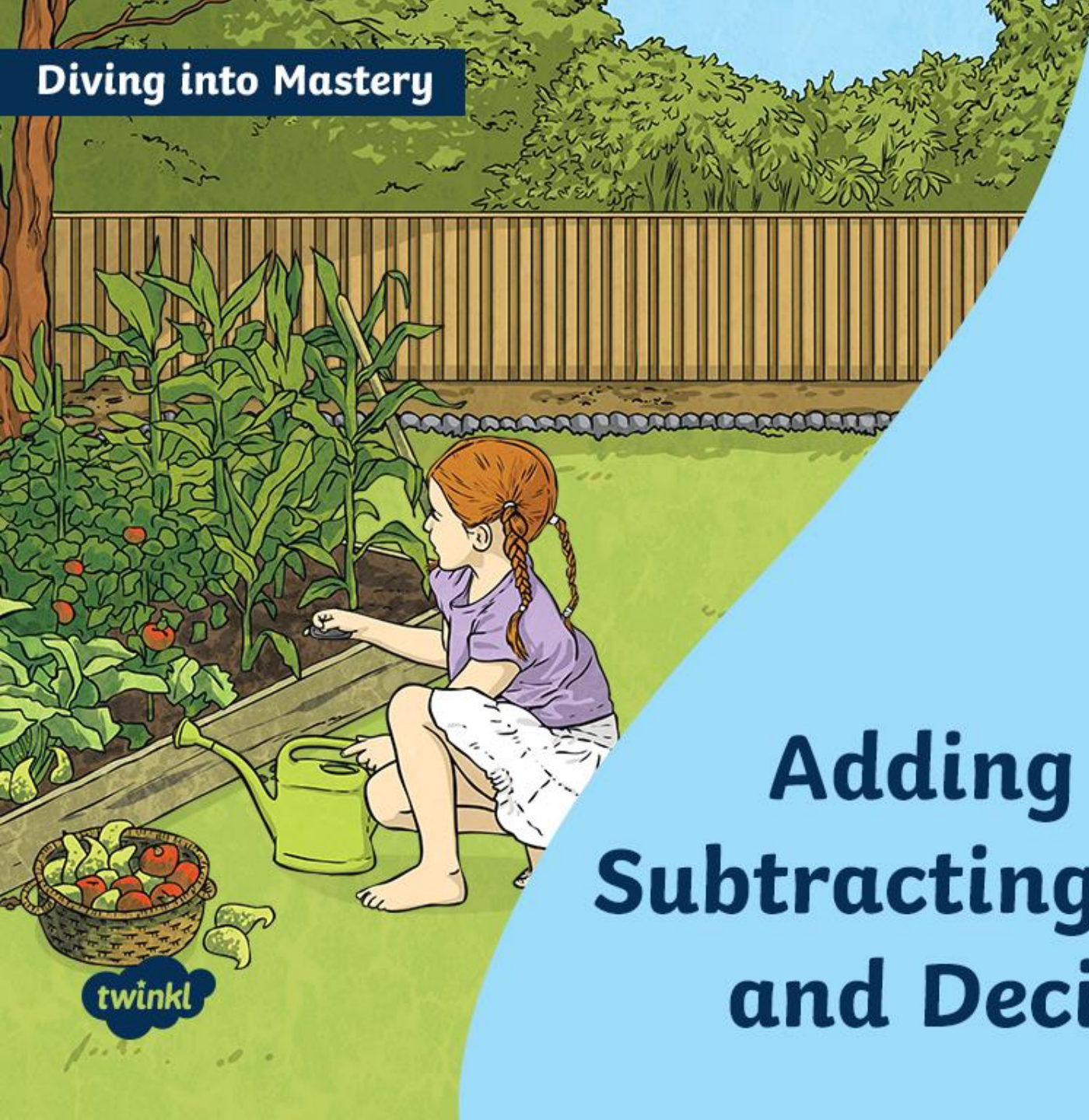


Diving into Mastery



# Adding and Subtracting Wholes and Decimals

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# Diving into Mastery Guidance for Educators

Each activity sheet is split into three sections, diving, deeper and deepest, which are represented by the following icons:



**Diving**



**Deeper**



**Deepest**

These carefully designed activities take your children through a learning journey, initially ensuring they are fluent with the key concept being taught; then applying this to a range of reasoning and problem-solving activities.

These sheets might not necessarily be used in a linear way. Some children might begin at the 'Deeper' section and in fact, others may 'dive straight in' to the 'Deepest' section if they have already mastered the skill and are applying this to show their depth of understanding.

# Aim

- Solve problems involving number up to three decimal places.



Use these place value charts to help you answer the calculations:

a)  $14 + 5.4 = 19.4$

| H | T | O   | t   | h |
|---|---|-----|-----|---|
|   | ● | ●●● | ●   |   |
|   |   | ●●● | ●●● |   |

b)  $19 + 6.23 = 25.23$

| H | T | O   | t  | h   |
|---|---|-----|----|-----|
|   | ● | ●●● | ●  |     |
|   |   | ●●● | ●● | ●●● |

c)  $25 - 7.4 = 17.6$

| H | T  | O   | t | h |
|---|----|-----|---|---|
|   | ●● | ●●● | ● |   |
|   |    | ●●● | ● |   |

d)  $18 - 6.45 = 11.55$

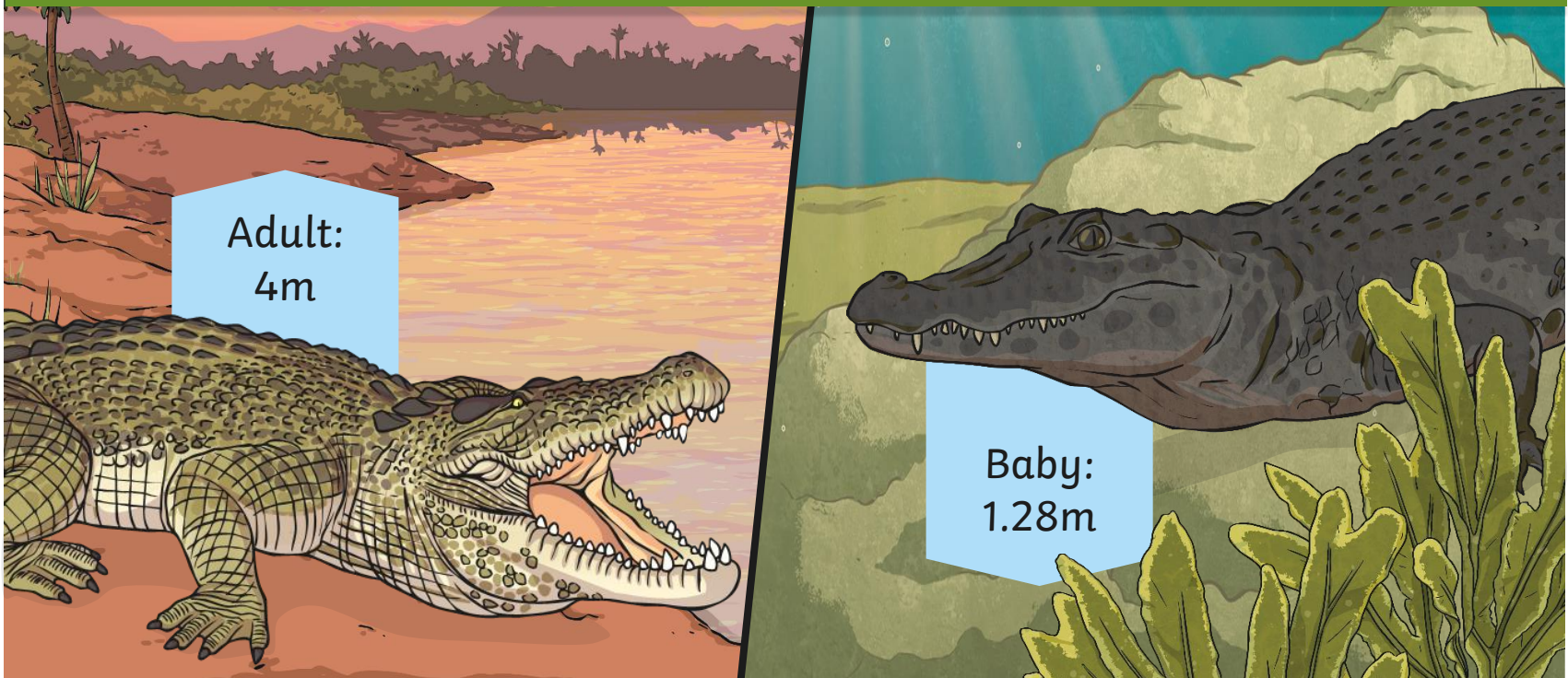
| H | T   | O   | t | h |
|---|-----|-----|---|---|
|   | ●●● | ●●● | ● |   |
|   | ●●● | ●●● | ● |   |



Here is an adult and a baby crocodile.  
How much longer is the adult than the baby?

$$4 - 1.28 = 2.72\text{m}$$

The adult is 2.72m longer than the baby.





Gerald walked 14.37km in July and 9km in August.  
How far did he walk altogether?

$14.37 + 9 = 23.37\text{km}$   
He has walked  
23.37km altogether.





**Geoff**

My plant is 3.24cm shorter than Lynne's.

Geoff and Lynne have been growing tomato plants. Geoff's plant is now 19cm tall and Lynne's is 23.24cm tall.

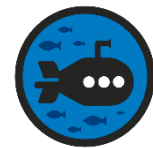
Do you agree?  
Explain your thinking.

Geoff has incorrectly calculated the difference.

$$23.24 - 19 = 4.24$$

His plant is 4.24cm shorter.





Here are the average heights of some land animals:



lion  
1.24m



giraffe  
5.8m



elephant  
4m



camel  
2m



ostrich  
2.65m



The average adult human is 1.75m.

True

False, a giraffe is 3.8m taller.

True

False, a camel is 0.76m taller.





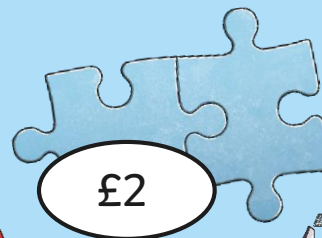
There are many answers.  
Some possible solutions are:

teddy bear, yoyo, cards  
and puzzle  
= £8.95    **£1.05 change**

book, yoyo, ball and puzzle  
= £7.88    **£2.12 change**

car, yoyo, ball and puzzle  
= £9.61    **39p change**

plane, yoyo, puzzle and ball  
= £9.06    **94p change**





Jamie is only able to buy a teddy bear, a yoyo, a ball and a puzzle.

Jamie spends £6.95 which gives him 5p change.



£2.68



£5.34



£1.27



£4.79



£3.61



£5



£2



£4



£1



£3



There are three possible answers.

Pablo bought a book and a board game. He spent £5.85 and used two £2 coins, one £1 coin and two 50p coins.

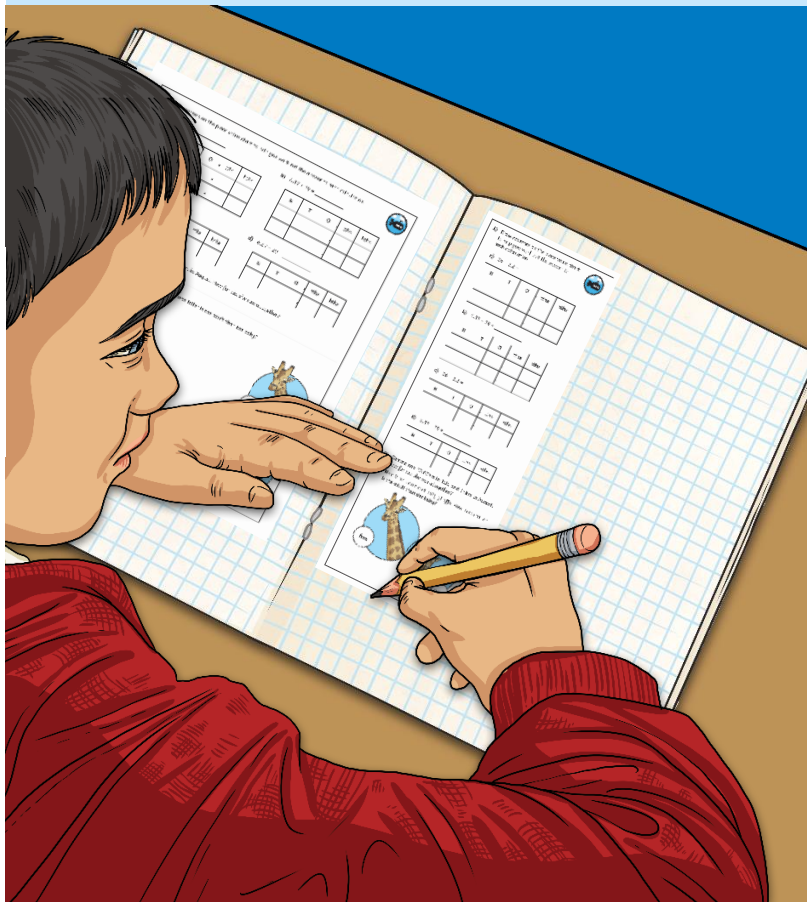
Pablo bought a book and a boat for £6.85 and received 15p change. He could have used three £2 coins and two 50p coins.

Pablo bought a book and a pack of cards for £4.85, he paid with one £2 coin, two £1 coins and two 50p coins.



# Adding and Subtracting Wholes and Decimals

Dive in by completing your own activity!



1) Jamie has two items.

My s taller

2) Here are

lion's jelly

36

3) Paolo vis

Paolo bu  
Which to

1) Draw counters on the place value chart to help you work out the answer to each calculation.

a)  $16 + 3.2 =$  \_\_\_\_\_

| H | T | O | tths | hths |
|---|---|---|------|------|
|   |   |   |      |      |
|   |   |   |      |      |
|   |   |   |      |      |

b)  $6.87 + 29 =$  \_\_\_\_\_

| H | T | O | tths | hths |
|---|---|---|------|------|
|   |   |   |      |      |
|   |   |   |      |      |
|   |   |   |      |      |
|   |   |   |      |      |

c)  $16 - 3.2 =$  \_\_\_\_\_

| H | T | O | tths | hths |
|---|---|---|------|------|
|   |   |   |      |      |
|   |   |   |      |      |
|   |   |   |      |      |
|   |   |   |      |      |

d)  $6.87 - 29 =$  \_\_\_\_\_

| H | T | O | tths | hths |
|---|---|---|------|------|
|   |   |   |      |      |
|   |   |   |      |      |
|   |   |   |      |      |
|   |   |   |      |      |

2) Gemma ran 13.67km in July and 14km in August. How far did she run altogether?

Are these

a) The c



b) A sou

c) 66.6

d) The l  
jelly

e) Now

3) Here is an adult and baby giraffe. How much taller is the adult than the baby?

|  |   |
|--|---|
|  | <br>6m     |
|  | <br>3.28m |

\_\_\_\_\_

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# Need Planning to Complement this Resource?

## National Curriculum Aim

Solve problems involving number up to three decimal places.

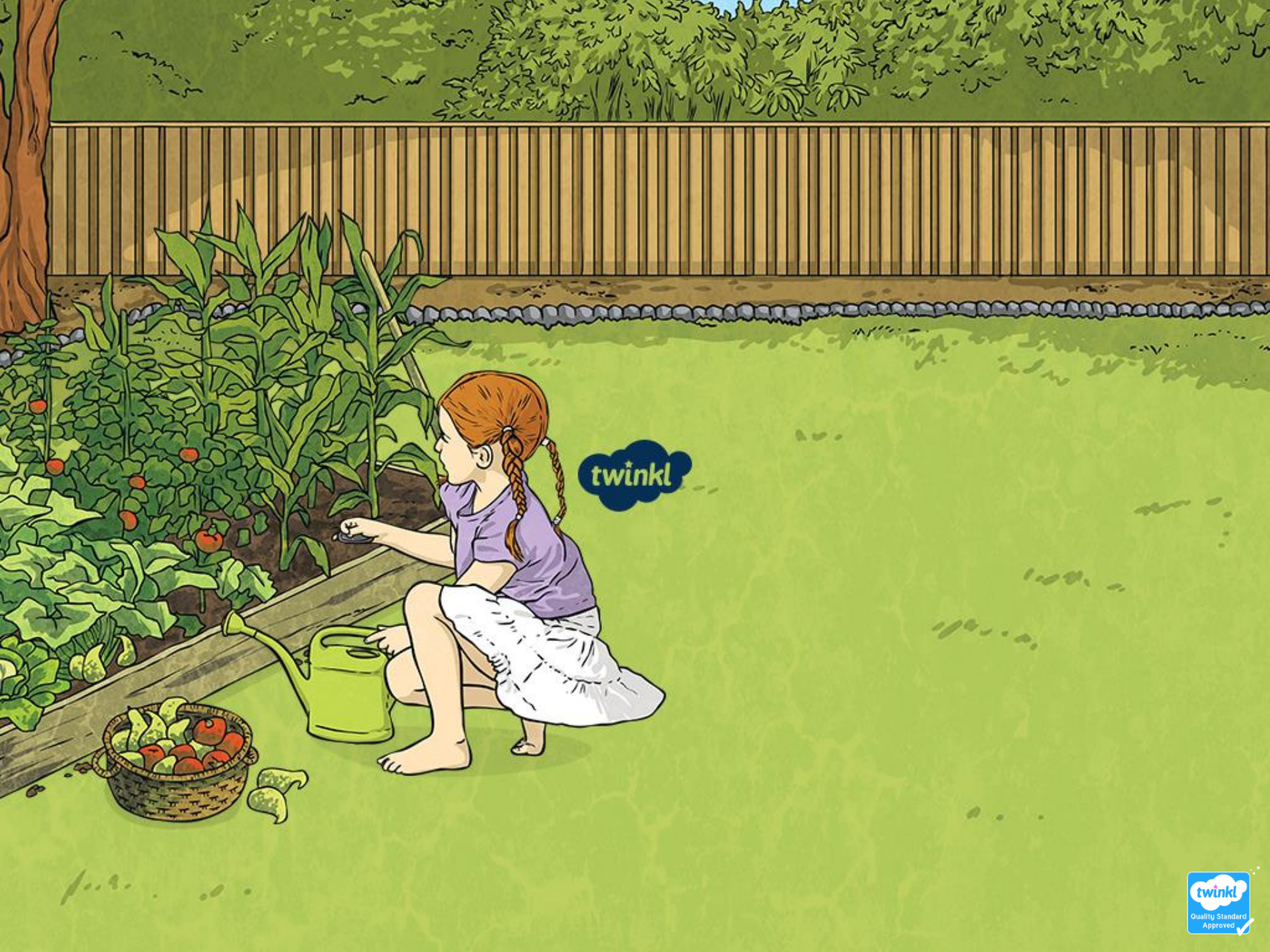
For more planning resources to support this aim, [click here](#).

This screenshot shows a Twinkl PlanIt resource page for the topic 'Adding Decimals with the Same Number of Decimal Places'. The page includes a 'Diving Into Mastery' section with a video player and a 'Check Your Understanding' section with a grid of problems. The problems involve adding decimals like 4.52 + 2.83 and 7.35 + 1.2. There are also visual aids like base ten blocks and a number line.

This screenshot shows a Twinkl PlanIt resource page for the topic 'Adding Decimals - Crossing the Whole'. The page includes a 'Diving Into Mastery' section with a video player and a 'Check Your Understanding' section with a grid of problems. The problems involve adding decimals like 0.89 + 0.29 and 1.17. There are also visual aids like base ten blocks and a number line.

Twinkl PlanIt is our award-winning scheme of work with over 4000 resources.





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