# Lesson/Activity Planner

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| **Name: Alison Godfrey** | **Date: 1.10.2022** | **Subject: Maths** | **Whole Class** | **Year Group: 1** |
| **Professional Development Focus (PDF):** Use of resources to support conceptual understanding | **Post Lesson Evaluation of PDF:** |
| **Any other Implications for your teaching from previous evaluations and feedback**The children show a good understanding of addition and subtraction vocabulary and I must make sure that I use the vocabulary correctly in my teaching. |
| **Learning outcome related to the EYFS/NC:****(This may be the same for several lessons)***To represent and use number bonds and related subtraction facts within 20 (NC Year 1)***Place of this lesson/activity within the sequence of learning:** Second lesson in the week’s focus on addition and subtraction |
| **Learning Objective for this lesson/activity (with context if appropriate):**To recall and use addition and subtraction facts to 10. Context: Solving problems using a range of resources  | **Success Criteria*** Use or visualise a resource that shows the facts to 10.
* Record your calculations as number sentences.
* Use the facts to 10 to explore a problem
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| **Key Vocabulary:** *(consider how you will introduce this, display this and assess its use)*Addition, subtraction, subtract, systematic, calculation, number sentence, one more, one less | **Resources:** (Include health and safety issues, outdoors if appropriate)Coat hangers and 10 pegs (5 pink, 5 yellow) – one for me and one for Mrs M. Individual whiteboards and pens. Nrich – One Big Triangle – on internet, with cards and triangle templates printed. |
| **Potential Misconceptions/Errors**Children may find it difficult to apply their knowledge into the problem solving context and resort to more inefficient/inaccurate strategies | **Pupils’ Prior Learning for this lesson*** Implications for individuals or groups of children from previous assessments

All children have an understanding of the concepts of addition, although many are limited in the number facts they actually know and need practise applying these in problem solving situations. Subtraction concepts of ‘how many more do I need’ and as partitioning/take away are secure for all but A, B and C. All are able to write addition number sentences to fit resources to 10 but most are insecure with writing subtraction number sentences. The children have previously used the coat hanger resource as a whole class to find number bonds. * Other considerations which may impact on learning. E.g. absence; behaviour; anxieties; life events etc
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| **Who will you focus your assessment on and how will this be done?** G, H, M, B * Do they understand how to use the pegs to find number bonds? (Talk partners)
* How fluently are they able to recall and use their number bonds in triangle problem? (Observation)

HA children * Evidence of deep understanding of links between addition and subtraction number sentences? (What’s same and different?)
* Systematic approach to the triangle problem? (Observation)

A, B, C – Use of representations to support recall and use of number bonds to 10 |

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| **Lesson/activity outline -** Think about the inclusivity of your lesson and how you are meeting the needs of **all** pupils. |
| **Learning episode & Time***(for example, retrieval,**exposition, repetition, practice)* | **What are you as a teacher doing?***Key teaching points**Formative assessment including key questions* *How will you manage transitions between the different elements of your lesson which may include children moving around the room?* | **What is the learner doing?***Consider challenge for all which may include adaptations for those working towards to those working mastery (consider scaffolds and resources/equipment)**Will the children be working independently, in pairs, groups?* | ***What is/are your additional adult(s) doing?**** *how will you ensure all pupils are supported in their learning?*
 | **Overall Assessment of Learning** |
| 9.00 RETRIEVAL of PRIOR LEARNING and EXPOSITION | Introduce learning objective.***Q: How can we use the pegs to help us find pairs of numbers that total 10?*****Assessment** - Focus on G and H, but ask B and M to explain to check their understanding.Establish:1. There are 10 pegs and however we split them, the number of pegs will still total 10
2. We can say an addition number sentence that matches the pegs
3. A systematic approach will mean we can find all pairs to 10 by moving one at a time

As I move a peg this adds one more to the number on one side and subtracts one from the other side | Start on carpet - children to sit with talk partner (mixed attainment). All children to rehearse saying the number sentences as I move pegs and to write matching number sentences. | Mrs M to listen/observe and intervene if necessary with A, B and C (lower attainers) and partners, to recap questions, model with coat hanger and pegs + |  |
| 9.07EXPOSITION and CHECKING FOR UNDERSTANDING | Show 2 + 8 with the pegs and *ask children to write a number sentence* that matches this.(**Assessment** - challenge HA children to write a subtraction that matches the pegs)Check that children have 2 + 8 = 10 number sentence and address any errors with this. Show how this fits the structure + = 10 on the IWB. | Children on the carpet using whiteboards to write number sentences in response to what is being modelled on the IWB. | Mrs M to work with HA children, checking that they have written correct subtractions.  |
| 9.10EXPOSITION and CHECKING FOR UNDERSTANDING | Show 8 + 2 = 10 and 10 – 2 = 8 on the IWB***Q: What’s the same and what’s different?*****Assessment** - Focus on listening to R, S, T and U who I hope will go beyond spotting the same numbers in a different order.Ask a range of children for their ideas.Feedback – W*hat is the same?*Establish - The same numbers are used for the addition and subtraction number sentencesFeedback – *What is different?*Establish:1. Addition and subtraction are linked – the same image can be used for both 2 + 8 and 10 – 2. If I start with 10 pegs and move 2 across the coat hanger, I am partitioning 10 into 2 and 8 and can write this as 10 – 2 = 8, so using the same numbers as I have with addition

Addition can be written with either number first, so 2 + 8 = 8 + 2 (link back to number sentence that children wrote earlier) | Using talk partners to discuss answers to my questions. | Mrs M to support A, B and C and partners |
| 9.15 – 9.20EXPOSITION | Introduce **One Big Triangle** problem, using visualiser <https://nrich.maths.org/192> - a problem where we are going to need to use our understanding of how addition and subtraction are linked and our number bonds to ten. Model thinking and reasoning with Mrs M for matching triangles, including getting stuck and unstuck. Ensure children are clear as to how the triangles join, how they might reason when placing a triangle (practice – talk partners), how they will know when they are stuck and how they can become unstuck. If they find a solution, they should photograph it and try to find another.Use triangle cards onto a card template. | Mixed attainment pairs (talk partners), at tables to watch and listen to task instructions. | Mrs. M. supporting me with modelling thinking and reasoning for matching triangles, including getting stuck and unstuck. |
| 9.20 – 9.45PRACTICE | Circulate around the pairs to check their understanding.**Key questions**: Tell me what you have done so far. What do you need to put with ... to make 10? Can you find a different card with that number on it? What might be helpful to try next?Use visualiser to clarify any misconceptions arising. | Children take it in turns to place a triangle and tell their partner why that triangle, but work together to make decisions about being stuck/unstuck.  | Mrs M to introduce the cards with tens frames to A, B and C and partners. Give partners the responsibility for checking and modelling reasoning. Assess and support as necessary. |
| (about 9.35)REPETITION and PRACTICE | **Mini-plenary**: Share solutions, discuss any difficulties - encourage resilience. Introduce extension questions. If necessary, remodel reasoning.**Extension questions:** Can you find more than one solution?  How will you know that you have found all the solutions? Use the cards to make a shape where the touching numbers add to 11.  | Children offer solutions but also make it clear what they found difficult.Moving on to extension questions - employing reasoning skills. | Mrs. M. to support with remodelling for any children who are finding extension questions challenging. |
| 9.45RETRIEVAL | **Plenary** What solutions have we found? Discuss extension questions.Tell your partner – prompts on wall – What did you learn today? What did you find out? What do you think you have become better at? Finish with singing the Farmer Pete Number Fun song (number bonds to 10) which the children are familiar with <https://www.youtube.com/watch?v=heZp5RVT5a8> | Children back on the carpet with talk partners to review learning using prompts on working wall.  |  |
| **Evaluation of teaching****What worked well…** | **Even better if….** |