## Kids Handwrite ${ }^{\text {TN }}$

Part III

RESOURCE MATERIAL

## Section 2

Printing Prerequisites Geometric Shapes
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## Section 2 - PRINTING PREREQUISITES

## GEOMETRIC SHAPES

## 1. Skill Development

All letters have their origin in basic one-dimensional geometric shapes. Students are expected to know these shapes by the end of Kindergarten. The sequence of learning geometric shapes is:

## Early Kindergarten Shapes

- vertical lines
- horizontal lines
- horizontal and vertical crossed lines
- squares
- rectangles
- circles, half-circles and ovals


## Mid-year Kindergarten Shapes

- diagonal lines top left to bottom right
- diagonal lines top right to bottom left
- crossed diagonal lines
- triangles
- curls

Recognizing and drawing shapes is a multi-step process including:

- naming
- recognizing
- matching
- tracing
- copying
- drawing from memory

Recognizing and visualizing shapes precedes the ability to draw the shape.
The Resource includes several fun activities to help students recognize and draw these basic one-dimensional geometric shapes. These pre-printing shapes teach students the shapes and the stroke direction required to make each shape. All letters combine the lines and strokes of the basic geometrical shapes.

Samples of these activities are shown below. Students are ready to move on to printing when they can recognize and draw these one-dimensional geometric shapes.

## 2. Introduction to Shapes

The first five pages of this section introduce the student to the following ten basic geometric shapes:

- vertical and horizontal lines
- squares and rectangles
- isosceles and right-angle triangles
- diagonal and curved lines
- circles and ovals

For each shape, there is a:

- brief description
- sample ("see")
- copy for tracing ("trace")
- picture showing the shape
- space for drawing the shape

The students can have fun filling the empty box with multiple versions - long, short, big,


Fill the space below with different sized squares. Colour the squares.
 small, fat, thin or multi-coloured- and they can put the shape within the shape.

With this exercise, the students will demonstrate their ability to reproduce the shapes.

## 3. Shape Recognition

To help students recognize the geometric shapes, the material includes three pages of outlined versions of each basic geometric shape within squares, each page serving a different purpose. The black dot in the top right-hand corner of each square indicates which side is up.

## a) White shapes with names

The squares on the first page contain an outline of the shape with the name of the shape. While learning the shapes, students can decorate and colour the:

- $\quad$ shape (the space inside the black outline)
- space inside the shape and
- space outside the shape.



## b) Multi-coloured shapes - no names (Level 1)

The squares on the second page contain the same shape outline, but each shape is a distinct colour. Print multiple copies of this page, and


- cut up the pages into the squares;
- mix up the shapes on the table;
- have the students name and sort the cut-up squares into piles by shape (with the dot at the top right-hand corner).

With this version of this exercise, the students have two cues to work with - the colour and the shape.
c) Single-coloured shapes - no names (Level 2)

The squares on this page contain the same shape outline, but each shape is the same colour. Again, print multiple copies of this page and

- cut up the pages into the squares.
- mix up the shapes on the table.
- have the students name and sort the cut-up squares into piles by shape (with the dot at the top right-hand corner).

With this version of the exercise, the students only have
 the shape to work with to sort the squares.

## d) Shape-Matching Exercise

The last two pages in this series are shape-matching exercises where the students must identify the shape in a row of different shapes.

The first exercise provides the shape and name, and the second only provides the name.


## 4. Finger Tracing

Finger tracing shapes on paper, in the air, on the table or in sand (or other pliable material) is a good first step in learning shapes.

This section focuses on the geometric shapes that underlie the Italic letter forms and how they are drawn as letters.

One finger tracing page is provided. The red dots in the shapes signify the starting point, and the red arrows represent the direction the finger moves when tracing the shapes.

Finger tracing from the starting point and the direction shown will start the muscle memory needed for
 printing the letters based on these shapes.

## 5. Connect-the-Dots

The students draw each geometric shape by connecting the dots on these pages. This activity requires the student to join a red dot to a black dot - starting at the red dot. This exercise allows students to practice starting and stopping at specific locations, a necessary skill for printing.

There are six connect-the-dot pages for students to create:

- vertical, horizontal and diagonal lines
- squares, rectangles and triangles
- crossed and connected diagonal lines
- half-circles
- arcade curls
- garland curls



## 6. Four-Step Shape Drawing Exercise

These pages provide activities for students to progress in drawing geometric shapes by:

- drawing the lines within an outline of each shape,
- tracing the lines that form the shape,
- drawing the shapes by looking at a reference, and
- drawing the shapes from memory.

The geometric shapes on these pages correspond to the strokes used in print and cursive Italic writing. They include:

- vertical and horizontal lines
- squares and rectangles
- diagonal lines - left to right and right to left
- capital a shape and the v shape
- diagonal cross (x shape)
- circles and ovals
- half-circles (right to left and left to right)
- arcade curls
- garland curls

One set has 1.5-inch ( 38 mm ) squares for the younger students, and the second set has 1-inch ( 25 mm ) squares for the older students.

Use these practice pages to prepare students to print the lowercase and uppercase letters and as warm-up exercises before a print or cursive writing lesson.

Below are the first two pages of a set of 1.5 -inch $(38 \mathrm{~mm})$ square practice pages.

Step 1 - Path within an Outline


Step 2 - Tracing


## Vertical Lines



Fill the space below with long and short vertical lines.
$\square$

## Horizontal Lines

A horizontal
line goes
sideways and
had no bends..
It can be short
or long.
See
$\square$
$\square$



Fill the space below with long and short horizontal lines.

The Square
A square is a
shape with four
equal sides and
four right
angles.

|  |
| :---: |
|  |
|  |




Fill the space below with different sized squares. Colour the squares.

## The Rectangle



Fill the space below with different sized rectangles. Colour the rectangles

## The Isosceles Triangle

An isosceles
triangle has
two sides of
equal length
and one side
that is shorter.


Fill the space below with isosceles triangles. Colour the triangles.

## The Right-Angled Triangle



Fill the space below with right-angled triangles. Colour the triangles.

## Diagonal Lines

A diagonal line
is a straight line
joining two
points that are
not next to each
other.


Fill the space below with diagonal lines. Use different colours

## Curved Lines

| A curved line |
| :---: |
| bends but has |
| no sharp |
| angles. The |
| ends do not |
| connect. |



Fill the space below with curved lines.. Use different colours.

## The Circle

A circle is a shape where all points on the outside line are the same distance from the centre.


Bicycle wheels are circles.


Fill the space below with circles of different sizes. Colour the circles.

The Oval
An oval is a
circle smooshed
in on opposite
sides. An egg or
your face is an
oval shape.


Fill the space below with ovals of different sizes. Colour the ovals.

Shape Recognition with Names

|  |
| :---: |
| Vertical <br> Line |
|  |



Shape Recognition No Names - Level 1


Shape Recognition No Names - Level 2
$\square^{\bullet}$



## Shape Matching

Colour the matching shape in each row


Shape Matching
colour the matching shape in each row

| Circle | $\square$ | $\square$ | $\square$ | $\square$ |
| :--- | :--- | :--- | :--- | :--- |


| Oval |  |  | $\Omega$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |

square

| Isosceles <br> Triangle | $\square$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |


| Rectangle | $\square$ | $\square$ |  |
| :--- | :--- | :--- | :--- | :--- | :--- |


| Rightangle Triangle |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |

## Shape Finger Tracing

Starting at the red dot, finger trace each shape. Repeat until you can form each shape with your eyes closed.


## Vertical and Horizontal Lines

Connect the red dots to the black dots by drawing from the red dot to the black dot.


Squares, Rectangles and Triangles
Create squares, rectangles and triangles by drawing from the red dot and following the arrow to go to the black dots.


## Diagonal Lines

Connect the red dots to the black dots by drawing from the red dot to the black dot.

| $\bullet \bullet$ |
| :--- |
| $\bullet$ |




Create half-circles by drawing from the red dot to the black dot in the direction shown.



-

$\bigcirc$
$\longrightarrow$

## Complete the Curls (Arcades)

Starting at the red dot and going in the direction of the arrow, draw continuous loops connecting the black dots.




## Draw the Curls (Garlands)

Starting at the red dot and going in the direction of the arrow, draw continuous loops connecting the black dots.


|  |  |  |
| :---: | :---: | :---: |
| $\square$ | $\triangle$ | 3 |
| $\ell$ | A | - |
| $\square$ | 2 | M |
| $\nabla$ | $\square$ | 4 |
| E | B | C |
| $\gamma$ | X | $\triangle$ |
| 0 | S | 11 |
| W | P | 10 |


Horizontal Line

| Square |
| :---: |
| Rectangle |






$\square$
Rectangle


|  |
| :---: |









```
SHAPES - STEP 3 - DRAW WITH SAMPLES
```




SHAPES - STEP 1 - DRAWING LINES WITHIN THE SHAPE OUTLINE
Diagonal - L to R
Diagonal $-R$ to $L$
A-Shape
V-Shape



Diagonal - $R$ to $L$


## Diagonal - L to R

Diagonal - $R$ to $L$

V-Shape

$\square$

$\square$





## Rt-Angle Triangles


Oval


Rt-Angle Triangles

$\square$


SHAPES - STEP 1 - DRAWING LINES WITHIN THE SHAPE OUTLINE


Half Circle $L$ to $R$
Arcade Curls $\square$

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Garland Curls


```
SHAPES - STEP 3 - DRAW WITH SAMPLES
```



## Half Circle L to R


Garland Curls




Horizontal
Line


| Diagonal |
| :---: |
| $L-R$ |


| Diagonal <br> $R-L$ |
| :---: |

## 



SHAPES - STEP 2 - TRACING DOTTED LINE SHAPES


SHAPES - STEP 3 - DRAWING FROM SAMPLE

| Vertical <br> Line |
| :---: |


| Horizontal |
| :---: |
| Line |

square
Rectangle

| Diagonal <br> $L-R$ |
| :---: |


| Diagonal |
| :---: |
| $R-L$ |



SHAPES - STEP 4 - DRAWING FROM MEMORY

| Vertical |
| :---: |
| Line |

Horizontal
Line
square
Rectangle


SHAPES - STEP 1 - DRAWING WITHIN SHAPE OUTLINE



| $V$-Shape |
| :---: |
|  |


Oval


SHAPES - STEP 3 - DRAWING FROM SAMPLE

| A-Shape |
| :--- |
| N |

V-Shape
Diagonal $X$

| RAngle |
| :---: |
| Triangles |

Circle
Oval
$\square$


```
SHAPES - STEP 4 - DRAWING FROM MEMORY
```



| $1 / 2$ Circle |
| :---: |
| $R-L$ |



| Arcade |
| :---: |
| Curl |



| Spiral |
| :--- |
| Right |


| Spiral |
| :---: |
| Left |




## SHAPES - STEP 3 - DRAWING FROM SAMPLE



SHAPES - STEP 4 - DRAWING FROM MEMORY

| $\begin{gathered} 1 / 2 \text { Circle } \\ R-L \end{gathered}$ | $\begin{gathered} 1 / 2 \text { Circle } \\ L-R \end{gathered}$ | Arcade Curl | Garland Curl | Spiral Right | Spiral Left |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
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