## Evidence L13

| EVIDENCE |  | $\mathbf{W} \equiv$ <br> L13 Teacher | Evidence | L13 Level 3 Pupil | L13 Level 3 Pupil |
| :---: | :---: | :---: | :---: | :---: | :---: |

## Regional Improvement Collaborative: West Partnership Moderation Conversation Guidance



Use the questions below to guide moderating conversations.
Constructive and supportive feedback that represents the views of the group must be provided.

Practitioners may also use this template as a reflective tool when planning learning and teaching and submitting assessment evidence.

Highlight the following:

| Curriculum <br> Area(s) | Languages | Maths | Sciences | Social <br> Studies | Expressive <br> Arts | Technologies | RME | HWB |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Aspect | Literacy | Numeracy |  <br> Wellbeing |  |  |  |  |  |
| Level | Early | First | Second | Third | Fourth |  |  |  |
| Evidence Code |  |  |  |  |  |  |  |  |


| Planning | Experiences and Outcomes <br> Is there coherence amongst the Experiences and Outcomes selected? <br> Yes, there is coherence as the teacher has reviewed previous knowledge and applied this to <br> the new methods taught |
| :--- | :--- |
| - Are the relevant aspects of each Experiences and Outcomes highlighted/identified? |  |


|  | Yes, benchmarks are given and then broken down into smaller outcomes |
| :--- | :--- |
| Learning Intentions <br> Do the Learning Intentions clearly state what the learner should know, understand and be <br> able to do by the end of the learning experience? |  |
| Yes they very succinct <br> - Is clear language used and does it reflect the wording and standards within the Experiences <br> and Outcomes? <br> Yes, language is clear and breaks down the E+O into great detail. Very precise |  |


| Assessment | Benchmarks <br> Have the Benchmarks been used to support the creation of the Success Criteria? <br> Yes they are very closely linked |
| :--- | :--- |
|  | Success Criteria <br> Are the Success Criteria clear, relevant and outline measurable definitions of success? <br> Yes, they are very precise as to what is expected and what pupils should know at each step <br> of the experience |
| Do they link to the Learning Intention/s and clearly outline what the learner needs to do to |  |
| Yes, as above |  |

## Learning Experiences, Planned Assessment, Evidence and Evaluation

- Reflect upon the planning. Does it:
- offer and range of quality learning experiences?

Yes, differing materials have been given to cover each individual learning outcome, progressively stretching the pupils' ability as they progress.

- demonstrate aspects of the design principles? (Challenge and Enjoyment; Breadth; Progression; Depth; Personalisation and Choice; Coherence; Relevance.)

Very challenging work included in the form of bearings questions. Good breadth of knowledge as all angle types covered, individually and as joint questions. No personalization due to nature of lessons progressing

- To what extent does the task promote higher order thinking skills? (Analysing, Applying, Creating, Understanding, Remembering, Evaluating)

Analysis needed to understand the more difficult and inter linked questions.
Applying prior knowledge used as the lessons progress
Remembering of angles facts from prior levels needed.
Application of all angles facts needed in bearings questions as well as complete understanding of all facts

- In what ways do the range of assessment activities meet the Success Criteria?

Each individual SC is evident in pupil work. Material covers each SC individually and collaboratively

- How do the range of assessment activities demonstrate, breadth, challenge and application of learning?

Analysis needed to understand the more difficult and inter linked questions.
Applying prior knowledge used as the lessons progress
Remembering of angles facts from prior levels needed.
Application of all angles facts needed in bearings questions as well as complete understanding of all facts
Very challenging work provided for bearings!

- Does the learning activity/experience enable the teacher to gather evidence against the set criteria?

Yes

- Does the teacher's evaluation of learning reflect the standards within the Experiences, Outcomes and Benchmark statements?

Yes it does, and pushes pupils on to more complicated work

## Feedback and Next Steps

- Does the feedback annotated on the evidence link to the Success Criteria?

Yes, it related back to prior knowledge

- Are the learner's strengths and appropriate next steps identified?

No next steps identified as whole topic has been covered.
Learner's strengths are identified through teacher written and verbal feedback

## Pupil Voice

- Is there evidence of the learner's involvement in planning, evaluation of their learning and within the assessment process?

No in planning, however pupil voice in the form of self evaluation sheet filled in and discussed with teacher as shown shows involvement in evaluation

## Attainment of Attended Outcomes

- Does the evidence allow you to determine whether the learner has attained the intended outcomes? Yes

If not, why not?

| Experiences and Outcomes, Learning Intention and Success Criteria not linked |  |
| :--- | :--- |
| Pupil Voice not evident |  |
| No evidence of breadth of learning |  |
| No evidence of challenge (higher order thinking skills) |  |
| No evidence of application of skills |  |

## Any other comments:

Alternate or Corresponding


Find the missing angles. Brilliant wal! (3) Remember that angles in a triangle add up to $180^{\circ}$.

4.

8.


Find the missing angles marked with letters.

10.

$x=69^{\circ}$

$x=50^{\circ}$
4. A boat sails a triangular course clockwise as shown.

Calculate the internal angles $A, B$ and $C$ in each triangle.
a)

b)

(Hint: angle $A$ is not $40^{\circ}$. Find angles $B$ and $C$ first.)
c)

What do you notice about this triangle?
5. Use your answer for question 4 to calculate the bearings needed to sail each course anticlockwise instead, i.e. the bearings from $A$ to $C$, then $C$ to $B$ and finally $B$ to $A$.

Find the missing angles.
Remember that angles on a straight line add up to $180^{\circ}$.
1.

3.

7.

8.
$\underbrace{5 .}$
2.

Fantastic 9. 'renal.!




Area of composite shapes
Great wale-live
8 m lelped with a
 comple-ched over \& male 3m sue you udestand. ${ }^{3 \mathrm{~m}}$ seeme it
notsue
Renenser your

(1)


$$
\begin{aligned}
B A & =4 \\
& =8,4 \quad 8-3=5 \mathrm{~m} \\
& =24, \mathrm{~m}^{2}
\end{aligned}
$$

(2) $A=7+3$

$$
=21.2
$$

(3)

$$
\begin{aligned}
A & =\frac{1}{2} b h \\
& =\frac{1}{2}+3 \times 3 \\
& =\frac{1}{2} \times 9 \\
& =a / 2
\end{aligned}
$$


same size!. (2) $A=\frac{1}{2} b l$ $=\frac{1}{2} \times 3 \times 2$


$$
\text { (6 } \begin{aligned}
A & =\frac{1}{2} b l n \\
& =\frac{1}{2} \times 2 \times 3 \\
& =\frac{1}{2} \times C \\
& =3 \sqrt{2} \\
& =A
\end{aligned}
$$





Naming angles Revision
(1) a) encosent $<P A T$
d LLPV
c) $L 1 \mathrm{SB}$
d) $\angle v x z$

Aementre the
aygles aymona!
e) $\angle H J K$
f) $\angle P O D$
g) $\angle c+x$
h Luvk $/$.
(2) a) $\angle B C G L$ RIGMT ANGLE
d) $L_{H T r}$ - acute angle.
c) LEBO - obTuSE angle
d)LCBS OBTUSE ReNLEx as its $>180^{\circ}$.
e) LPOH - acute
ff s wat siralent
glLbut Acute
4) $L_{t+N>}$ obtuse.

Area of Square /rectangue/tirianole revision
(G) al

$$
\text { a) } \begin{aligned}
A & =L \times b \\
& =5+7 \\
& =35 \mathrm{~cm}^{2}
\end{aligned}
$$

$$
\text { b) } A=\operatorname{umpar} L \neq b
$$

$$
=4+9
$$

$$
=36 \mathrm{~cm}^{2} .
$$

$$
\begin{aligned}
d A & =2 \times b \\
& =6+6
\end{aligned}
$$

$$
=36 \mathrm{~cm}^{2} .
$$

$$
\begin{array}{rlrl}
d A & =c \times b & 2 \times 5=10 \\
& =2 \times 5.5 & & \\
& =11 \mathrm{~cm}^{2}
\end{array}
$$

$$
\text { e) } \begin{aligned}
A & =L+b \\
& =10+2.5 \\
& =25 \mathrm{~cm}^{2}
\end{aligned}
$$



$$
\text { d) } \begin{aligned}
\Delta & =\frac{1}{2} \times b+4 \\
& =\frac{1}{2} x 8 \\
& =\frac{1}{2} \times 64 \\
& =32 \operatorname{con}^{2} 1
\end{aligned}
$$

e) $A=\frac{1}{2}+b+h$

$$
=\frac{1}{2}+12+3
$$

$$
=\frac{1}{2} \times 36
$$

$=18 \cos ^{2} / 1 \times 8$

$$
\begin{aligned}
& A+\quad \frac{1}{2}+b \times 4 \\
&=\frac{1}{2}+1.5 \times 18 \\
&=\frac{1}{2}+12 \\
&=1
\end{aligned}
$$

## Area of a Trapezium <br> Area $=\frac{1}{2}(a+b) h$

Find the areas of these trapeziums

## Question $1-8$ only




9 cm


6.

4 cm 7 cm
8.


Find the shaded areas in these compound shapes made from trapeziums and other shapes
9.

10.

11.


13.

EXTENSION - Find the missing lengths in these trapeziums




Area bF a trasezium.
$3 B A=\frac{1}{2}(a+b) 4$

$$
=\frac{2}{2}(8+4) \times 5
$$

$$
=\frac{1}{2}+12+5
$$

$$
=\frac{1}{2}+66
$$

$$
\text { (2) } \begin{aligned}
A & =\frac{1}{2}\left(a+\mathrm{cm}^{2} / 1 / 4\right. \\
& =\frac{1}{2}(3+5)+6 / \\
& =\frac{1}{2}+8+6 \\
& =\frac{1}{2}+48 \\
& =24 \mathrm{~cm}^{2} / 1
\end{aligned}
$$

(5)

$$
\begin{aligned}
A & =\frac{1}{2}(a+b) h \\
& =\frac{1}{2}(8+9) \times 8 \\
& =\frac{1}{2} 217+8 \\
& =\frac{1}{2} \times 136 \\
& =6 \operatorname{sen}^{2} 2
\end{aligned}
$$

(19) $A=$

$$
\begin{aligned}
& =\frac{1}{12}(15+7) \times 6 \\
& =\frac{1}{2} \times 12 \times 6 \\
& =\frac{1}{2} \times 72
\end{aligned}
$$

$-36 \operatorname{con}^{2} H$
(5)

$$
\begin{aligned}
A & =\frac{1}{2}(a+b) h \\
& =\frac{1}{2}(4+7)+9 \quad \text { wisng way ound! } \\
& =\frac{1}{2}(1)+9 \quad \frac{1}{2}(4+a) \times 7 \\
& =\frac{1}{2}+9 a \\
& =\frac{49}{2} \operatorname{cin}^{2} / 1 X
\end{aligned}
$$

(6)

$$
\begin{aligned}
A & =\frac{1}{2}(9+b) h \\
& =\frac{1}{2}(6+1)+8 \\
& =\frac{1}{2}(17) \times 8 \\
& =\frac{1}{2}+136 \\
& =68 \mathrm{~cm}^{2} \text { vemember units }
\end{aligned}
$$

(7).

$$
\begin{aligned}
A & =\frac{1}{2}(a+b) 4 \\
& =\frac{1}{2}(3+7) \times 4 \\
& =\frac{1}{2}(10) \times 4 \\
& =\frac{1}{2} \times 40 \\
& =20 \mathrm{cin}^{2} .
\end{aligned}
$$

$$
\text { (8) } \begin{aligned}
A & =\frac{1}{2}(a+b) h \\
& =\frac{1}{2}(1+6) \times 31 \\
& =\frac{1}{2}(7) \times 3 \\
& =\frac{1}{2}+21 \\
& =\frac{21}{2} \mathrm{~cm}^{2} \operatorname{ari}^{2} 0.5 \mathrm{~cm}^{2}
\end{aligned}
$$

Good stuff 1 Just remember to che you units and appositit side lengths go in the brackets

PC 76 O25
(5) A of miancic

$$
\begin{aligned}
\Rightarrow \mid & =\frac{1}{2} b+4 \\
& =\frac{1}{2}+3 \times 1.4 \\
& =\frac{1}{2}+4.2 \\
& =2.1 \mathrm{~mm}^{2}
\end{aligned}
$$

$A$ of woben Rectuncie $\rightarrow=2+b$

$$
\begin{aligned}
& =3 \times 3-2 \\
& =9.6 \text { mam }
\end{aligned}
$$

$A$ or winnoul

$$
\begin{aligned}
\Delta & =2 \times b \\
& =1+6+0.5 \mathrm{l} \\
& =0.8 \mathrm{~cm}^{2} .
\end{aligned}
$$

rosan woonon
AREA

$$
\begin{aligned}
& \Rightarrow A=2.1+9,6-0.8 \text { Just add triagle } \\
& =12.5 \mathrm{mi}^{2}+\text { iectangle! } \\
& 117 \\
& \text { incea } \\
& \Rightarrow
\end{aligned}
$$

total hoonen

Name
Class

| I can.............. |  |
| :--- | :--- | :--- | :--- | :--- |
| How do I know.............. | What I need to do to improve |
| (say, write, make, do) |  |



| I can.............. | Bench Marks | Resources |
| :---: | :---: | :---: |
| Number <br> MNU 3-07a <br> I can solve problems by carrying out calculations with a wide range of fractions, decimal fractions and percentages, using my answers to make comparisons and informed choices for real life situations. | - Converts fraction, decimal fractions or percentages into equivalent fractions, decimal fractions or percentages. <br> - Uses knowledge of fractions, decimal fractions and percentages to carry out calculations with or without a calculator | Teejay book 3a chapter 6 |
| Measurement <br> MNU 3-11a <br> I can solve practical problems by applying my knowledge of measure, choosing the appropriate units and degree of accuracy for the task and using a formula to calculate area when required. <br> MTH 3-11b <br> Having investigated different routes to a solution, I can find the area of compound 2D shapes, applying my knowledge to solve problems. | - Chooses appropriate units for length and area when solving practical problems <br> - Converts between standard units to 3 decimal places and applies this when solving calculations of length and area. <br> - Calculates the area of 2D shape where units are inconsistent. <br> - Find the area of compound 2D shapes constructed from squares, rectangles and triangles. | Teejay book 3a chapter 8 |

## Level 3 - Unit 2 Teacher Guidelines

| Algebra <br> MTH 3-15a <br> Having discussed ways to express problems or statements using mathematical language, I can construct, and use appropriate methods to solve, a range of simple equations. | - Solves linear equations, for example $\mathrm{ax}+\mathrm{b}=\mathrm{c}$ where $\mathrm{a}, \mathrm{b}$ and c are integers. | Teejay book 3a chapter 7 <br> Problem solving worksheets - break the code etc by solving equations |
| :---: | :---: | :---: |
| Angle MTH 3-17a <br> I can name angles and find their sizes using my knowledge of the properties of a range of 2 D shapes and the angle properties associated with intersecting and parallel lines. | - Names angles using notation such as <ABC <br> - Identifies corresponding angles, alternate angles and vertically opposite angles and use this knowledge to calculate missing sides. <br> - Uses the angle properties of triangles and quadrilaterals to find missing angles. | Teejay book 3b chapter 6 |
| Probability <br> MNU 3-22a <br> I can find the probability of a simple event happening and explain why the consequences of the event, as well as its probability, should be considered when making choices. | - Uses the probability scale of 0 to 1 showing probability as a fraction or decimal fraction. <br> - Demonstrates understanding of the relationship between the frequency of an event happening and the probability of it happening. <br> - Uses a given probability to calculate an expected outcome, for example, "the probability of rain in June is 0.25 so how many days do we expect it to rain?" <br> - Calculates the probability of a simple event happening, for example, "what is the probability of throwing a prime number on a 12 sided die"? <br> - Identifies all of the mutually exclusive outcomes of a single event and calculates the probability of each. <br> - Investigates real-life situations which involve making decisions on the likelihood of events occurring and the consequences involved. | Teejay book 3b chapter 13 |

## Level 3 - Unit 2 Teacher Guidelines

| Money <br> MNU 3-09a <br> When considering how to spend money, I can source compare and contrast different services, discuss their advantages and disadvantages, and explain which offer is best value to me | - Demonstrates understanding of best value in relation to contracts and services when comparing products. <br> - Chooses the best value for their personal solution and justifies choices. | ICT suite/library investigation |
| :---: | :---: | :---: |
| Symmetry <br> MTH 3-19a <br> I can illustrate the lines of symmetry for a range of 2D shapes and apply my understanding to create and complete symmetrical pictures and patterns. | - Identifies all lines of symmetry in 2D shapes. <br> - Creates symmetrical patterns and pictures. | Teejay book 2b chapter 2 Symmetrical mask worksheets |

## Regional Improvement Collaborative: West Partnership Practitioner Moderation Template (PMT)

Prior to the moderation exercise, please complete the following information and submit it to your facilitator with assessment evidence from one learner that you judge to have successfully attained the Es and Os.

| Evidence Code | L13 |
| :--- | :--- |
| Curriculum Area(s) | Numeracy/Maths |
| Level | 3 |
| Stage(s) | S1/S2 |

Experiences and Outcomes (highlight the relevant aspects of each E and O ):

## Angle MTH 3-17a

I can name angles and find their sizes using my knowledge of the properties of a range of 2D shapes and the angle properties associated with intersecting and parallel lines.

## Measurement MTH 3-11b

Having investigated different routes to a solution, I can find the area of compound 2D shapes and the volume of 3D shapes applying my knowledge to solve practical problems.

These two experiences and outcomes are part of our Level 3 Unit 2, a group of topics integrated in a balanced way.

## Learning Intentions:

## Angle MTH 3-17a

- To revise our knowledge of naming angles using 3 letters and the different types of angles
- To be able to recognise and identify straight and right angles and use their properties to find missing angles.
- To be able to recognise and identify vertically opposite angles and use their properties to find missing angles.
- To be able to find a missing angle round a point, given all the other angles
- To be able to find the missing angle in any triangle given all other necessary angles
- To be able to recognise and identify corresponding ' $F$ ' angles and use their properties to help solve problems.
- To be able to recognise and identify alternate ' $Z$ ' angles and use their properties to help solve problems.


## Measurement MTH 3-11b

- To revise our knowledge of the areas of squares, rectangles and triangles
- To be able to separate a given compound 2D shape into 2 or more smaller shapes and work out their separate areas to obtain its overall area.


## Benchmarks:

- Identify corresponding angles, alternate angles and vertically opposite angles and use this knowledge to calculate missing sides.
- Find the area of compound 2D shapes constructed from squares, rectangles and triangles.

Success Criteria: Please list SC and give brief detail on how learners were involved in their creation.
All success criteria is discussed verbally with the pupils and agreed at both the start and end of every lesson

## Angle MTH 3-17a

- Recall that the middle letter is where the angle lies
- Recall types of angles facts; acute < $90^{\circ}$, obtuse $>90^{\circ}$ but $<180^{\circ}$ etc
- Recall that all angles are measured in degrees $\left(^{\circ}\right)$
- Know that a straight angle is the same as a straight line and is equal to $180^{\circ}$
- Know that a right angle is $90^{\circ}$
- Know that vertically opposite angles are equal
- Know that angles around a point add up to $360^{\circ}$
- Know that angles in a triangle add up to $180^{\circ}$
- Know that only one angle needs to be given in an isosceles triangle to work out the other two.
- Know that corresponding angles make an ' $F$ ' shape using parallel lines and that they are equal
- Know that alternate angles make a 'Z' shape using parallel lines and that they are equal.
- Recognise all the angles properties in a more complicated diagram and work through them separately to work out all the missing angles


## Measurement MTH 3-11b

- Recall that the area of a square/rectangle is 'length $x$ breadth'
- Recall that the area of a triangle is ' $1 / 2 \mathrm{x}$ base x height'
- Know and recognise that there is sometimes more than one way to split a compound shape
- Know how to add/subtract to find missing sides required before doing area calculations
- Know to use correct units in the answer; $\mathrm{mm}^{2}, \mathrm{~cm}^{2}, \mathrm{~m}^{2}$ etc
- Know the dimensions required to apply the formula for area of a trapezium

Briefly outline the context and range of quality learning experiences that have been planned making reference to the chosen design principles. Make specific reference to breadth, challenge \& application.

## Lesson 1

Revise basic angles in a straight line, triangle and 360 degrees Mth 2-17a and then introduce Vertically Opposite Angles in an Investigative way.

## Lesson 2

Introduce Corresponding angles in an Investigative way.
Lesson 3
Introduce Alternate angles in an Investigative way.

## Lesson 4

Breadth and Challenge Use the rules of angles in Bearings Questions, Application Use the rules of angles in more complicated diagrams.

## Lesson 5

Revise Areas of Rectangles, Squares and Triangles MNU 2-11b.

## Lesson 6

Introduce Compound Areas of Rectangles and Squares in an investigative way, include practical examples for Application.

## Lesson 7

Introduce Compound Areas of Rectangles and Triangles in an investigative way, include practical examples for Application.
Lesson 8
Breadth and Challenge Introduce Area of a Trapezium.

Record the planned assessment that will be gathered to meet the success criteria considering breadth, challenge and application.

The pupils were presented with various resources. The TeeJay textbooks were used to revise prior learning and to provide some extension questions. Worksheets and homework tasks were also used throughout to consolidate classroom learning.

Breadth and challenge were provided by pupils applying their knowledge of Angle Rules to work out missing angles in a Bearings question and by them applying their knowledge of Area and using formulae to calculate the Area of a Trapezium

Application has been provided by using the rules of angles in more complicated diagrams and by completing practical examples of calculating the Area of composite shape with squares, rectangles and triangles.

Briefly outline the oral/written feedback given to the pupil on progress and next steps, referring to the learning intention and success criteria.

As can be seen by the pupil evidence provided, teachers give written feedback on work completed. Some of these examples are;
'It's an acute angle, so it must be $<90^{\circ}$ - Check!'
'Can you explain why?'
'These all add up to $180^{\circ}$ - needs to add up to $360^{\circ}$ for this one!'
'Remember you should be able to get the equal angles from the equal sides indicators!'
Verbal feedback is also given throughout the lesson and when homework/assessments are handed back.

## Pupil Voice:

What have you learned? How did you learn? What skills have you developed?
Pupils fill out a Self Evaluation sheet after each topic, some of the comments are-
'I need to remember that angles round a point add up to $360^{\circ}$, not $180^{\circ}$ '
'I need to remember to half the answer when working out the area of a triangle’

