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## Preporing jor Twutle Logo




## Preporing jor Turthe Logo




## Prepowing fo

move

forward

## P 『urtle <br> LOQ0

half turn
quarter turn


## commands

forward 3 left 90

## Preparing for Turtle Logo

move

forward
half turn
quarter turn


## Prepowing for Twitle Logo

move

forward
half turn
quarter turn


## move



## forward



Regent Studies | www.regentstudies.com
half turn $\stackrel{\circ}{\square}$

## quarter turn



## square



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## rectangle



# commands 



# algorithm 



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# instructions. 



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## right

## 9



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## forward <br> 4



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## moNe



## forward



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half turn $\stackrel{0}{\square}$

## quarter turn



## squmare



## rectangle



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## commands



## algorithm



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## instructions



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right 90


## forward <br> 4



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## move



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## forward



## half turn



## quarter turn



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## square



## rectangle



## commands



## algorithm




## instructions



## right



## forward 4



## left <br> 90



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## move



## forward



## half turn


quarter turn

## turn



## square



## rectangle


commands

forward 7 left 90

## algorithm



## instructions




## moNe



## forward



|

## half turn





## turn



## square


rectangle


## algorithm



## instructions



## right



## move



## forward



## half turn


quarter turn


## turn



## square



## rectangle <br> 

## algorithm



## instructions



## right 90



## left 90



## Prepowing for Taritl Loogo




## Prepanting foor Turrith logo




## Preparing for Turtle Logo





## Preparing for Turtle Logo



## Preparing for Turtle Logo



## Preparing For Turtle Logo

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| forward | algorithm |
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| half turn | instructions |
| quarter turn | right |
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## Preparing For Turtle Logo

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## Preparing For Turtle Logo



## Preparing For Turtle Logo



## Preparing For Turtle Logo

 $n \quad d \quad e \quad o \quad a \quad r \quad u \quad a \quad f \quad s \quad a$ sf mm w li ad j qi
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forward
half turn
quarter turn
square
rectangle commands
algorithm instructions right
left
turtle
move

## Preparing For Turtle Logo

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$e \quad f$

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## Preparing For Turtle Logo



## Preparing For Turtle Logo



End of Unit Assessment | Computing | Year 2 | Preparing for Turtle Logo

| All | Most | Some |
| :---: | :---: | :---: |
| Walk forward a number of steps. | Turn accurately $90^{\circ}$ (a quarter turn), walk squares and rectangles, give and follow instructions. | Write an algorithm for a shape or a route and debug errors in an algorithm. |
| 33\% | 33\% | 33\% |
| Name Name Name Name | Name <br> Name <br> Name <br> Name | Name <br> Name <br> Name <br> Name |




I can...
Computing | Year $2 \mid$ Preparing for Turtle Logo


## Computing: Preparing for Turtle Logo

## Preparing for Turtle Logo

Type your aims and success criteria here.

Your child has been creating algorithms for walking shapes and routes by moving forward a number of steps and making quarter turns. (An algorithm is a set of precise instructions.)

For example, to draw a square you would use the following instructions:
forward 4
quarter turn to the right
forward 4
quarter turn to the right
forward 4
quarter turn to the right
forward 4
quarter turn to the right


Here is a suggested task that will help reinforce this learning.

1. Create algorithms for some routes around the house using the commands: forward (number of steps), quarter turn to the right, quarter turn to the left.
2. Have someone else in the family check the algorithms.
3. Debug (correct) any mistakes in the algorithms.

## Preparing for Turtle Logo

Your child has been creating algorithms for walking shapes and routes by moving forward a number of steps and making quarter turns. (An algorithm is a set of precise instructions.)

For example, to draw a square you would use the following instructions:
forward 4
quarter turn to the right
forward 4
quarter turn to the right
forward 4
quarter turn to the right
forward 4
quarter turn to the right


Here is a suggested task that will help reinforce this learning.

1. Create algorithms for some routes around the house using the commands: forward (number of steps), quarter turn to the right, quarter turn to the left.
2. Have someone else in the family check the algorithms.
3. Debug (correct) any mistakes in the algorithms.

## Preparing for Turtle Logo

Type your aims and success criteria here.

Your child has developed their use of commands in Turtle Logo language. They have learnt to use fd for forward, rt 90 for quarter turn to the right and It 90 for quarter turn to the left. Here is a suggested task that will help reinforce this learning.

1. Use the plan of a park below to write algorithms for a small figure following a route to different areas of the park.
2. Have someone else in the family check the algorithms.
3. Debug any mistakes.

## The P@rk



Type your aims and success criteria here.

Your child has developed their use of commands in Turtle Logo language. They have learnt to use fd for forward, rt 90 for quarter turn to the right and $1 t 90$ for quarter turn to the left. Here is a suggested task that will help reinforce this learning.

1. Draw a plan of a route in, or near your home in the space below.
2. Write some different algorithms for a small figure to follow some routes on the plan.
3. Have someone else in the family check the algorithms.
4. Debug any mistakes.


Your child has developed their use of commands in Turtle Logo language. They have learnt to use fd for forward, rt 90 for quarter turn to the right and $1 t 90$ for quarter turn to the left. Here is a suggested task that will help reinforce this learning.

1. Use the plan of a park below to write algorithms for a small figure following a route to different areas of the park.
2. Have someone else in the family check the algorithms.
3. Debug any mistakes.

## The Pork



## Preparing for Turtle Logo

Your child has developed their use of commands in Turtle Logo language. They have learnt to use fd for forward, rt 90 for quarter turn to the right and lt 90 for quarter turn to the left. Here is a suggested task that will help reinforce this learning.

1. Draw a plan of a route in, or near your home in the space below.
2. Write some different algorithms for a small figure to follow some routes on the plan.
3. Have someone else in the family check the algorithms.
4. Debug any mistakes.


## Preparing for Turtle Logo: Moving Forward and Making Turns

## Aim:

Understand what algorithms are and that programs execute by following precise and ambiguous instructions.
Create and debug simple programs.
Use logical reasoning to predict the behaviour of simple programs.
This unit prepares children for using Turtle Logo on screen, but links well to shape and direction in Maths.

I can give and follow an algorithm to turn right or left.

## Success Criteria: $\quad$ Resources:

I can give clear accurate instructions.
I can give instructions in order.
I can write instructions.
I can check instructions.
I can move forward a number of steps.
I can turn to the right or left.

## Key/New Words:

Algorithm, Instructions, Commands, Forward, Backward, Left, Right, Move, Turn.

Lesson Pack.
Hall or space large enough for children to move around freely.
Cones or similar to mark points.
Small whiteboards and pens.

## Preparation:

None needed.

Prior Learning: It will be helpful if children are familiar with basic shapes and using right and left.

## Learning Sequence

Walk and Turn: Spread the children out in the hall and give them instructions to move forwards and
backwards, and then to make turns. Ensure children are able to walk forward the number of required
steps and make quarter turns to the right or the left.

[^0]

Computing | Year 2 | Preparing for Turtle Logo I Moving Forward and Making Turns I Lesson 1



## Walk and Turn



Can you follow your teacher's instructions?


## Walking Shapes

Write instructions that instruct your partner to walk a square. Each side should be 3 steps long.

Compare with another pair.


Make sure your steps are the same length.


You could use cones to mark the corners of your shapes.




## A Square of 3 Step Sides

Here are suggested instructions for a square of 3 step sides.

## Instructions

- Forward 3 steps
- Turn to the right
- Forward 3 steps
- Turn to the right
- Forward 3 steps
- Turn to the right
- Forward 3 steps
- Turn to the right


How do these compare with your instructions?

## A Rectangle of 5 and 2 Step Sides

Here are suggested instructions for a rectangle of 5 and 2 step sides.

## Instructions

- Forward 5 steps
- Turn to the right
- Forward 2 steps
- Turn to the right
- Forward 5 steps
- Turn to the right
- Forward 2 steps
- Turn to the right


How do these compare with your instructions?




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Preparing for Turtle Logo | Moving Forward and Making Turns

| I can give and follow an algorithm to turn right or left. |  |  |
| :--- | :--- | :--- |
| I can give clear accurate instructions. |  |  |
| I can give instructions in order. |  |  |
| I can write instructions. |  |  |
| I can check instructions. |  |  |
| I can move forward a number of steps. |  |  |
| I can turn to the right or left. |  |  |

Preparing for Turtle Logo | Moving Forward and Making Turns

| I can give and follow an algorithm to turn right or left. |  |  |
| :--- | :--- | :--- |
| I can give clear accurate instructions. |  |  |
| I can give instructions in order. |  |  |
| I can write instructions. |  |  |
| I can check instructions. |  |  |
| I can move forward a number of steps. |  |  |
| I can turn to the right or left. |  |  |

Preparing for Turtle Logo | Moving Forward and Making Turns

| I can give and follow an algorithm to turn right or left. |  |  |
| :--- | :--- | :--- |
| I can give clear accurate instructions. |  |  |
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| I can write instructions. |  |  |
| I can check instructions. |  |  |
| I can move forward a number of steps. |  |  |
| I can turn to the right or left. |  |  |

Preparing for Turtle Logo | Moving Forward and Making Turns

| I can give and follow an algorithm to turn right or left. |  |  |
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| I can give clear accurate instructions. |  |  |
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| I can move forward a number of steps. |  |  |
| I can turn to the right or left. |  |  |

Preparing for Turtle Logo | Moving Forward and Making Turns

| I can give and follow an algorithm to turn right or left. |  |  |
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| I can give clear accurate instructions. |  |  |
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| I can turn to the right or left. |  |  |

Preparing for Turtle Logo | Moving Forward and Making Turns

| I can give and follow an algorithm to turn right or left. |  |  |
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| I can give clear accurate instructions. |  |  |
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| I can move forward a number of steps. |  |  |
| I can turn to the right or left. |  |  |

Preparing for Turtle Logo | Moving Forward and Making Turns

| I can give and follow an algorithm to turn right or left. |  |  |
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| I can move forward a number of steps. |  |  |
| I can turn to the right or left. |  |  |

Preparing for Turtle Logo | Moving Forward and Making Turns

| I can give and follow an algorithm to turn right or left. |  |  |
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| I can give clear accurate instructions. |  |  |
| I can give instructions in order. |  |  |
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| I can check instructions. |  |  |
| I can move forward a number of steps. |  |  |
| I can turn to the right or left. |  |  |




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I can move forward a number of steps.

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I can turn to the right or left.

## PR®AOMLKing form 



I can move forward a number of steps.

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I can turn to the right or left.

## Preparing jor Turitle Logo



I can move forward a number of steps.

## Prepoaring jor Turtle Logo



## I can turn to the right or left.

## Preparing for Turtle Logo: Half and Quarter Turns

## Aim:

Understand what algorithms are and that programs execute by following precise and ambiguous instructions.
Create and debug simple programs.
Use logical reasoning to predict the behaviour of simple programs.
This unit prepares children for using Turtle Logo on screen, but links well to shape and direction in Maths.

I can give and follow an algorithm to make half and quarter turns.

## Success Criteria:

I can give clear accurate instructions.
I can give instructions in order.
I can write an algorithm.
I can check an algorithm.
I can move forward a number of steps.
I can make half and quarter turns.

## Key/New Words:

Forward, Left, Right, Move, Turn, Half turn, Quarter turn.

## Resources:

Lesson Pack.
Hall or space large enough for children to move around freely.
Cones or similar to mark points.
Small whiteboards and pens.

## Preparation:

Activity Sheets (with answer cards if needed).

Prior Learning: Children will have created their own algorithms using right and left in lesson 1.

## Learning Sequence

What shape? Give the children instructions to walk squares and rectangles. Check the children are
walking the same size steps and what sort of turn they are making. (The first lesson didn't specify half
or quarter turns but that is what is intended at this stage. If the children are confident then move on
quickly.)

[^1]

Computing | Year 2 | Preparing for Turtle Logo I Half and a Quarter Turns I Lesson 2

## Half and a Quarter Turns


$(\dot{B})$



## What shape?

Can you follow your teacher's instructions?

What shapes are you walking?





## Our Algorithms

Let's try out some of our algorithms.


Can we make any corrections?
(De bug the algorithm)





Preparing for Turtle Logo | Half and Quarter Turns

| I can give and follow an algorithm to make half and <br> quarter turns. |  |  |
| :--- | :--- | :--- |
| I can give clear accurate instructions. |  |  |
| I can give instructions in order. |  |  |
| I can write an algorithm. |  |  |
| I can check an algorithm. |  |  |
| I can move forward a number of steps. |  |  |
| I can make half and quarter turns. |  |  |

Preparing for Turtle Logo | Half and Quarter Turns

| I can give and follow an algorithm to make half and <br> quarter turns. |  |  |
| :--- | :--- | :--- |
| I can give clear accurate instructions. |  |  |
| I can give instructions in order. |  |  |
| I can write an algorithm. |  |  |
| I can check an algorithm. |  |  |
| I can move forward a number of steps. |  |  |
| I can make half and quarter turns. |  |  |

Preparing for Turtle Logo | Half and Quarter Turns

| I can give and follow an algorithm to make half and <br> quarter turns. |  |  |
| :--- | :--- | :--- |
| I can give clear accurate instructions. |  |  |
| I can give instructions in order. |  |  |
| I can write an algorithm. |  |  |
| I can check an algorithm. |  |  |
| I can move forward a number of steps. |  |  |
| I can make half and quarter turns. |  |  |

Preparing for Turtle Logo | Half and Quarter Turns

| I can give and follow an algorithm to make half and |
| :--- | :--- | :--- |
| quarter turns. | 年 | I can give clear accurate instructions. |
| :--- |

Preparing for Turtle Logo | Half and Quarter Turns

| I can give and follow an algorithm to make half and <br> quarter turns. |  |  |
| :--- | :--- | :--- |
| I can give clear accurate instructions. |  |  |
| I can give instructions in order. |  |  |
| I can write an algorithm. |  |  |
| I can check an algorithm. |  |  |
| I can move forward a number of steps. |  |  |
| I can make half and quarter turns. |  |  |

Preparing for Turtle Logo | Half and Quarter Turns

| I can give and follow an algorithm to make half and <br> quarter turns. |  |  |
| :--- | :--- | :--- |
| I can give clear accurate instructions. |  |  |
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| I can write an algorithm. |  |  |
| I can check an algorithm. |  |  |
| I can move forward a number of steps. |  |  |
| I can make half and quarter turns. |  |  |

Preparing for Turtle Logo | Half and Quarter Turns

| I can give and follow an algorithm to make half and <br> quarter turns. |  |  |
| :--- | :--- | :--- |
| I can give clear accurate instructions. |  |  |
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| I can move forward a number of steps. |  |  |
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Preparing for Turtle Logo | Half and Quarter Turns

| I can give and follow an algorithm to make half and <br> quarter turns. |  |  |
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| I can give instructions in order. |  |  |
| I can write an algorithm. |  |  |
| I can check an algorithm. |  |  |
| I can move forward a number of steps. |  |  |
| I can make half and quarter turns. |  |  |

## Half and Quarter Turns

1: Walk this shape, taking 5 steps on each side of the shape.
Forward 5 steps
Quarter turn to the right
Foward 5 steps
Quarter turn to the right
Forward 5 steps
Quarter turn to the right
Foward 5 steps
Quarter turn to the right


What shape have you drawn? Did you finish at the start?

## 3: Walk this shape.

Forward 3 steps
Quarter turn to the left
Foward 5 steps
Quarter turn to the left
Forward 3 steps
Quarter turn to the left
Foward 5 steps
Quarter turn to the left


What shape have you drawn? Did you finish at the start?

2: Walk this shape.
Forward 6 steps
Quarter turn to the right
Foward 4 steps
Quarter turn to the right
Forward 6 steps
Quarter turn to the right
Foward 4 steps
Quarter turn to the right


What shape have you drawn? Did you finish at the start?

4: Walk this shape.
Forward 4 steps
Quarter turn to the left
Foward 4 steps
Quarter turn to the left
Forward 4 steps
Quarter turn to the left
Foward 4 steps
Quarter turn to the left


What shape have you drawn? Did you finish at the start?

## Half and Quarter Turns

1: Walk this shape, taking 5 steps on each side of the shape. What shape have you drawn? Did you finish at the start?

Forward 5 steps
Quarter turn to the right
Foward 5 steps
Quarter turn to the right
Forward 5 steps
Quarter turn to the right
Foward 5 steps
Quarter turn to the right

2: Walk this shape. What shape have you drawn? Did you finish at the start?

Forward 6 steps
Quarter turn to the right
Foward 4 steps
Quarter turn to the right
Forward 6 steps
Quarter turn to the right
Foward 4 steps
Quarter turn to the right

3: Walk this shape. What shape have you drawn? Did you finish at the start?

4: Walk this shape. What shape have you drawn? Did you finish at the start?

## Forward 3 steps

Quarter turn to the left
Foward 5 steps
Quarter turn to the left
Forward 3 steps
Quarter turn to the left
Foward 5 steps
Quarter turn to the left

5: Walk this shape. What shape have you drawn? Did you finish at the start?

Forward 4 steps
Quarter turn to the left
Foward 4 steps
Quarter turn to the left
Forward 4 steps
Quarter turn to the left
Foward 4 steps
Quarter turn to the left

6: Walk this shape. What shape have you drawn? Did you finish at the start?

Forward 3 steps
Quarter turn to the left
Foward 4 steps
Quarter turn to the left
Forward 3 steps
Quarter turn to the left
Foward 4 steps
Quarter turn to the left

## Half and Quarter Turns

1: Walk this shape, taking 5 steps on each side of the shape. What shape have you drawn? Did you finish at the start?

Forward 5 steps
Quarter turn to the right
Foward 5 steps
Quarter turn to the right
Forward 5 steps
Quarter turn to the right
Foward 5 steps
Quarter turn to the right

2: Walk this shape. What shape have you drawn? Did you finish at the start?

Forward 6 steps
Quarter turn to the right
Foward 4 steps
Quarter turn to the right
Forward 6 steps
Quarter turn to the right
Foward 4 steps
Quarter turn to the right

3: Walk this shape. What shape have you drawn? Did you finish at the start?

4: Walk this shape. What shape have you drawn? Did you finish at the start?

## Forward 3 steps

Quarter turn to the left
Foward 5 steps
Quarter turn to the left
Forward 3 steps
Quarter turn to the left
Foward 5 steps
Quarter turn to the left

5: Walk this shape. What shape have you drawn? Did you finish at the start?

Forward 4 steps
Quarter turn to the left
Foward 4 steps
Quarter turn to the left
Forward 4 steps
Quarter turn to the left
Foward 4 steps
Quarter turn to the left

Forward 2 steps
Quarter turn to the right
Foward 5 steps
Quarter turn to the right
Forward 2 steps
Quarter turn to the right
Foward 5 steps
Quarter turn to the right

6: Challenge
Give your partner an algorithm of your own to follow. Record your algorithm and the shape drawn.


## Half and Quarter Turns Answers

1: Walk this shape, taking 5 steps on each side of the shape. What shape have you drawn? Did you finish at the start?

## Square

Forward 5 steps
Quarter turn to the right
Foward 5 steps
Quarter turn to the right
Forward 5 steps
Quarter turn to the right
Foward 5 steps
Quarter turn to the right

4: Walk this shape. What shape have you drawn? Did you finish at the start?

## Rectangle

Forward 3 steps
Quarter turn to the left
Foward 5 steps
Quarter turn to the left
Forward 3 steps
Quarter turn to the left
Foward 5 steps
Quarter turn to the left

2: Walk this shape. What shape have you drawn? Did you finish at the start?

## Rectangle

Forward 6 steps
Quarter turn to the right
Foward 4 steps
Quarter turn to the right
Forward 6 steps
Quarter turn to the right
Foward 4 steps
Quarter turn to the right

3: Walk this shape. What shape have you drawn? Did you finish at the start?

## Rectangle

Forward 2 steps
Quarter turn to the right
Foward 5 steps
Quarter turn to the right
Forward 2 steps
Quarter turn to the right
Foward 5 steps
Quarter turn to the right

6: Walk this shape. What shape have you drawn? Did you finish at the start?

## Rectangle

Forward 3 steps
Quarter turn to the left
Foward 4 steps
Quarter turn to the left
Forward 3 steps
Quarter turn to the left
Foward 4 steps
Quarter turn to the left

## Bepowing for "aur边 ロOgO



I can move forward a number of steps.

## Berouning for Truible



I can make half turns.

## Berouning for "rurios



# I can make quarter turns. 

## PR®AOMLKing form 



I can move forward a number of steps.

##  Trurichbe borgoo



I can make half turns.

##  Trusceble borgoo



I can make quarter turns.

## Preparing jor Turitle Logo



I can move forward a number of steps.

## Prepooring for Turtle Logo



I can make half turns.

## Prepooring for Tuxitle Logo



I can make quarter turns.

## Preparing for Turtle Logo: Right 90 Left 90

## Aim:

Understand what algorithms are how they are implemented as programs on digital devices; and that programs execute by following precise and ambiguous instructions.

Create and debug simple programs.
Use logical reasoning to predict the behaviour of simple programs.
This unit prepares children for using Turtle Logo on screen, but links well to shape and direction in Maths.

I can give and follow an algorithm using the commands right 90 and left 90.

## Success Criteria:

I can give clear accurate instructions.
I can give instructions in order.
I can write an algorithm.
I can check an algorithm.
I can turn right 90 and left 90.

## Key/New Words:

Forward, Left, Right, Move, Turn, Right 90, Left 90.

## Resources:

Lesson Pack.
Hall or space large enough for children to move around freely.
Cones or similar to mark points.
Small whiteboards and pens.

## Preparation:

Activity Sheet - 1 per pair.

Prior Learning: It will be helpful if children understand that a right angle is $90^{\circ}$.

## Learning Sequence

Squares and Rectangles: By walking forward a number of steps and by making quarter and half turns, can
you work in pairs to walk squares and rectangles? Children give each other instructions to walk squares
and rectangles using the commands, forward 4 (number of steps) and quarter turn to the right or left.
(Move on quickly if children can achieve this task easily)

## Taskit

Turnit: Children can make algorithms for different squares and rectangles using "right 90" or "left 90".


Computing | Year 2 | Preparing for Turtle Logo | Right 90 and Left 90 | Lesson 3

## Right 90 and Left 90



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## Use Turtle Logo Commands

Give your partner instructions to walk a square using the following Turtle Logo commands:

Forward
Right 90 or Left 90


Take care to walk the same size steps and make accurate turns.

Use cones to mark the corners of your shapes if it helps.


## Right 90 and Left 90

Work through the activities. Record your findings as you go.

Try to make your steps the same each time.

Try to make your 90 degree turns accurate.





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Preparing for Turtle Logo | Right 90, Left 90

| I can give and follow an algorithm using the commands <br> right 90 and left 90. |  |  |
| :--- | :--- | :--- |
| I can give clear accurate instructions. |  |  |
| I can give instructions in order. |  |  |
| I can write an algorithm. |  |  |
| I can check an algorithm. |  |  |
| I can turn right 90 and left 90. |  |  |

Preparing for Turtle Logo | Right 90, Left 90

| I can give and follow an algorithm using the commands <br> right 90 and left 90. |  |  |
| :--- | :--- | :--- |
| I can give clear accurate instructions. |  |  |
| I can give instructions in order. |  |  |
| I can write an algorithm. |  |  |
| I can check an algorithm. |  |  |
| I can turn right 90 and left 90. |  |  |

Preparing for Turtle Logo | Right 90, Left 90

| I can give and follow an algorithm using the commands <br> right 90 and left 90. |  |  |
| :--- | :--- | :--- |
| I can give clear accurate instructions. |  |  |
| I can give instructions in order. |  |  |
| I can write an algorithm. |  |  |
| I can check an algorithm. |  |  |
| I can turn right 90 and left 90. |  |  |

Preparing for Turtle Logo | Right 90, Left 90

| I can give and follow an algorithm using the commands <br> right 90 and left 90. |  |  |
| :--- | :--- | :--- |
| I can give clear accurate instructions. |  |  |
| I can give instructions in order. |  |  |
| I can write an algorithm. |  |  |
| I can check an algorithm. |  |  |
| I can turn right 90 and left 90. |  |  |

Preparing for Turtle Logo | Right 90, Left 90

| I can give and follow an algorithm using the commands <br> right 90 and left 90. |  |  |
| :--- | :--- | :--- |
| I can give clear accurate instructions. |  |  |
| I can give instructions in order. |  |  |
| I can write an algorithm. |  |  |
| I can check an algorithm. |  |  |
| I can turn right 90 and left 90. |  |  |

Preparing for Turtle Logo | Right 90, Left 90

| I can give and follow an algorithm using the commands <br> right 90 and left 90. |  |  |
| :--- | :--- | :--- |
| I can give clear accurate instructions. |  |  |
| I can give instructions in order. |  |  |
| I can write an algorithm. |  |  |
| I can check an algorithm. |  |  |
| I can turn right 90 and left 90. |  |  |

Preparing for Turtle Logo | Right 90, Left 90

| I can give and follow an algorithm using the commands <br> right 90 and left 90. |  |  |
| :--- | :--- | :--- |
| I can give clear accurate instructions. |  |  |
| I can give instructions in order. |  |  |
| I can write an algorithm. |  |  |
| I can check an algorithm. |  |  |
| I can turn right 90 and left 90. |  |  |

Preparing for Turtle Logo | Right 90, Left 90

| I can give and follow an algorithm using the commands <br> right 90 and left 90. |  |  |
| :--- | :--- | :--- |
| I can give clear accurate instructions. |  |  |
| I can give instructions in order. |  |  |
| I can write an algorithm. |  |  |
| I can check an algorithm. |  |  |
| I can turn right 90 and left 90. |  |  |

## Right 90, Left 90

1: Walk this shape, taking 6 steps on each side of the shape.
Forward 6 (steps)
Right 90 (degrees)
Foward 6
Right 90
Forward 6
Right 90
Forward 6
Right 90


What shape have you drawn? Where did you finish?

3: Walk this shape.
Forward 2 (steps)
Left 90 (degrees)
Forward 4
Left 90
Forward 2
Left 90
Forward 4
Left 90


2: Walk this shape.
Forward 7 (steps)
Right 90 (degrees)
Forward 1
Right 90
Forward 7
Right 90
Forward 1
Right 90


What shape have you drawn? Where did you finish?

4: Walk this shape.
Forward 3 (steps)
Left 90 (degrees)
Forward 3
Left 90
Forward 3
Left 90
Forward 3
Left 90


What shape have you drawn? Where did you finish?

## Right 90, Left 90

1: Walk this shape, taking 6 steps on each side of the shape. What shape have you drawn? Where did you finish?

Forward 6 (steps)
Right 90 (degrees)
Foward 6
Right 90
Forward 6
Right 90
Forward 6
Right 90

4: Walk this shape. What shape have you drawn? Did you finish at the start? Where should you finish?

Forward 3 (steps)
Left 90 (degrees)
Forward 3
Left 90
Forward 3
Left 90
Forward 3
Left 90

2: Walk this shape. What shape have you drawn? Did you finish at the start? Where should you finish?

## Forward 7 (steps)

Right 90 (degrees)
Forward 1
Right 90
Forward 7
Right 90
Forward 1
Right 90

5: Walk this shape. What shape have you drawn? Did you finish at the start?
Where should you finish?

```
Forward 3 (steps)
Left 90 (degrees)
Forward 4
Left 90
Forward 3
Left 90
Forward 4
Left 90
```

3: Walk this shape. What shape have you drawn? Did you finish at the start? Where should you finish?

```
Forward 2 (steps)
Left 90 (degrees)
Forward 4
Left 90
Forward 2
Left 90
Forward 4
Left 90
```

6: Walk this shape. What shape have you drawn? Did you finish at the start? Where should you finish?

Forward 4 (steps)
Right 90 (degrees)
Forward 4
Right 90
Forward 4
Right 90
Forward 4
Right 90

1: Walk this shape, taking 6 steps on each side of the shape. What shape have you drawn? Where did you finish?

Forward 6 (steps)
Right 90 (degrees)
Foward 6
Right 90
Forward 6
Right 90
Forward 6
Right 90

4: Walk this shape. What shape have you drawn? Did you finish at the start? Where should you finish?

Forward 3 (steps)
Left 90 (degrees)
Forward 3
Left 90
Forward 3
Left 90
Forward 3
Left 90

## Right 90, Left 90

2: Walk this shape. What shape have you drawn? Did you finish at the start? Where should you finish?

3: Walk this shape. What shape have you drawn? Did you finish at the start?
Where should you finish?

```
Forward 2 (steps)
Left 90 (degrees)
Forward 4
Left 90
Forward 2
Left 90
Forward 4
Left 90
```

6: Challenge
Give your partner an algorithm of your own to follow. Record your algorithm and the shape drawn.


## Right 90, Left 90 Answers

1: Walk this shape, taking 6 steps on each side of the shape. What shape have you drawn? Where did you finish?

Square
Forward 6 (steps)
Right 90 (degrees)
Foward 6
Right 90
Forward 6
Right 90
Forward 6
Right 90

2: Walk this shape. What shape have you drawn? Did you finish at the start? Where should you finish?

## Rectangle

Forward 7 (steps)
Right 90 (degrees)
Forward 1
Right 90
Forward 7
Right 90
Forward 1
Right 90

5: Walk this shape. What shape have you drawn? Did you finish at the start?
Where should you finish?

## Rectangle

Forward 3 (steps)
Left 90 (degrees)
Forward 4
Left 90
Forward 3
Left 90
Forward 4
Left 90

3: Walk this shape. What shape have you drawn? Did you finish at the start? Where should you finish?

```
Rectangle
Forward 2 (steps)
Left 90 (degrees)
Forward 4
Left 90
Forward 2
Left 90
Forward 4
Left 90
```

6: Walk this shape. What shape have you drawn? Did you finish at the start? Where should you finish?

## Square

Forward 4 (steps)
Right 90 (degrees)
Forward 4
Right 90
Forward 4
Right 90
Forward 4
Right 90

## Bepuning for TaNTO <br> 



I can turn
right 90 and left 90 .

##  Trurichbe borgoo

I can turn
right 90 and left 90.

## Prepoaring jor Tuxitle Logo



I can turn right 90 and left 90.

## Preparing for Turtle Logo: Completing Algorithms

## Aim:

Understand what algorithms are and that programs execute by following precise and ambiguous instructions.
Create and debug simple programs.
Use logical reasoning to predict the behaviour of simple programs.
This unit prepares children for using Turtle Logo on screen, but links well to shape and direction in Maths.

I can give, follow and complete an algorithm.

## Success Criteria:

I can give clear accurate instructions.
I can give instructions in order.
I can write an algorithm.
I can check an algorithm.
I can give and follow instructions accurately.

I can move forward and turn right 90 and left 90.

## Key/New Words:

Forward, Backward, Left, Right, Move, Turn, Right 90, Left 90.

## Resources:

Lesson Pack.
Hall or space large enough for children to move around freely.
Cones or similar to mark points.
Small whiteboards and pens.

## Preparation:

Activity Sheet - 1 per pair.

Prior Learning: Children will have created algorithms using the commands right 90 and left 90 in lesson 3 .

## Learning Sequence

Squares, Rectangles and Rectilinear Shapes: Children work in pairs to draw rectangles, squares and
other rectilinear shapes, ensuring they use the Turtle Logo language of forward, right 90 and left 90.
Ensure the children walk steps the same size and make accurate $90^{\circ}$ turns. They could use cones to mark

the corners of the shapes. | Complete This Shape: Demonstrate how to give instructions to draw part of a rectilinear shape. Then ask |
| :--- |
| the children what instructions needs to be given to get back to the start. |
| Completing Algorithms: Children work through the Activity Sheet in pairs, which gives them algorithms complete. Children record their answers. Pairs can check answers with other pairs. Remind |
| the children to make the same size steps and make accurate quarter turns. They could use cones to |
| mark the corners of the shapes. Children use the appropriate activity sheet to follow the algorithms and |
| record the shape 'drawn'. |
| Children also write their own algorithms for their partner to complete. |

## Taskit

Completeit: In pairs, one child gives instructions to their partner to start a rectilinear shape. Their partner has to complete the shape.


Computing | Year 2 | Preparing for Turtle Logo I Completing Algorithms I Lesson 4

## Completing Algorithms




## Squares, Rectangles and Rectilinear Shapes

Walk squares, rectangles and other rectilinear shapes.



Take care to walk the same size steps.
could mark the corners with cones.


A rectilinear shape is a shape of any number of sides, but all the angles are right angles.




## Complete This Shape 3

Follow this algorithm
Forward 6

Left 90
Forward 2

Left 90

## Forward 4

Right 90
Forward 2
Left 90
Forward 2


How will you finish this shape?

Left 90
Forward 4

Left 90

## Completing Algorithms

Work through the different activities. Record your findings as you go.


Try to make your steps the same size every time.


You may wish to mark your starting position in some way.


Try to make your 90 degree turns accurate.

These instructions are written in "Turtle Logo" format.

Forward 4
Right 90

You will need to record how you can get back to your starting point.



## Using Turtle Logo Language

It is important that we use language that is understood by whoever or whatever is following the instructions.


Sometimes commands can be abbreviated.


## Turning

We can shorten left or right to lt or rt

Left can be written as lt 90
Right can be written as rt 90








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Preparing for Turtle Logo | Completing Algorithms

| I can give, follow and complete an algorithm. |  |  |
| :--- | :--- | :--- |
| I can give clear accurate instructions. |  |  |
| I can give instructions in order. |  |  |
| I can write an algorithm. |  |  |
| I can check an algorithm. |  |  |
| I can give and follow instructions accurately. |  |  |
| I can move forward and turn right 90 and left 90. |  |  |

Preparing for Turtle Logo | Completing Algorithms

| I can give, follow and complete an algorithm. |  |  |
| :--- | :--- | :--- |
| I can give clear accurate instructions. |  |  |
| I can give instructions in order. |  |  |
| I can write an algorithm. |  |  |
| I can check an algorithm. |  |  |
| I can give and follow instructions accurately. |  |  |
| I can move forward and turn right 90 and left 90. |  |  |

Preparing for Turtle Logo | Completing Algorithms

| I can give, follow and complete an algorithm. |  |  |
| :--- | :--- | :--- |
| I can give clear accurate instructions. |  |  |
| I can give instructions in order. |  |  |
| I can write an algorithm. |  |  |
| I can check an algorithm. |  |  |
| I can give and follow instructions accurately. |  |  |
| I can move forward and turn right 90 and left 90. |  |  |

Preparing for Turtle Logo | Completing Algorithms

| I can give, follow and complete an algorithm. |  |  |
| :--- | :--- | :--- |
| I can give clear accurate instructions. |  |  |
| I can give instructions in order. |  |  |
| I can write an algorithm. |  |  |
| I can check an algorithm. |  |  |
| I can give and follow instructions accurately. |  |  |
| I can move forward and turn right 90 and left 90. |  |  |

Preparing for Turtle Logo | Completing Algorithms

| I can give, follow and complete an algorithm. |  |  |
| :--- | :--- | :--- |
| I can give clear accurate instructions. |  |  |
| I can give instructions in order. |  |  |
| I can write an algorithm. |  |  |
| I can check an algorithm. |  |  |
| I can give and follow instructions accurately. |  |  |
| I can move forward and turn right 90 and left 90. |  |  |

Preparing for Turtle Logo | Completing Algorithms

| I can give, follow and complete an algorithm. |  |  |
| :--- | :--- | :--- |
| I can give clear accurate instructions. |  |  |
| I can give instructions in order. |  |  |
| I can write an algorithm. |  |  |
| I can check an algorithm. |  |  |
| I can give and follow instructions accurately. |  |  |
| I can move forward and turn right 90 and left 90. |  |  |

Preparing for Turtle Logo | Completing Algorithms

| I can give, follow and complete an algorithm. |  |  |
| :--- | :--- | :--- |
| I can give clear accurate instructions. |  |  |
| I can give instructions in order. |  |  |
| I can write an algorithm. |  |  |
| I can check an algorithm. |  |  |
| I can give and follow instructions accurately. |  |  |
| I can move forward and turn right 90 and left 90. |  |  |

Preparing for Turtle Logo | Completing Algorithms

| I can give, follow and complete an algorithm. |  |  |
| :--- | :--- | :--- |
| I can give clear accurate instructions. |  |  |
| I can give instructions in order. |  |  |
| I can write an algorithm. |  |  |
| I can check an algorithm. |  |  |
| I can give and follow instructions accurately. |  |  |
| I can move forward and turn right 90 and left 90. |  |  |

## Completing Algorithms

1: How would you complete the algorithm?
Forward 1 (steps)
Right 90 (degrees)
Forward 2
Right 90
Forward 4
Right 90
Forward 6
Right 90
Forward 3


3: How would you complete the algorithm?
Forward 1 (steps)
Right 90 (degrees)
Forward 4
Left 90
Forward 1
Right 90
Forward 2
Right 90
Forward 4
Right 90


2: How would you complete the algorithm?
Forward 2 (steps)
Left 90 (degrees)
Forward 2
Left 90
Forward 3
Right 90
Forward 3
Left 90
Forward 3
Left 90


4: How would you complete the algorithm?
Forward 2 (steps)
Right 90 (degrees)
Forward 2
Left 90
Forward 3
Left 90
Forward 6
Left 90
Forward 5


## Completing Algorithms

1: How would you complete the algorithm?
Forward 1 (steps)
Right 90 (degrees)
Forward 2
Right 90
Forward 4
Right 90
Forward 6
Right 90
Forward 3

2: How would you complete the algorithm?
Forward 2 (steps)
Left 90 (degrees)
Forward 2
Left 90
Forward 3
Right 90
Forward 3
Left 90
Forward 3
Left 90
5: How would you complete the algorithm?
Forward 6 (steps)
Right 90 (degrees)
Forward 3
Right 90
Forward 3
Right 90
Forward 5
Left 90
Forward 3

3: How would you complete the algorithm?
Forward 1 (steps)
Right 90 (degrees)
Forward 4
Left 90
Forward 1
Right 90
Forward 2
Right 90
Forward 4
Right 90

6: How would you complete the algorithm?
Forward 3 (steps)
Left 90 (degrees)
Forward 3
Left 90
Forward 1
Left 90
Forward 5
Left 90
Forward 3
Left 90
Forward 2

Completing Algorithms

1: How would you complete the algorithm?
Forward 1 (steps)
Right 90 (degrees)
Forward 2
Right 90
Forward 4
Right 90
Forward 6
Right 90
Forward 3

2: How would you complete the algorithm?
Forward 2 (steps)
Left 90 (degrees)
Forward 2
Left 90
Forward 3
Right 90
Forward 3
Left 90
Forward 3
Left 90
5: How would you complete the algorithm?
Forward 6 (steps)
Right 90 (degrees)
Forward 3
Right 90
Forward 3
Right 90
Forward 5
Left 90
Forward 3

3: How would you complete the algorithm?
Forward 1 (steps)
Right 90 (degrees)
Forward 4
Left 90
Forward 1
Right 90
Forward 2
Right 90
Forward 4
Right 90
6: Challenge
Give your partner an algorithm of your own to follow. Record your algorithm and the shape drawn.


## Completing Algorithms Answers

1: How would you complete the algorithm?

| Forward 1 (steps) Right 90 <br> Right 90 (degrees) Forward 4 <br> Forward 2  <br> Right 90  <br> Forward 4  <br> Right 90  <br> Forward 6  <br> Right 90  <br> Forward 3  | Forward 2 (steps) Left 90 <br> Left 90 (degrees) Forward 4 <br> Forward 2  <br> Left 90  <br> Forward 3  <br> Right 90  <br> Forward 3  <br> Left 90  <br> Forward 3  <br> Left 90  | Forward 1 (steps) Right 90 <br> Right 90 (degrees) Forward 2 <br> Forward 4  <br> Left 90  <br> Forward 1  <br> Right 90  <br> Forward 2  <br> Right 90  <br> Forward 4  <br> Right 90  |
| :---: | :---: | :---: |
| 4: How would you complete the algorithm? <br> Forward 2 (steps) <br> Right 90 (degrees) <br> Forward 2 <br> Left 90 <br> Forward 3 <br> Left 90 <br> Forward 6 <br> Left 90 <br> Forward 5 <br> Left 90 <br> Forward 4 | 5: How would you complete the algorithm? <br> Forward 6 (steps) <br> Right 90 (degrees) <br> Forward 3 <br> Right 90 <br> Forward 3 <br> Right 90 <br> Forward 5 <br> Left 90 <br> Forward 3 <br> Left 90 <br> Forward 2 | 6: How would you complete the algorithm? <br> Forward 3 (steps) <br> Left 90 (degrees) <br> Forward 3 <br> Left 90 <br> Forward 1 <br> Left 90 <br> Forward 5 <br> Left 90 <br> Forward 3 <br> Left 90 <br> Forward 2 <br> Left 90 <br> Forward 5 |

## Bepowing for "aur边 ロOgO



I can move forward a number of steps.

## Bepuning for TaNTO <br> 



I can turn
right 90 and left 90 .

## PR®AOMLKing form 



I can move forward a number of steps.

##  Trurichbe borgoo

I can turn
right 90 and left 90.

## Prepoaring jor Tuxitle Logo



I can turn right 90 and left 90.

## Preparing jor Turitle Logo



I can move forward a number of steps.

## Preparing for Turtle Logo: Command Abbreviations

Aim:
Understand what algorithms are and that
programs execute by following precise
and ambiguous instructions. Create and
debug simple programs. Use logical
reasoning to predict the behaviour of
simple programs.
This unit prepares children for using Turtle
Logo on screen, but links well to shape
and direction in Maths.
I can use recognised language in an
algorithm.

## Success Criteria:

I can give clear accurate instructions.
I can give instructions in order.
I can write an algorithm.
I can check an algorithm.
I can use command abbreviations fd, rt, It from Turtle Logo.

Key/New Words:
Forward, Backward, Left, Right, Move, Turn, Right 90, Left 90, fd, rt, It.

## Resources:

Lesson Pack.
Hall or space large enough for children to move around freely.
Cones or similar to mark points.
Small whiteboards and pens.

## Preparation:

None needed.

Prior Learning:

## Learning Sequence

Can you? Ask the children to walk a rectilinear letter, for example L, T, F. Some children may need cones
to mark the corners of their shape to help remember it.

[^2]

Computing | Year 2 I Preparing for Turtle Logo | Command Abbreviations | Lesson 5

## Command Abbreviations

## fd





## Using Turtle Logo Language

It is important that we use language that is understood by whoever or whatever is following the instructions.


Sometimes commands can be abbreviated.

## Moving Forward

We can shorten forward to fd
Forward becomes fd 5


## Using Turtle Logo Language

It is important that we use language that is understood by whoever or whatever is following the instructions.


Sometimes commands can be abbreviated.

## Turning

We can shorten left or right to lt or rt

Left can be written as lt 90 Right can be written as rt 90

$(: \dot{i})$








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Preparing for Turtle Logo | Command Abbreviations

| I can use recognised language in an algorithm. |  |  |
| :--- | :--- | :--- |
| I can give clear accurate instructions. |  |  |
| I can give instructions in order. |  |  |
| I can write an algorithm. |  |  |
| I can check an algorithm. |  |  |
| I can use command abbreviations fd, rt, It from Turtle Logo. |  |  |

Preparing for Turtle Logo | Command Abbreviations

| I can use recognised language in an algorithm. |  |  |
| :--- | :--- | :--- |
| I can give clear accurate instructions. |  |  |
| I can give instructions in order. |  |  |
| I can write an algorithm. |  |  |
| I can check an algorithm. |  |  |
| I can use command abbreviations fd, rt, lt from Turtle Logo. |  |  |

Preparing for Turtle Logo | Command Abbreviations

| I can use recognised language in an algorithm. |  |  |
| :--- | :--- | :--- |
| I can give clear accurate instructions. |  |  |
| I can give instructions in order. |  |  |
| I can write an algorithm. |  |  |
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| I can use command abbreviations fd, rt, lt from Turtle Logo. |  |  |

Preparing for Turtle Logo | Command Abbreviations

| I can use recognised language in an algorithm. |  |  |
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Preparing for Turtle Logo
Command Abbreviations


## Preparing for Turtle Logo

Command Abbreviations


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Command Abbreviations



## Bixpuning for "rurios 40000



I can use the short cut command fd.

## Beponing for  <br> کOZOO



I can use the shortcut commands rt and lt.

## 『runçbe borgeo



I can use the short cut command fd.

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## Prepooring for Tuxile Logo



I can use the short cut command fd.

## Prepoaring jor Tuxitle Logo



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## Preparing for Turtle Logo: From Here to There

## Aim:

Understand what algorithms are how they are implemented as programs on digital devices; and that programs execute by following precise and ambiguous instructions.

Create and debug simple programs.
Use logical reasoning to predict the behaviour of simple programs.
This unit prepares children for using Turtle Logo on screen, but links well to shape and direction in Maths. In this lesson, children will use small figures to follow routes on paper. This is an important transition from the real to the screen.

I can create, test and debug an algorithm.

## Success Criteria:

I can give clear accurate instructions.
I can give instructions in order.
I can write an algorithm.
I can check an algorithm.
I can move forward and turn right 90 and left 90.

I can use the command abbreviations fd, rt, It from Turtle Logo.

## Key/New Words:

Forward, Backward, Left, Right, Move, Turn, Right 90, Left 90, Debug.

## Resources:

## Lesson Pack.

Routes that the children can use to walk along.
Small whiteboards and pens.
Small figures or counters.

## Preparation:

Edit the first two teaching slides in the Lesson Presentation to add a destination suitable for your school.
School plans showing routes.
Chosen route activity sheets.

| Prior Learning: | Children will have been introduced to the shortcuts fd , lt and rt and have used these commands to walk squares, <br> rectangles and rectilinear letters in lessons 4 and 5. |
| :--- | :--- |

## Learning Sequence

Our Route to the... Children walk a well known route in school, counting and recording their steps and
turns. (Some children may need the route drawn on paper which they can then record their steps on to.)

## Taskit

Routeit: Children create algorithms for other routes in school. Give to children to test and debug any errors.


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## Creating Our Algorithm

Here is our algorithm to the...

Example:
fd 6
rt 90
fd 3
rt 90



## Create Your Algorithm

Create your own algorithms for different routes around school.


Share your algorithms, check and debug if necessary.








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Preparing for Turtle Logo | From Here to There

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| :--- | :--- | :--- |
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## From Here to There Farm Route

Use one of the farm route grids and write an algorithm for the following routes.
Route: Pig sty to Cow shed. Algorithm:
$\qquad$
Route: Main gate to Field gate. Algorithm: $\qquad$
Route: Barn to Cow shed.
Algorithm: $\qquad$
Route: Farm House to Pig sty.
Algorithm: $\qquad$
Now make up your own routes and write an algorithm for each one:

## Route:

$\qquad$ Algorithm: $\qquad$
Route: $\qquad$ Algorithm: $\qquad$
Remember to use the commands: fd 10 (forward ten steps) rt 90 (quarter turn to the right) It 90 (quarter turn to the left)




Main Gate


## From Here to There Farm Route

Use one of the farm route grids and write an algorithm for the following routes.
Route: Pig sty to Cow shed. Algorithm:
$\qquad$
Route: Main gate to Field gate. Algorithm: $\qquad$
Route: Barn to Cow shed.
Algorithm: $\qquad$
Route: Farm House to Pig sty.
Algorithm: $\qquad$
Now make up your own routes and write an algorithm for each one:

## Route:

$\qquad$ Algorithm: $\qquad$
Route: $\qquad$ Algorithm: $\qquad$
Remember to use the commands: fd 10 (forward ten steps) rt 90 (quarter turn to the right) It 90 (quarter turn to the left)




## From Here to There School Route





## The F@rn





## From Here to There School Route





## The School



Hall


Preparing for Turtle Logo
From Here to There


## Preparing for Turtle Logo

From Here to There


Preparing for Turtle Logo
From Here to There



## Bepowing for "aur边 ロOgO



I can move forward a number of steps.

## Bepuning for Trurios <br> 



I can turn
right 90 and left 90 .

## Bixpuning for "rurios 40000



I can use the short cut command fd.

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## PR®AOMLKing form 



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I can move forward a number of steps.

## Prepoaring jor Tuxitle Logo



I can turn right 90 and left 90.

## Prepoaring jor Tuxitle Logo



## I can use the shortcut commands rt and lt.

## Prepooring for Tuxile Logo



I can use the short cut command fd.

## Introduction

This unit has two main aims, to enable children to create, test and debug algorithms, and preparing children to use the language of Turtle Logo. The children begin by giving and following instructions to move forward and make quarter turns, followed by walking different rectilinear shapes. The language is extended to use the main Turtle Logo commands. Children will create, text and debug algorithms for shapes and routes around school in preparation for using the commands in online programs such as Turtle Logo/Logo Interpreter or MSWLogo.


## Health \& Safety

Take care with the walking activities, remind children to walk forwards, and watch for cones.


## Home Learning

Task 1 Preparing for Turtle Logo 1: Children practice writing algorithms for moving around their home

Task 2 Preparing for Turtle Logo 2: Children practice writing algorithms for moving a small figure on an existing plan or a plan of their home.

## Assessment Statements

By the end of this unit..
...all children should be able to:

- Walk forward a number of steps.


## ...most children will be able to:

- Turn accurately $90^{\circ}$ (a quarter turn).
- Walk squares and rectangles.
- Give and follow instructions.
...some children will be able to:
- Write an algorithm for a shape or a route.
- Debug errors in an algorithm.


## Lesson Breakdown

## 1. Moving forward and Making Turns

Understand what algorithms are, and that programs execute by following precise and ambiguous instructions. Create and debug simple programs. Use logical reasoning to predict the behaviour of simple programs. This unit prepares children for using Turtle Logo on screen, but links well to shape and direction in Maths.

- I can give and follow an algorithm to turn right or left.


## 2. Half and Quarter Turns

Understand what algorithms are, and that programs execute by following precise and ambiguous instructions. Create and debug simple programs. Use logical reasoning to predict the behaviour of simple programs.

- I can give and follow an algorithm to make half and quarter turns.


## 3. Right 90 and Left 90

Understand what algorithms are, and that programs execute by following precise and ambiguous instructions. Create and debug simple programs. Use logical reasoning to predict the behaviour of simple programs.

- I can give and follow an algorithm using the commands right 90 and left 90.


## 4. Completing Algorithms

Understand what algorithms are, and that programs execute by following precise and ambiguous instructions. Create and debug simple programs. Use logical reasoning to predict the behaviour of simple programs.

- I can give, follow and complete an algorithm.


## 5. Command Abbreviations

Understand what algorithms are, and that programs execute by following precise and ambiguous instructions. Create and debug simple programs. Use logical reasoning to predict the behaviour of simple programs.

- I can use recognised language in an algorithm.


## 6. From Here to There

Understand what algorithms are, and that programs execute by following precise and ambiguous instructions. Create and debug simple programs. Use logical reasoning to predict the behaviour of simple programs.

- I can create, test and debug an algorithm.

Resources

- Hall or space large enough for children to move around freely.
- Cones or similar to mark points.
- Small whiteboards and pens.
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- Hall or space large enough for children to move around freely.
- Cones or similar to mark points.
- Small whiteboards and pens.
- Routes that the children can use to walk along.
- Small whiteboards and pens.
- Small figures (human or animal) and counters.


[^0]:    Taskit
    Shapeit: Children could make algorithms for different squares and rectangles.
    Challengeit: Use the Challenge Cards for extension activities.

[^1]:    Taskit
    Shapeit: Children can make algorithms for different squares and rectangles using "quarter turn".
    Challengeit: Use the
    for extension activities.

[^2]:    Taskit
    Letterit: Children create algorithms for rectilinear letters and ask friends to text them. Debug any mistakes.
    Challengeit: Use the Challenge Cards for extension activities.

