

## Numicon Worksheets

Why are there no worksheets provided in the programme?

For many years it has been shown by research that children do worksheets, but not really relate the activity with the real use of maths- solving problems in real life situations. The relating is known as 'generalising'. If you are looking for a worksheet to reinforce memorisation of number facts, or to create busy work, there are thousands for free on the internet; Numicon doesn't need to create any more!

However, if you are realising the your student/child needs many repetitive activities to memorise the shapes, patterns of numbers, patterns of solving problems, then by using the activities, talking about what they doing and recording the results, this type of activity has much greater long term benefit.

Creating your own games and activities will have a greater impact on long term learning that doing endless rows of number problems. To get an idea of the kind of games and to start your own creative juices flowing, look at the activities on the Numicon Intervention CD. It's great!

But what can one group do while I am teaching another? Choose from the Practice section of each activity group – Whole Class and independent. Numicon Pupil Books (publish September 2017) have loads of activities linked to every activity to develop deeper thinking.

Here are some more suggestions. Create 3 sections in your maths time:

1. Class or group introduction to new material with review of previous learning, the context for the maths linked with everyday life examples. Group work - you can visit each group while they are working and teach a focus group.
2. Paired and Independent activity to practice and go deeper with their learning
3. Class/group discussion where you discuss point 2 and any other relevant points arising from points 3 and 4.

Group activities always follow-up on that day's introduction to new material, or review concepts previously introduced that require more practice. Activities, such as problem-solving or in pairs are often used. Here are some examples of group/paired work activities:

- Firm Foundations- a) Play matching games with a partner using the FEELY BAG and spinner. Record what you match in your book. b) Create a story on your ipad/computer about two of the shapes you pull from the Feely Bag. Tell or write this story using you Talking Tin or ipad. C) Play a mystery game with your partner- 'What shape am I?' like the 'Guess Who' game.
- Numicon One- a) Work in pairs to create a number array using the number cards 0-100. Record the 10's in your books. Record the 5 column numbers in your book. b) Work in pairs to place ten shapes along the Tens number line. Record the numbers that the end of each 10 makes. Now put a 5 at the beginning of the number line. This will move all the tens along. Write down the number where each ten ends in your book. Now choose a shape for yourself to put at the beginning and record what you find.
- Numicon Two- a) Create a number problem for your partner to solve with the shapes. Swap problems and share answers recorded in your books. b) Use the card number track and using the

spinner or dice, race to get to zero with subtraction. Record the steps in your books. c) Discuss the quickest way to get to 100 using the 5 or 3 shapes. Record what happens in your books. d) This can also be useful for subtraction too.

- Numicon Three- a) Race to create a number line with only odd numbers and record the answers in your books.
- See many more suggestions in the Teaching Resource Handbook, Explore More and Pupil Books

Well, what happens in individual work?

Provide problems written on laminated cards that can be used by many children relating to the relevant activities. You find the ideas for these on the Challenge section of each Numicon page/card. This does require preparation, but the results are surely worth it!

For example: *(You will have already done these activities as a class and in groups.)*

Firm Foundations *(For students using Breaking Barriers, they can do these activities too with a peer.)*

### Feely Bag Game 1

You will need:

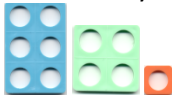


Put the shapes into the bag.

Take out 3 shapes.

Put the biggest one first, then next size beside it, the smallest last.

Draw what you have made.



### Feely Bag Game 2

You will need:

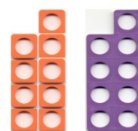


Put the shapes into the bag.

Take 1 shape from the bag

Build that shape with the orange pieces beside it

Draw what you have made or take a photo



### Feely Bag Game 3

You will need:



Put the shapes into the bag.

Spin two times on the spinner and take two

shapes from the Feely Bag

Join them together

Find 1 shape to put on top

Draw what you have made or take a photo.

### Feely Bag Game 4

You will need:



Put the shapes into the bag.

Take 2 shapes from the Feely Bag

Join them together

Place 1 shape on top that covers them

Draw what you have made or take a photo

Numicon 1 - Solving 3-digit addition. Each game gets harder. Ask the children to do them in order.

<b>Ten Game 1</b> 1) Collect Number Cards 0-10 Turn them over face down, jumbled up. Choose 2 2) Add them together. Do they make a 'Ten'? 3) Write down the numbers and show that they make a Ten in a number sentence. 4) Repeat this game 5 times 5) Choose another game from the box	<b>Ten Game 2</b> 1) Collect Number cards 0-10 Turn them over face down jumbled up. Choose 3 2) Place two of the cards beside each other that add to 10. Now put the 3 <sup>rd</sup> card in line. 3) Read this set of numbers and say the words- 'plus' and 'equals'. Record on your Talking Tin/device. 4) Repeat this game ten times 5) Choose another game from the box	<b>Ten Game 3</b> 1) Collect Number Cards 0-10. Turn them over face-down jumbled up. Choose 3. 2) Add them together. Look for a 'Ten' first, then add the other. 3) Record each 'game' and the answer in your book. 4) Repeat this game several times. 5) Choose another game from the box.
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Numicon 2 – Working with higher numbers

<b>Big Numbers Game 1</b> 1) Choose number cards 10, 20, 30, -100. Place them face down and jumbled up 2) Select 2 of the cards. Choose the bigger number, then put the second one beside it. Using the – card create a number sentence. 3) Write it in your book 4) Do this ten times 5) Choose another game from the box	<b>Big Numbers Game 2</b> 1. Choose number cards 10, 20, 30, -100. Place them face down and jumbled up. 2. Select 2 of the cards. Choose the bigger number, then put the second one beside it. Using the – and = cards create a number sentence with the answer. 3. Write it in your book. 4. Do this ten times 5. Choose another game from the box	<b>Big Numbers Game 3</b> 1. Choose number cards 10, 20, 30, -100. Place them face down and jumbled up 2. Choose 2 that must add to 100. Now choose another card. 3. Now record your number sentence with +, + and = signs in your book. 4. Do this ten times 5. Choose another game from the box
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