

Training module 4

Day 2

Session notes for IQTE trainers



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Wrap up 3—3.15pm	Session 5: 3—3.45pm Making materials	Wrap up 3—3.15pm
	Wrap up 3.45—4pm	

To make:

Group work headings:
 'Pupil behaviour',
 'Time', 'Group
 size', 'Instructions',
 'Type of activity',
 'Space', each on
 a separate piece of
 flip chart paper

To collect:

Non-standard
 measures:
 bottle tops, small
 water bottles
 cut to make small
 cups

Water and water
 bottles

Newspaper

Module 4**Day 2**

Page 3

Session 1: Materials/ Charts/ Handouts	Session 2: Materials/ Charts/ Handouts	Session 3: Materials/ Charts/ Handouts	Session 4: Materials/ Charts/ Handouts	Session 5: Materials/ Charts/ Handouts
Flip chart or chalkboard, markers	Flip chart or chalkboard, markers	Flip chart or chalkboard, markers	Flip chart or chalkboard, markers	Flip chart or chalkboard, markers
A4 paper, pens, tape	Chart 3: Organising group work	Chart 4: Addition grid (two)	Non-standard measures	Pens, crayons, rulers, scissors
Group work headings	Paper circles (one for each participant and one for you)		Chart 5: Measuring capacity	Paper circles (from Session 2)
Chart 1: Group work skills			Water	Chart: Addition grid (from Session 3)
Chart 2: Establishing group work skills	Crayons and scissors		Chart 6: Measuring length using hand spans	Chart: Measuring capacity (from Session 4)
			Rulers	Chart: Measuring length using hand spans (from Session 4)
				Non-standard measures (from Session 4)
				Newspaper
				Water bottles

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Session 1

9.30—10.30am

Group work



Learning outcomes

By the end of this session, the participants will be able to:

analyse why group work activities may not be successful in some classrooms

identify key group work skills that pupils must practise to be successful in group work

describe how teachers can set clear rules and responsibilities so that pupils can be successful in group work



Materials

Flip chart or chalkboard, markers

A4 paper, pens, tape

Group work headings

Chart 1:
Group work skills

Chart 2:
Establishing group work skills

Session 1

9.30—10.30am

Group work

activity 01

Time
30 minutes

Analysing group work problems

Ask a volunteer to lead an opening prayer. Then ask a volunteer to suggest a game or song to begin the day.

Remind the participants that in their training they have learnt that group work is a key part of child-centred teaching methods.

Then explain that group work does not just happen automatically, however. If it is not going well, teachers can get discouraged and stop doing it.

Tell the participants that in this session they will look at problems that they might have with group work and look for solutions to these problems.

Explain that two common problems that teachers have with group work are class control and high noise levels. Ask, 'Have any of you had these problems?' Take a few answers.

Divide the participants into groups of four or five, and give each group some pieces of [A4 paper](#).

Ask the groups to spend ten minutes brainstorming the problems that they have had with group work. Tell them to write each problem on half a piece of A4 paper.

While they are working, put the [Group work headings](#) on the wall.

Bring the whole class together. Show them the headings. Tell them to decide under which headings their group's problems go. Ask one person from each group to [tape](#) their problems under the appropriate headings.

When they have finished, tell them to spend five minutes looking at the problems.

Summary

Go through the headings and problems with the class. Ask them to clarify their problems and move them to another heading if necessary.

Point out any patterns or key problems. Explain that they will now look at how to solve these problems.

activity

02

Time
 30 minutes

**Teaching group
 work skills**

Show [Chart 1: Group work Skills](#) with the points covered. Tell the participants that pupils need to learn certain skills before they can work well in groups. Ask, 'What do you think these skills might be?'

Encourage them by asking questions, for example: 'What does the child need to do with the other children? What if a child in the group doesn't understand?'

Uncover the points on Chart 1, and check that the participants included them all. If they didn't, identify and explain them.

Explain that the only way for children to learn these skills is by the teacher guiding them to practise the skills and by the teacher's careful planning and leading.

Tell them that one of the best ways for children to learn these skills is to make them 'group work rules' similar to the classroom ground rules. Have only three to five rules as more would make them difficult to remember.

Ask the participants what they think the group work rules should be. Lead them to decide on the rules by asking the following questions and then asking them to change the questions into rules:

'Do you need to stay with your group during group work?' (Rule: Stay with your group during an activity.)

'Do you need to take turns?'

'How loud should your voices be?'

'What do you need to do together?'

'What do you do if you don't understand?'

Explain that there are a few key things a teacher can do at the beginning, middle and end of an activity that help establish the group work skills. Ask, 'What do you think these key things might be?' Take a few ideas.

Show [Chart 2: Establishing group work skills](#) and ask some participants to read them aloud.

Summary

Ask the participants to reflect on how they themselves have been working in groups. Have their groups been successful in completing their tasks? Have they followed the rules that they have just made?

Ask two or three volunteers to give feedback to the class.

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Session 2

10.30—11.30am

Group work/ Teaching Maths



Learning outcomes

By the end of this session, the participants will:

be able to explain group work procedures that help pupils to understand the objectives of an activity

be able to describe a story and activity that introduces fractions

have experienced how to make equal fractions from a circle



Materials

Flip chart or chalkboard, markers

Chart 3:
Organising group work

Paper circles
(one for each participant and one for you)

Crayons and scissors

Session 2
10.30—11.30am

Group work/
Teaching Maths

activity
01

Time
30 minutes

Guidelines for organising group work

Tell the participants that, when a teacher sets and keeps to routine procedures when planning and leading each activity, the teacher guides the pupils to practise the learning and behavioural skills needed for the activity and gives them the necessary routines to help the learning be successful.

.....
Show [Chart 3: Organising group work](#), with the guidelines covered. Ask, 'Can you suggest a guideline that teachers should have for group work?'

.....
Take their responses, writing them on the flip chart. Then uncover the guidelines on the chart and check that they included all the points. Go through each step and ask for any clarifying questions.

Summary

Ask, 'How can teachers solve the problems that they are having with group work?' (by teaching following the guidelines shown in Chart 3, by praising pupils when they follow the group work rules, by giving very simple activities at first)

activity
02

Time
30 minutes

Picture it! Explore it! with fractions

Explain that the Scheme of Work gives all the areas of Maths that the teacher is expected to cover.

.....
Tell them that one area is number work or numeration. Ask if they know what numeration covers in Term 1.

.....
Take their answers. Then to reinforce their understanding tell them that in Term 1 the Scheme of Work covers the ability to:

.....
sort, classify, identify, count, order, read and write whole numbers 0—99

.....
recognise values of numbers

.....
and identify, classify, order, read and write fractions of a whole and of a given amount.

<p>Tell them that you will present one or two activities in each areas of mental work, Move it! Picture it! and Explore it!</p>	<p>Her children were amazed that she could cut the pieces equally. They watched her carefully so that they could learn to do it. She told them that with practice they would learn how to divide the fruit equally into fractions. And they did.'</p>	<p>Ask them to show you one part of the 'orange'. Ask, 'What is that part called?' (half) Ask, 'What do two halves equal?' (one whole)</p>
<p>Explain that you will tell a story that introduces fractions. Ask, 'Why do we use stories to teach?' (Children's brains learn better by making pictures than by being told abstract facts.)</p>	<p>Give each participant a paper circle. Tell them that the circle is the 'orange' from the story.</p>	<p>Summary Remind the participants what they have learned about group work with regards to pupil behaviour, time, group size, instructions, type of activity and space.</p>
<p>It also helps to have learning materials so that the pupils see the pictures as well listen, and can link their learning with everyday life.</p>	<p>Ask, 'How would we fold our "orange" to show two equal parts?' Ask a volunteer to show their example, then ask the other participants to fold their 'orange' and you fold yours. Move around the room, helping where necessary.</p>	<p>Then ask about the last activity:</p>
<p>Tell this story:</p>	<p>Point out that there are now two parts of one 'orange'. One part is one half and the other part is one half. Tell them to write '1/2' on their two 'orange' parts. Tell them that '1/2' is a fraction, a part of a whole.</p>	<p>'Were the instructions clear?'</p>
<p>'Once upon a time, there was a Mommy who had 12 children. She believed that the first serving of fruit every morning should be the same size for each of her 12 children. She always divided the oranges or bananas or pineapples or mangoes equally. No one got a bigger or smaller piece.</p>		<p>'Was there enough time given?'</p>
<p>If any of the 12 children wanted more, she again cut them the same size piece for their second helping.</p>		<p>'Did everyone work together?'</p>
		<p>'Were there enough materials and space for all?'</p>
		<p>'Why is this still a group activity even though each person has an "orange"?''</p>
		<p>Finally, ask, 'What did you learn by doing this activity?' 'Why do we ask the pupils to do the work themselves?'</p>

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	Wrap up 3.45—4pm	

Session 3

12—1pm

Teaching Maths



Learning outcomes

By the end of this session, the participants will:

be able to identify activities that encourage the memorisation of basic facts

have practised these activities so that they are ready to lead them in their classrooms

know how to use the addition grid to help pupils learn and find patterns in their basic facts



Materials

Flip chart or chalkboard, markers

Chart 4:
Addition grid
(two)

Session 3
12—1pm

Teaching Maths

activity
01

Time
30 minutes

Move it! with addition

Tell the participants that in Maths ‘basic operations’ are addition, subtraction, multiplication and division, and that they are taught in that order.

Explain that movement, repetition and lots of practice are important for pupils in learning ‘basic operations’ as they help pupils to learn the basic Maths facts by heart as quickly as possible.

Children need to feel safe when learning Maths so that the emotional brain is open and they can learn more advanced concepts. Some children will need more time and practice. Give them that time. Give them encouragement.

Tell the participants that you will teach them the ‘adding-clapping’ game. You will teach the game slowly with and step-by-step instructions. Ask them to notice how you introduce the separate skills of speaking and clapping before putting the two together.

Say this verse line by line, with the participants repeating each line after you:

1 + 1 is 2,
That’s for me and you.
2 + 2 is 4,
That’s a couple more.
3 + 3 is 6,
Let us pick the sticks.
4 + 4 is 8,
Enter through the gate.
5 + 5 is 10,
Our goats are in the pen.
Good night!

Tell them that you will say the verse again, and this time you will clap with ‘Mr Nobody’ (explain who he is).

Say the whole verse again, with the same clapping movements and rhythm for every line:

1 + 1 is 2

(1: clap thighs, 1: clap own hands together, 2: clap partner’s hands in the middle).

Now ask the participants to stand up and face you to do the clapping with ‘Mr Nobody’. Repeat a few times.

Then ask them to turn to a partner and do it together. Move around the room, helping where necessary.

activity 02

Summary

Ask the participants to think about the activity in relation to the areas that are important for good group work: pupil behaviour, time, group size, instructions, type of activity, space.

Ask,

‘Were the instructions clear? Did we spend enough time learning the game or did we go too fast for some?’

‘Did everyone work together?’

‘Was there enough space for all?’

Ask the participants what they learned by doing this activity. Ask, ‘Why do we have the pupils move and speak at the same time?’

Time

15 minutes

Addition grid relay game

Tell the participants that they will now do a game that allows pupils to practise their facts with more and more speed.

Explain that you will do the game with addition but the game can also be played to practise multiplication, subtraction or division. With their pupils, they will need to work with the addition grid for a few days before playing the game.

Tape two copies of [Chart 4: Addition grid](#) to the chalkboard or wall, side by side.

Divide the participants into two teams. Ask them to stand in line, with the first person facing their chart and the others behind.

Explain that they will have a relay race to fill in the grid. The first person in each team will race to their grid and fill in any square correctly.

For example, they would write ‘6’ in the square where the ‘4’ column and the ‘2’ row meet ($4 + 2 = 6$). The team members will keep taking turns to run and fill in a square until all the squares are filled. If a team member sees that a sum is incorrect, they can correct it as a turn.

Play the game. Stop when one team has filled in all the squares on their grid. This is the winning team – if their sums are correct. Deduct points for incorrect sums from the total.

activity

03

Time
15 minutes

Independent written work

Describe and demonstrate how teachers often only put basic operations problems on the chalkboard and then ask all the children to work on them as a class.

Ask, 'From what you know about brain development, why do pupils also need to do independent work on basic operations every day?' (to practise their skills on their own, to test their knowledge, to work together with others if they need help)

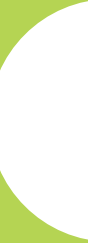
Explain that teachers need to give all their pupils a few horizontal and vertical problems to do on their own every day when they have introduced a topic. Pupils can solve the problems on their slates or in their exercise books.

Write some examples on the flip chart or chalkboard to demonstrate and ask the participants to solve them.

Move around the room, helping where necessary. Tell the quicker ones to check each other's work quietly, and then give each other another problem or two until everyone is finished. Check the answers with the class.

Summary

Ask, 'Which of the three activities did you like the most and why?' Tell them to discuss the question with a partner. Then ask volunteers to give feedback to the class.



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	Wrap up 3.45—4pm	

Session 4

2—3pm

Teaching Maths



Learning outcomes

By the end of this session, the participants will:

.....
be able to describe the two measurement topics in the Maths Scheme of Work Term 1
.....

.....
have participated in estimation and measurement activities using non-standard measures
.....

.....
be able to identify the challenges of organising measurement activities
.....



Materials

Flip chart or chalkboard, markers

.....
Non-standard measures
.....

.....
Chart 5:
Measuring capacity
.....

.....
Water
.....

.....
Chart 6:
Measuring length using hand spans
.....

.....
Rulers
.....

Session 4

2—3pm

Teaching Maths

activity 01

Time
30 minutes

Explore it! with capacity measurement

Explain that in the first term of Maths Year 1, the teacher presents both length and capacity measurement to the pupils. Tell them that these topics allow for lots of hands-on exploration and stories.

Ask, 'Do teachers use standard or non-standard measures?' (non-standard) Then ask, 'What kind of non-standard measures might teachers use for measuring capacity?' (Possible answers are: bottle tops and cups.)

Divide the class into groups of four. Explain that you will tell them about a cook who tries to use her hands to measure like her mother does:

'When the cook first starts she isn't very good at it. She keeps getting the measures for the ingredients wrong. Then she decides to use bottle tops and cups to measure and asks her mother for her help. With time her recipes improve as she finds the right capacity measures to use. She notices that sometimes it is good to use the bottle top for measuring and sometimes the small cup.'

Show and name the two different [non-standard measures](#): the bottle tops and small cups. Give each group bottle tops and small cups. Ask the groups to estimate how many bottle tops will fill the small cup.

Show [Chart 5: Measuring capacity](#) and ask one person from each group to come and write their group's estimate on the chart.

Then show how to fill the bottle tops with [water](#) and pour it into the cups. Tell the participants that they will now find the exact measurement. Ask them to make sure that each person in their group has a turn measuring. Then give out the water.

When they have finished, ask one person from each group to come and write their exact measurement on Chart 5. If there is time, you can repeat the activity using large cups.

activity

02

Time
30 minutes

Explore it! with length measurement

Show [Chart 6: Measuring length using hand spans](#).

Show the participants how to measure using your hand span. Ask them to estimate how many of your hand spans make the width or height of a chair. Take a few answers. Then do the measurement with your hand span. Ask, 'How many hand spans is it?' Point out the difference between estimating and exact measuring.

Ask a volunteer to demonstrate how to estimate and measure as you did, but with a different object (for example, the length of a piece of flip chart paper).

Point to Chart 6. Ask the participants to estimate in pairs the measurement of the first object on the chart. Move around the room, helping and giving feedback. Ask one pair for their estimate and write it in the appropriate box on the chart.

Give out the [rulers](#) and ask each pair to measure the first object. Ask the same pair for their exact measurement and write it in the appropriate box on the chart. Ask whether the other pairs had the same measurement. Continue in the same way with each object on the chart.

When all the estimates and exact measurements are on the chart, ask the participants what they learned from this activity.

Summary

Ask, 'What must you think about before you do this activity with pupils so that it goes well?'

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Session 5

3—3.45pm

Making materials



Learning outcomes

By the end of this session, the participants will have:

made materials to use with their classes and share with staff in their schools



Materials

Flip chart or chalkboard, markers

Pens, crayons, rulers, scissors

Paper circles (from Session 2)

Chart: Addition grid (from Session 3)

Chart: Measuring capacity (from Session 4)

Chart: Measuring length using hand spans (from Session 4)

Non-standard measures (from Session 4)

Newspaper

Water bottles

Session 5:

3—3.45pm

Making materials

activity 01

Time
15 minutes

Making materials

Tell the participants that in this session they will make the following teaching materials and write them on the flip chart or chalkboard:

.....
Addition grid chart

.....
Measuring capacity chart

.....
Measuring length using
hand spans chart

.....
Paper circles

.....
Non-standard measures.

.....
Show the materials that you have made. Move around the room while they are working, checking for quality and giving support and positive feedback.

Wrap- up 3.45— 4pm



Briefly summarise the main points of the day's activities. Then ask the participants to do the 'two stars and one wish' activity as a whole class, sharing their comments with you orally.

Training module 4

Day 2

Charts/handouts

The charts, handouts and other materials needed for each day are illustrated here.

You will need to prepare these materials before each of the day's training begins.

chart

01

Group work skills

Pupils should be able to :

- work cooperatively with other pupils
- take turns (talking, listening, leading, recording)
- use 'inside' voices
- plan together
- ask questions if they don't understand

chart

02

Establishing group work skills

- Put group work rules on the wall.
- Review the rules at the beginning of each activity time.
- Praise pupils who are following the rules during an activity.
- Praise the whole class for what went well at the end of an activity.

chart

03

Organising group work

- Choose an activity (or two levels of it) that meets most pupils' ability level.
- Make sure that there are enough materials and space for all pupils to be active.
- Leave time to explain instructions, give examples, demonstrate, clean up.
- Break down the activity into small steps and explain the steps slowly.
- Ask pupils questions about the instructions to check for understanding.
- Tell pupils how much time they have for the task and reporting back.

chart

04





Addition grid

+	1	2	3	4	5
1					
2					
3					
4					
5					

chart

05

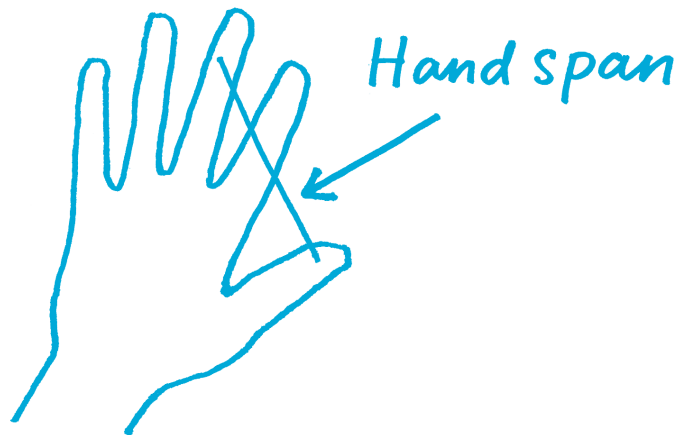
Measuring capacity

<u>Estimate</u>	<u>Actual measure</u>
How many bottle tops do you think fill one small cup? ?  = 1 	How many bottle tops fill one small cup? ?  = 1 
Group 1	Group 1
Group 2	Group 2
Group 3	Group 3
Group 4	Group 4
Group 5	Group 5

chart

06

Measuring length using hand spans



How to find your hand span

Open your hand and stretch it.

From your thumb to your middle finger is a hand span in Nigeria.

Object	Estimate	Exact measurement
Length of partner's arm		
Width of exercise book		
Length of pen		
Height of partner		



esspin

Education Sector
Support Programme
in Nigeria



UKaid

from the Department for
International Development

Photography

Jide Adeniyi-jones

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