figure that you hear.	Identify 3D figures.
Pick the Figure (2 activities)	Click on the figure that matches the figure that you hear.	
Figure Matching	Click to match each figure with its name.	
Figure Hunt	Find and click on all the figures that match the shape that you hear.	
Figure Counting (2 activities)	Count the number of figures that match the figure that you hear and press enter.	

3. 2D Properties

ACTIVITY NAME	INSTRUCTION	REQUIRED SKILLS
Bag of Shapes	Count and type the number of each shape in the bag.	Identify 2D shapes.
Count the Sides	Count and type the number of sides that the shape you see has.	Count the number of sides of 2D shapes.
How Many Sides?	Click on the number of sides for the name of each shape.	Recognize the number of sides that a printed shape name has.
Which Shape has the Most Sides?	Click on the shape that has the most sides.	Compare 2D shapes based on the number of sides.
Which Shape has the Most Sides? II	Which shape has the most sides?	
How Many Vertices? I	Click on the number of vertices that the shape you see has.	Count the number of vertices of 2D shapes.
How Many Vertices? II	Click on the number of vertices for the name of each shape.	Recognize the number of vertices that a printed shape name has.
Which Shape has the Most Vertices?	Which shape has the most vertices?	Compare 2D shapes based on their number of vertices.

4. 3D Properties

ACTIVITY NAME	INSTRUCTION	REQUIRED SKILLS
Bag of Figures	Count and type the number of figures for each question.	Identify 3D figures.
Riddles	Click on the figure that answers each riddle.	Recognize the properties of 3D figures.
Construction	Click on the correct set of shapes to build each 3D figure.	Recognize that 3D figures are made up of 2D shapes and shapes needed to build a given figure.

5. Symmetry

ACTIVITY NAME	INSTRUCTION	REQUIRED SKILLS
Is it Symmetrical?	Is each shape divided symmetrically?	Recognize whether a shape is divide symmetrically or not.
Is it Symmetrical? 2	Is this shape symmetrical?	
Make it Symmetrical	Click on the spot on each picture where you can put a line so that the picture will be divided symmetrically. You can rotate the line by clicking on the rotate button.	Determine where a line of symmetry should lie on a given picture.
Symmetrical Letters	Click on the spot on each letter where you can put a line of symmetry.	
Find the Matching Half	Look at the object on the top and find its other half from the objects below.	Determine whether given halves of an object are symmetrical or not.
Find the Unsymmetrical Shape	Look at these three objects and click on the shape that is not symmetrical.	Determine whether given objects are symmetrical or unsymmetrical.
How Many Lines of Symmetry?	How many lines of symmetry does this shape have?	Count how many lines of symmetry an object has.

6. Flips (Reflections), Turns, Slides

ACTIVITY NAME	INSTRUCTION	REQUIRED SKILLS
Flip (Reflection), Turn or Slide?	Does this picture show a flip, a turn or a slide?	Determine whether a given transformation is a flip, a turn or a slide.
Pick the Transformation	Click on the picture that demonstrates the transformation that you hear.	
Pick the Transformation II		
Pick the Transformation III		
Shape Transformation	Look at the shape transformation and click on whether it is a flip, a slide or a turn.	

7. Directions

ACTIVITY NAME	INSTRUCTION	REQUIRED SKILLS
Follow the Map	Read and follow the directions and then then tell me where you end up.	Follow directions on a map - up, down, left, right.
Follow the Compass		Follow directions on a map - north, south, east, west.
Moving on the Grid	Click on the direction you would have to travel to travel to get between these objects.	Determine where one object lies in relation to another - up, down, left or right.
Moving on the Grid 2	Look at the grid and tell me how many squares are between these two objects.	Determine the distance between two squares on a grid.
Moving on the Grid 3		
Moving on the Grid 4	Read the instructions and click on the object that you will land on.	Follow directions on a grid - up, down, left, right.