## Varied Fluency

## Step 3: Equivalent Lengths-mm and cm

## National Curriculum Objectives:

Mathematics Year 3:(3M1a) Compare lengths ( $\mathrm{m} / \mathrm{cm} / \mathrm{mm}$ )
Mathematics Year 3:(3M2a) Measure lengths ( $\mathrm{m} / \mathrm{cm} / \mathrm{mm}$ )

## Differentiation:

Developing Questions to support converting from mm to cm and vice versa. Lengths in multiples of 10 mm .
Expected Questions to support converting from mm to cm and vice versa. Lengths in increments of 1 mm .
Greater Depth Questions to support converting from mm to cm and vice versa. Lengths in increments of 1 mm , using 0 as a place holder in the tens columns for some lengths.

## More Year 3 Length and Perimeter resources.

Did you like this resource? Don't forget to review it on our website.

## Equivalent Lengths－mm and cm Equivalent Lengths－mm and cm

la．Complete the bar model．

| 60 mm |  |
| :---: | :---: |
| cm | mm |

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2a．Join the equivalent lengths．
4a．Tick the insects that are the same length as the caterpillar below．
60 mm

| $60 \mathrm{~cm} \mathrm{6mm}$ |
| :--- |
| $\boxed{ }$ |
| $6 \mathrm{~cm} \mathrm{10mm}$ |

lb．Complete the bar model．

| 90 mm |  |
| :---: | :---: |
| cm | mm |

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Db．Join the equivalent lengths．


| $2 \mathrm{~cm} \mathrm{0mm}$ | 300 mm |
| :---: | :---: |
|  |  |
| 30 mm | 4 cm 0 mm |

4b．Tick the insects that are the same length as the worm below．

## 90 mm

$7 \mathrm{~cm} \mathrm{10mm} \square$
$9 \mathrm{~cm} \mathrm{0mm}$
$\boxed{\square}$
$19 \mathrm{~cm} \mathrm{0mm}$
$\square$

## Equivalent Lengths-mm and cm Equivalent Lengths-mm and cm

5a. Complete the bar model.

| 62 mm |  |
| :---: | :---: |
| cm | mm |

5b. Complete the bar model.

| 99 mm |  |
| :---: | :---: |
| cm | mm |

6b. Join the equivalent lengths.


8a. Tick the ribbons that are the same length as the one below.

## 561 mm



8b. Tick the ribbons that are the same length as the one below.

## $8 \mathrm{~cm} \mathrm{5mm}$



## Equivalent Lengths-mm and cm Equivalent Lengths-mm and cm

9a. Complete the bar model.

| 942 mm |  |
| :---: | :---: |
| cm | mm |

10a. Join the equivalent lengths.
12a. Tick the snakes that are the same length as the one below.
606 mm
6 cm 6 mm
50 cm 106 mm $\square$
60 cm 6 mm

12b. Tick the snakes that are the same length as the one below.
905mm

# Varied Fluency <br> Equivalent Lengths-mm and cm 

## Varied Fluency <br> Equivalent Lengths-mm and cm

## Developing

1a. Various possible answers, including:
$6 \mathrm{~cm} 0 \mathrm{~mm}, 5 \mathrm{~cm} 10 \mathrm{~mm}$
$2 \mathrm{a} .30 \mathrm{~mm}=3 \mathrm{~cm}$
$40 \mathrm{~mm}=4 \mathrm{~cm}$
$10 \mathrm{~cm}=100 \mathrm{~mm}$
$5 \mathrm{~cm}=50 \mathrm{~mm}$
3 a .8 cm 10 mm
4 a .6 cm 0 mm

## Expected

5a. Various possible answers, including:
$6 \mathrm{~cm} 2 \mathrm{~mm}, 5 \mathrm{~cm} 12 \mathrm{~mm}$
$6 \mathrm{a} .33 \mathrm{~mm}=3 \mathrm{~cm} 3 \mathrm{~mm}$;
$45 \mathrm{~mm}=4 \mathrm{~cm} 5 \mathrm{~mm}$;
$360 \mathrm{~mm}=36 \mathrm{~cm} 0 \mathrm{~mm} ;$
$8 \mathrm{~cm} 2 \mathrm{~mm}=82 \mathrm{~mm}$
7a. 533 mm
8 a. 56 cm 1 mm
50 cm 61 mm

## Greater Depth

9a. Various possible answers, including:
$94 \mathrm{~cm} 2 \mathrm{~mm}, 84 \mathrm{~cm} 102 \mathrm{~mm}$
10a. $63 \mathrm{~mm}=6 \mathrm{~cm} 3 \mathrm{~mm}$
$60 \mathrm{~cm} 3 \mathrm{~mm}=603 \mathrm{~mm}$
$360 \mathrm{~mm}=35 \mathrm{~cm} 10 \mathrm{~mm}$
$3 \mathrm{~cm} 6 \mathrm{~cm}=36 \mathrm{~mm}$
11 a .63 cm 13 mm
12 a .60 cm 6 mm
50 cm 106 mm

## Developing

1b. Various possible answers, including:
$9 \mathrm{~cm} 0 \mathrm{~mm}, 8 \mathrm{~cm} 10 \mathrm{~mm}$
2b. $80 \mathrm{~mm}=8 \mathrm{~cm} 0 \mathrm{~mm}$
$2 \mathrm{~cm}=20 \mathrm{~mm}$
$30 \mathrm{~cm}=300 \mathrm{~mm}$
$9 \mathrm{~cm} 0 \mathrm{~mm}=90 \mathrm{~mm}$
3b. 2 cm Omm
4b. 9 cm Omm

## Expected

5b. Various possible answers, including:
$9 \mathrm{~cm} 9 \mathrm{~mm}, 8 \mathrm{~cm} 19 \mathrm{~mm}$
6b. $76 \mathrm{~mm}=7 \mathrm{~cm} 6 \mathrm{~mm}$
$95 \mathrm{~mm}=9 \mathrm{~cm} 5 \mathrm{~mm}$
$489 \mathrm{~cm}=48 \mathrm{~cm} 9 \mathrm{~mm}$
$6 \mathrm{~cm} 9 \mathrm{~mm}=69 \mathrm{~mm}$
7b. 4 cm 4 mm
8b. 85 mm
75 mm 1 cm

## Greater Depth

9b. Various possible answers, including:
$70 \mathrm{~cm} 9 \mathrm{~mm}, 80 \mathrm{~cm} 109 \mathrm{~mm}$
10b. $78 \mathrm{~mm}=7 \mathrm{~cm} 8 \mathrm{~mm}$
$70 \mathrm{~cm} 8 \mathrm{~mm}=708 \mathrm{~mm}$ $780 \mathrm{~mm}=78 \mathrm{~cm} 0 \mathrm{~mm}$
$7 \mathrm{~cm} 18 \mathrm{~mm}=88 \mathrm{~mm}$
11b. 5 cm 8 mm
12b. 90 cm 5 mm
80 cm 105 mm

