Varied Fluency
Step 2: Equivalent Lengths – m and cm

National Curriculum Objectives:

Mathematics Year 3:(3M1a) Compare lengths (m/cm/mm)
Mathematics Year 3:(3M2a) Measure lengths (m/cm/mm)

Differentiation:

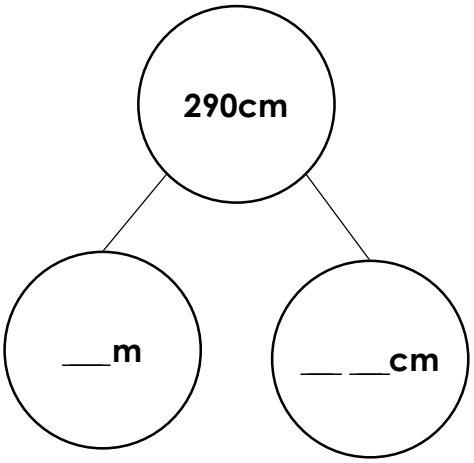
Developing Questions to support converting from m to cm and vice versa. Lengths in multiples of 5cm.
Expected Questions to support converting from m to cm and vice versa. Lengths are in multiples of 1cm. Includes some use of one half.
Greater Depth Questions to support converting from m to cm and vice versa. Lengths in multiples of 1cm including the use of 0 as a place holder in the tens column. Includes the use of one quarter, one half and three quarters.

More Year 3 Length and Perimeter resources.

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

Equivalent Lengths – m and cm

1a. Complete the part-whole model below.



D VF

2a. Circle the measurement that is the odd one out.

500cm | 50cm | 5m

D VF

3a. Put these lengths in order from shortest to longest.

3m and 20cm	230cm
395cm	2m and 95cm

shortest _____ longest

D VF

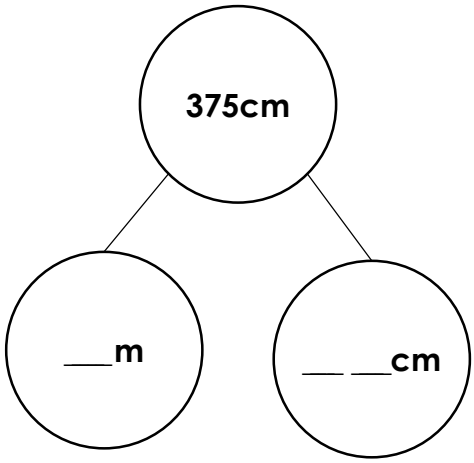
4a. Complete the conversion table:

m and cm ⟷	cm
2m and 40cm	___ ___ ___ cm
__ m and ___ ___cm	410cm
8m and 70cm	___ ___ ___ cm
__ m and ___ ___cm	990cm
3m and 90cm	___ ___ ___ cm

D VF

Equivalent Lengths – m and cm

1b. Complete the part-whole model below.



D VF

2b. Circle the measurement that is the odd one out.

6m and 70cm | 670cm | 760cm

D VF

3b. Put these lengths in order from longest to shortest.

435cm	375cm
3m and 90cm	4m and 50cm

longest _____ shortest

D VF

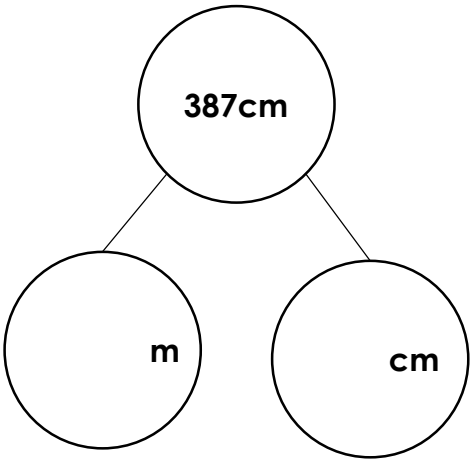
4b. Complete the conversion table:

m ⟷	cm
3m and 20cm	___ ___ ___ cm
__ m and ___ ___cm	165cm
5m and 55cm	___ ___ ___ cm
__ m and ___ ___cm	630cm
7m and 90cm	___ ___ ___ cm

D VF

Equivalent Lengths – m and cm

5a. Complete the part-whole model below.



E VF

6a. Circle the measurement that is the odd one out.

$1\frac{1}{2}$ m | 150cm | 1m and 21cm

E VF

7a. Put these lengths in order from shortest to longest.

3m and 29cm	239cm	2m and 97cm
2m and 93cm	392cm	279cm

E VF

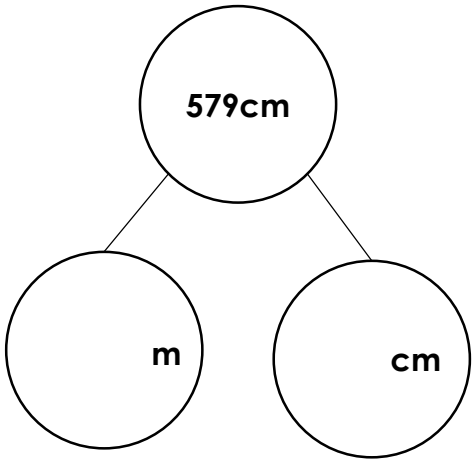
8a. Complete the conversion table:

m and cm ⟷	cm
6m and 48cm	cm
	416cm
9m and 64cm	cm
	589cm
0m and 98cm	cm

E VF

Equivalent Lengths – m and cm

5b. Complete the part-whole model below.



E VF

6b. Circle the measurement that is the odd one out.

412cm | 4m and 50cm | $4\frac{1}{2}$ m

E VF

7b. Put these lengths in order from longest to shortest.

577cm	7m and 57cm	566cm
5m and 75cm	557cm	7m and 75cm

E VF

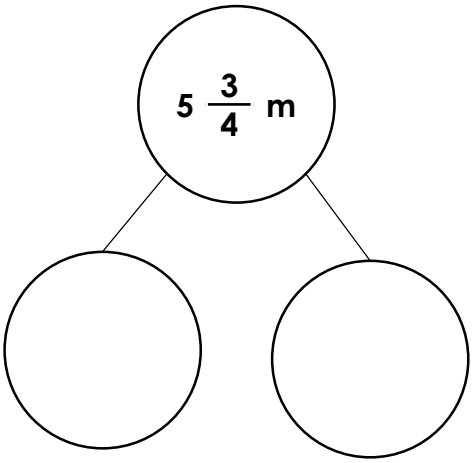
8b. Complete the conversion table:

m ⟷	cm
1m and 88cm	cm
	564cm
0m and 49cm	cm
	82cm
3m and 36cm	cm

E VF

Equivalent Lengths – m and cm

9a. Complete the part-whole model below. Include units of measurement.



GD VF

10a. Circle the measurement that is the odd one out.

1m and 75cm	134cm	$1\frac{3}{4}$ m

GD VF

11a. Put these lengths in order from longest to shortest.

636cm	$6\frac{1}{4}$ m	5m and 7cm
3m and 96cm	308cm	$5\frac{3}{4}$ m

GD VF

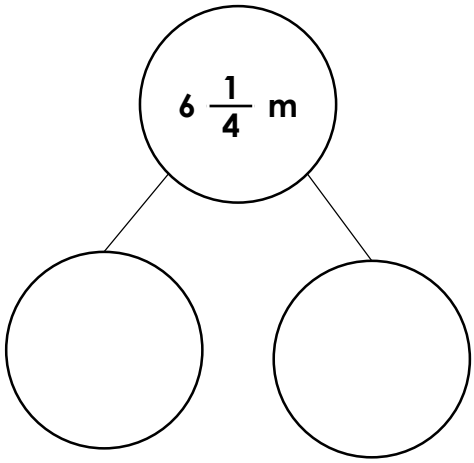
12a. Complete the conversion table:

m ⟷	cm
$9\frac{3}{4}$ m	
	seven hundred and seventy-five cm
$8\frac{1}{4}$ m	
	four hundred and fifty cm

GD VF

Equivalent Lengths – m and cm

9b. Complete the part-whole model below. Include units of measurement.



GD VF

10b. Circle the measurement that is the odd one out.

725cm	$7\frac{1}{4}$ m	7m and 14cm

GD VF

11b. Put these lengths in order from shortest to longest.

$3\frac{1}{2}$ m	$4\frac{3}{4}$ m	3m and 38cm
4m and 83cm	402cm	4m and 81cm

GD VF

12b. Complete the conversion table:

m ⟷	cm
	eight hundred and fifty cm
$4\frac{1}{2}$ m	
	twenty five cm
$6\frac{3}{4}$ m	

GD VF

Varied Fluency
Equivalent Lengths – m and cm

Developing

1a. 2m, 90cm

2a. 50cm

3a. 230cm, 2m and 95cm, 3m and 20cm and 395cm

4a. The completed conversion table should look like this:

m and cm ⟷	cm
2m and 40cm	240cm
4m and 10cm	410cm
8m and 70cm	870cm
9m and 90cm	990cm
3m and 90cm	390cm

Expected

5a. 3m, 87cm

6a. 1m and 21cm

7a. 239cm, 279cm, 2m and 93cm, 2m and 97cm, 3m and 29cm and 392cm

8a. The completed conversion table should look like this:

m and cm ⟷	cm
6m and 48cm	648cm
4m and 16cm	416cm
9m and 64cm	964cm
5m and 89cm	589cm
0 and 98cm	98cm

Greater Depth

9a. 5m, 75cm – other answers may include unconventional partitioning.

10a. 134cm

11a. 636cm, $6\frac{1}{2}$ m, $5\frac{3}{4}$ m, 5m and 7cm, 3m and 96cm and 308cm

12a. The completed conversion table should look like this:

m ⟷	cm
$9\frac{3}{4}$ m	nine hundred and seventy five cm
$7\frac{3}{4}$ m	seven hundred and seventy-five cm
$8\frac{1}{4}$ m	eight hundred and twenty-five cm
$4\frac{1}{2}$ m	four hundred and fifty cm

Varied Fluency
Equivalent Lengths – m and cm

Developing

1b. 3m, 75cm

2b. 760cm

3b. 4m and 50cm, 435cm, 3m and 90cm and 375cm

4b. The completed conversion table should look like this:

m ⟷	cm
3m and 20cm	320cm
1m and 65cm	165cm
5m and 55cm	555cm
6m and 30cm	630cm
7m and 90cm	790cm

Expected

5b. 5m, 79cm

6b. 412cm

7b. 7m and 75cm, 7m and 57cm, 577cm, 5m and 75cm, 566cm and 557cm

8b. The completed conversion table should look like this:

m ⟷	cm
1m and 88cm	188cm
5m and 64cm	564cm
0m and 49cm	49cm
0m and 82cm	82cm
3m and 36cm	336cm

Greater Depth

9b. 6m, 25cm – other answers may include unconventional partitioning.

10b. 7m and 14cm

11b. 3m and 38cm, $3\frac{1}{2}$ m, 402cm, $4\frac{3}{4}$ m, 4m and 81cm and 4m and 83cm

12b. The completed conversion table should look like this:

m ⟷	cm
$8\frac{1}{2}$ m	eight hundred and fifty cm
$4\frac{1}{2}$ m	four hundred and fifty cm
$\frac{1}{4}$ m	twenty five cm
$6\frac{3}{4}$ m	six hundred and seventy-five cm