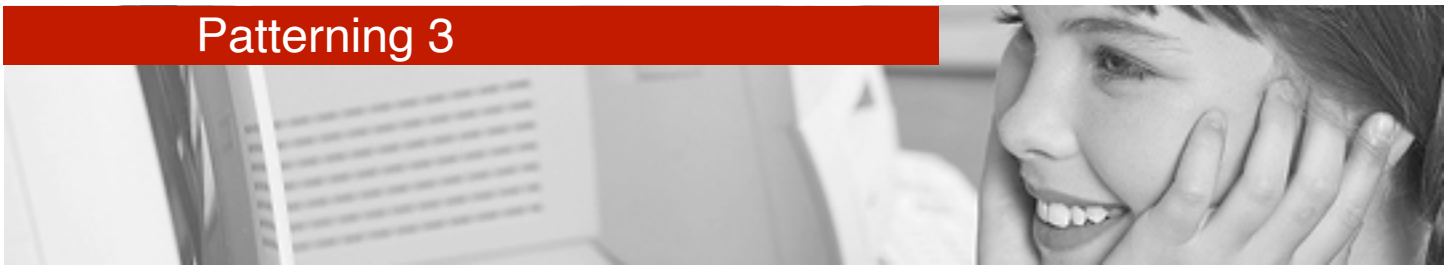
Patterning 3



Patterning 3

Patterning 3 continues to build upon the basic skills of patterning through more challenging activities and concepts. In this program, students are taught how to correctly identify and complete patterns in which two or more attributes change. Students are also required to find patterns in real world examples of charts and calendars. The program also strengthens the students ability to describe existing patterns and to build increasingly complex patterns from a given description. The activities are brought to life through a series of colorful graphics and exciting auditory rewards. A series of audio instructions and help buttons ensure that students will navigate these activities easily and with confidence. Designed specifically for grade 3 students, **Patterning 3** is an exciting and effective way to build a students thorough understanding of these mathematical principles.

Targeted Skills

- Complete Geometric, Pictorial and Numerical Patterns Where 2+ Attributes Change
- Identify Missing Entries in Geometric, Pictorial and Numerical Patterns Where 2+ Attributes Change
- Descriptions of Given Geometric, Pictorial and Numerical Patterns Where 2+ Attributes Change
- Complete 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 3

1 - What is Missing?

ACTIVITY NAME	INSTRUCTION	REQUIRED SKILLS
Fill in the Blanks 1	Type the missing numbers for each pattern.	Fill in a missing entry in a numerical pattern.
Fill in the Blanks 2		
Missing Number 1	Type the missing number for each pattern.	
Missing Number 2		
Missing Letter	Click on the letter that belongs where the X is in this pattern of letters.	Fill in a missing entry in a letter pattern in which two attributes change.
Missing Shape	Look at the pattern and click on the shape that belongs in the red X.	Fill in a missing entry in a geometric pattern in which two attributes change.

2 - What Comes Next?

ACTIVITY NAME	INSTRUCTION	REQUIRED SKILLS
Arrow Patterns (2 activities)	Determine which direction arrows at various points after a given pattern will point.	Determine the next entries for a given geometric pattern in which two attributes change.
Block Patterns	Determine which colour a block would be at various points after a given pattern of blocks.	
Clothing Pattern	Look at the pattern and select the item of clothing that comes next in the pattern.	
Number Patterns	If a pattern started at x and went down by y every time, what would the nth number be?	Determine a specific entry for a described numerical pattern.
Counting by Fives	If you are counting by fives/tens, which number comes before/after x?	
Counting by Tens		
Pick the Set of Numbers	Which set of numbers follows this sequence?	Determine the next entries for a given numerical pattern.
Next Shape	Pick the shape that comes next in the pattern.	Determine the next entry for a given geometric pattern.
Next Number	Type the number that comes next in the pattern.	Determine the next entry for a given numerical pattern.

Patterning 3

3 - Make the Pattern

ACTIVITY NAME	INSTRUCTION	REQUIRED SKILLS
Allowance (2 activities)	Fill in the missing values in the chart of week number and allowance amount.	Determine the next entries for a given numerical pattern.
Eating Candy	Look at the chart of amount of candy eaten and determine how much candy is left on a given day.	
Make a Number Pattern Part I	Enter the first five numbers of this described pattern.	Determine the first five numbers of a described numerical pattern.
Make a Number Pattern Part II		
Describe the Pattern 1	Match the pattern with its description by clicking on the correct description for the highlighted pattern.	Determine the proper description for a given numerical pattern.
Describe the Pattern 2		
Pattern Word Problems	Read the patterning word problem questions and select the correct answer.	Understand real world patterning problems and determine the proper responses.

Patterning 3

4 - Talking About Patterns

ACTIVITY NAME	INSTRUCTION	REQUIRED SKILLS
Describe the Clothes	Pick the description that matches the pattern above.	Match a pictoral pattern with a given description.
Pattern Match (3 activities)	Match the pattern with its description by clicking on the correct description for the highlighted pattern.	Match a numerical pattern with a given description.
Up or Down by 10s	Pick the pattern that matches the description given above.	Determine which given numerical pattern goes up or down by 10s.
Pick the Number Pattern		Determine which given numerical pattern matches a given description
Pick the Pattern (2 activities)		
Ratios	Complete the given ratio.	Understand the concept of a ratio and complete a given simple ratio.
What is the Third Number?	Look at the description above and figure out which number would come third in the pattern.	Determine the third number in a described pattern.
Pattern Descriptions	Pick the description that matches the pattern shown above.	Determine which description matches a given pattern.
Which Operation?	Look at the pattern shown and pick the operation you would use to make that pattern.	Determine which operation is used to make a given numerical pattern.
Allowance Problems	Fill in the chart below with the values that fit the description given at the top.	Read a chart depicting a numerical pattern and fill in the missing values.

5 - Number Charts

ACTIVITY NAME	INSTRUCTION	REQUIRED SKILLS
Complete the Chart	Look at the pattern on the number chart and click on the next five numbers of the pattern.	Read a numerical pattern from a hundreds chart and determine the next entries.
Word Problems	Look at the chart and answer various questions about continuing the given patterns.	

Data Management 3

Data Management 3

Data Management 3 is an exciting and effective program for building upon basic data management and probability principles, while introducing new concepts as well. The program features increasingly challenging sorting problems, which require students to identify and sort objects based on two and more attributes. The surveying problems are based on increasingly complex attributes and real world problems. The programs graphing components introduce the concept of many-to-one correspondence, teaching students how to read and create graphs and pictographs with scales of 5, 10 and 100. The probability problems involve more challenging and compelling real world examples. 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 3 students, **Data Management 3** is an excellent and exciting way to build these important skills.

Targeted Skills

- Counting and Measuring by 2+ Attributes
- Sorting by 2+ Attributes
- Conduct Surveys, Obtain Data from Graphs and Venn Diagrams
- Graphing - Many-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 - Surveying

1.2 - Sorting

1.3 - Graphing

1.4 - Venn Diagrams

2.1 - Probability

Data Management 3

1.1 - Surveying

ACTIVITY NAME	INSTRUCTION	REQUIRED SKILLS
Good and Bad Questions	Which of the following questions will give you results that you could place on a graph?	Determine good questions for generating a finite number of responses.
Campers	Various questions about the number of campers with specific attributes in a given picture.	Gather data from pictoral evidence based on one attribute.
Drink Orders	Various questions about the number of drink orders with specific attributes in a given picture.	
Favorite CDs	Various questions about how the number specific CDs in a pile of CDs.	
Fruit Survey	Various questions about the number of fruit totaled up on a tally chart.	Gather data from a tally chart.

1.2 - Sorting

ACTIVITY NAME	INSTRUCTION	REQUIRED SKILLS
Puppies	Sort the puppies into four groups.	Use two attributes to sort objects.
Shoes	Sort the shoes into four groups.	
Cars	Sort the cars into six groups.	Use three attributes to sort objects.
Stamps	Selena organized her stamp collection into four different categories shown in the picture. What are the attributes she used to organize the stamps this way?	Identify two attributes that were used to sort presorted groups.
Buttons	Look at each group of buttons and decide how they were sorted.	
Sort into Venn Diagram	Click on the shapes and drag them to their correct locations in the Venn Diagram.	Place given objects into their appropriate spots on a Venn Diagram.
Numbers into Venn Diagram	Click on the numbers and drag them to their correct locations in the Venn Diagram.	

1.3 - Graphing

ACTIVITY NAME	INSTRUCTION	REQUIRED SKILLS
Favorite Days	Various questions about comparing data from a tally chart.	Read data from a tally chart.
What is the Best Graph?	Pick which type of graph would be best for a specific surveying situation.	Determine the appropriate graph for a given situation.
Cars	Various questions about reading and comparing data from a pictograph.	Read pictographs with many-to-one correspondence.
Home Runs		
Favorite Seasons	Various questions about reading and comparing data from a bar graph.	Read bar graphs with many-to-one correspondence.
Sports Equipment		
Tally Charts	Compare the graph with the tally chart. Does the tally chart match the graph?	Determine whether a given tally chart matches a given bar graph.
Complete the Graph	Read the information below the graph, then drag the bars at the bottom of the screen to their proper locations on the graph.	Build a bar graph from its separate parts.

1.4 - Venn Diagrams

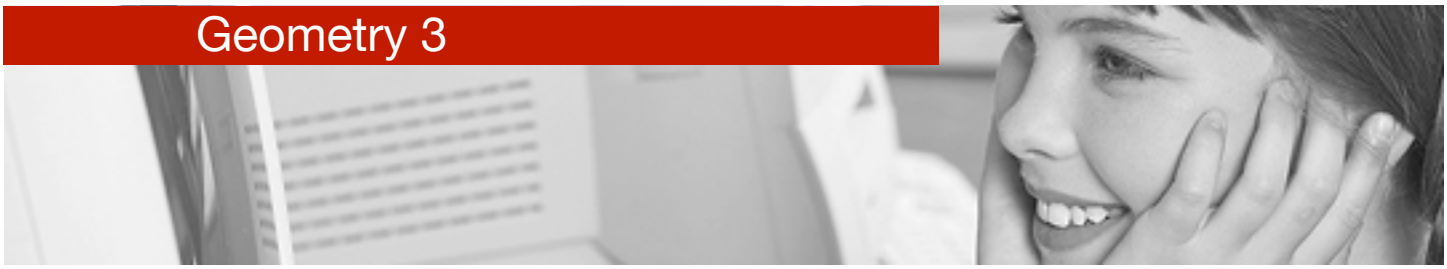
ACTIVITY NAME	INSTRUCTION	REQUIRED SKILLS
Pirates	Various questions about which pirate shown belongs at a certain spot in a Venn Diagram.	Read Venn Diagrams and determine where given pieces of data belong.
Class BBQ	Various questions about counting data on a given Venn Diagram.	
Dogs and Cats		
Glasses and Hair		

Data Management 3

2.1 - Probability

ACTIVITY NAME	INSTRUCTION	REQUIRED SKILLS
Dice	Various questions about calculating the probability in rolling dice.	Express simple probability calculations in numerical form.
Spinners - Which Color?	Various questions about certainty in simple spinner games.	Count and group given pictoral data as a basis for probability experiments. Predict the probability that an event will occur.
Spinners - Should You Play?	Various questions about calculating the probability of spinner games.	Express simple probability calculations in numerical form.
Spinners - Chances		
Fun and Games - Guess the Number	Various questions about certainty in different 'guess the number' games.	Count and group given pictoral data as a basis for probability experiments. Predict the probability that an event will occur.
Fun and Games - Birthday Cake	Various questions about certainty and chance relating to a pie graph.	
Fun and Games - Sports	Various questions about certainty and chance in different sports scenarios.	
Fun and Games - Starry Sky	Various questions about certainty and chance about two people looking at the same star in the night sky.	
Eyes Closed! - Dolls	Various questions about calculating the probability of picking a certain doll from a given group.	Express simple probability calculations in numerical form.
Eyes Closed! - Halloween Candy	Various questions about certainty and chance of picking a certain candy from a given combination of candies.	Count and group given pictoral data as a basis for probability experiments. Predict the probability that an event will occur.
Eyes Closed! - Letters	Various questions about certainty and chance of picking a certain letter out of a given bag of letters.	
Eyes Closed! - What are the Chances	Various questions about certainty and chance in different games of chance.	

Geometry 3



Geometry 3

Geometry 3 continues to effectively reinforce and build upon the basic principles of geometry in exciting ways. The program continues to test knowledge of shapes and figures from the first two programs, while introducing new and more complex 2D shapes and 3D figures. New concepts such as building figures from nets, congruence, co-ordinate geometry and locating lines of symmetry are all introduced through activities that clearly outline these ideas and challenge young minds. The program features exciting and colorful graphics, along with amusing graphical and auditory rewards that are certain to engage the students' full attention. A series of audio instructions and help buttons ensure that students will navigate these activities easily and with confidence. Designed specifically for Grade 3 students, **Geometry 3** is a powerful tool to teach and test increasingly challenging geometric principles.

Targeted Skills

- Names of 2D Shapes (square, rectangle, circle, triangle, pentagon, hexagon, octagon)
- Differences Between Parallelograms, Rhombuses, Trapezoids.
- 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, Divide Objects Symmetrically and Count Lines of Symmetry
- Identify Congruent Objects
- Directional Relationships (inside, to the right, beside, over, etc.)
- Read Co-ordinates from 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 6 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 Shapes
2. 3D Figures
3. Symmetry
4. Congruence
5. Mapping
6. Flips, Slides and Turns

Geometry 3

1. 2D Shapes

ACTIVITY NAME	INSTRUCTION	REQUIRED SKILLS
Four Siders	Click on all the parallelograms / rhombuses / trapezoids.	Identify parallelograms, rhombuses and trapezoids.
Shape Riddles	Click on the shape name that answers the riddle.	Recognize the properties of 2D shapes.
Find the Pentagons	Click on all of the pentagons.	Identify 2D shapes.
Find the Hexagons	Click on all of the hexagons.	
Find the Octagons	Click on all of the octagons.	
Name the Shapes	Click on the name of the shape you see.	
How Many Sides	How many sides does a (hexagon, pentagon, octagon, square, trapezoid, triangle, rhombus, parallelogram) have?	Recognize the number of sides that a printed shape name has.

2. 3D Figures

ACTIVITY NAME	INSTRUCTION	REQUIRED SKILLS
What Figure is This?	Click on the name of the figure that you see.	Identify 3D figures.
How Many Vertices?	How many vertices does this figure have?	Count the number of vertices of 3D figures.
How Many Edges?	How many edges does this figure have?	Count the number of edges of 3D figures.
Riddles	Click on the figure that answers the riddle.	Recognize the properties of 3D figures.
Building a Figure	Which geometric shape can be made using each net?	Understand that 3D figures are made up of 2D shapes and determine what shapes are needed to build a given figure.
Taking it Apart	Which net can be made by taking each geometric shape apart?	
Name the Built Figure	Which geometric shape can be made using each net?	
Shapes to Figures	Look at the shapes you see. What figure could you build from these shapes?	

3. Symmetry

ACTIVITY NAME	INSTRUCTION	REQUIRED SKILLS
Is it Symmetrical?	Is this object symmetrical?	Recognize whether a given object is symmetrical or not.
Find the Symmetrical Objects	Click on all of the symmetrical objects.	
Symmetrical Letters	Is this letter symmetrical?	
Symmetrical Letters II	Click on all of the symmetrical letters.	
Lines of Symmetry	How many lines of symmetry does this object have?	Count the number of lines of symmetry that a given object has.
Lines of Symmetry II		
Place the Line of Symmetry	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.
Place the Line of Symmetry II		

4. Congruence

ACTIVITY NAME	INSTRUCTION	REQUIRED SKILLS
Are they Congruent?	Are the two shapes congruent?	Understand concept of congruence. Determine whether shapes are congruent or not.
Are They Congruent? II		
Pick the Congruent Shape	Click on the shape that is congruent to the colored shape.	

5. Mapping

ACTIVITY NAME	INSTRUCTION	REQUIRED SKILLS
Shapes in Order	Various questions about where shapes lie in relation to each other - to the left, to the right, etc.	Describe the spatial relationship between given objects - to the left, to the right.
Fun on the Grid	Which object is in a given co-ordinate? What co-ordinate is a given object in?	Read co-ordinates from a grid and determine distance between given co-ordinates.
Read the Map	Various questions about which towns on the map lie in which co-ordinates and how far these squares are apart.	
Rooms in the House	Look at the plan of the house and determine which room will you be in if you follow these directions from a given room?	Follow directions on a given map to determine a journey - turn right, turn left, walk forward, etc.

6. Flips, Slides and Turns

ACTIVITY NAME	INSTRUCTION	REQUIRED SKILLS
Are They Slides?	Are the shapes to the right of each colored shape slides?	Determine whether a given transformation is a flip, a turn or a slide.
Click on the Flip (Reflection)	Click on the shape that is a flip of the colored shape.	
Click on the Slide	Click on the shape that is a slide of the colored shape.	
Click on the Turn	Click on the shape that is a turn of the colored shape.	
Flip (Reflection), Turn or Slide?	Is the gray shape a flip, a turn or a slide of the colored shape?	
Which Turn?	How far would you have to turn the red letter to the right to get the grey letter?	Determine the degree of a given turn - quarter, half, three quarters.