

EdQual Research Programme Consortium: Implementing Education Quality in Low Income Countries.

Language and Literacy Project Teachers' Handbook.

1st Edition.

John Clegg

EdQual Research Programme Consortium

University of Dar-Es-Salaam, Tanzania University of Cape Coast, Ghana

October 2010 (1st Edition)





EdQual RPC is a Research Consortium led by the University of Bristol UK and sponsored by the Department for International Development, UK.



The Consortium comprises:

The Graduate School of Education, University of Bristol, UK

The Department of Education, University of Bath, UK

The Institute for Educational Planning and Administration, University of Cape Coast, Ghana

The Faculty of Education, University of Dar es Salaam, Tanzania

The Kigali Institute of Education, Rwanda

The Education Policy Unit, University of the Witwatersrand, Johannesburg, South Africa. EdQual also collaborates with the Institute for Educational Development, The Aga Khan University, Pakistan and the Instituto de Informática Educativa, Universidad de La Frontera, Chile.

EdQual runs research projects mainly in Africa, aimed at improving the quality of formal basic education for disadvantaged groups. Our projects include:

Implementing Curriculum Change to Reduce Poverty and to Increase Gender Equity

Leadership and Management of Change for Quality Improvement

Literacy and Language Development through Primary Education

School Effectiveness and Education Quality in Southern and Eastern Africa

The Use of ICT to Support Basic Education in Disadvantaged Schools and Communities in Low Income Countries.

For more information visit www.edqual.org.

This handbook has been published by EdQual RPC and funded by the UK Department for International Development, although the views expressed are those of the Author[s].

EdQual 2010. Permissions are being sought for textbook extracts.

1st Edition

ISBN: 978-1-906675-29-5

CONTENTS

SECT	TON 1: HELPING LEARNERS TO SPEAK	4
1.	Giving opportunities for speaking	4
2.	Speaking in the plenary classroom	
2.1	Asking questions	4
2.2	Prompting	5
2.3	Nominating	5
2.4	Wait time	
3.	Giving opportunities for speaking in pairs and groups	
3.1	Talking in the L1	
3.2	Groupwork skills	
4.	School policy	6
SECT	TON 2: HELPING LEARNERS TO WRITE	
1.	Giving opportunities for writing	
2.	Encouraging writing for meaning	
3.	Encouraging learners to talk about the text	7
4.	School policy	7
SECT	TON 3: TASKS FOR HELPING LEARNERS TO SPEAK AND WRITE	8
1.	Sentence starters	
2.	Word lists	8
3.	A writing/speaking frame	8
4.	Substitution tables	10
5.	Charts and graphs	11
6.	Diagrams	13
SECT	TON 4: HELPING LEARNERS TO READ	14
1.	Try to get each child access to a book	
2.	Giving opportunities for reading	
3.	Giving opportunities for reading for meaning	
4.	Giving opportunities for search-reading	
5.	Encouraging learners to talk about the text	
6.	School policy	
CECT	TON E. HELDING LEADNEDS TO LISTEN	1.0
SECT 1.	TON 5: HELPING LEARNERS TO LISTEN	
1. 2.	Talking clearly	
2. 3.	Using listening support activities	
3. 4.	School Policy	
⊣.	School rolley	10
	TON 6: TASKS FOR HELPING LEARNERS TO LISTEN AND READ	
1.	Ask questions	
2.	Fill in a chart:	
3.	Label a diagram	
4.	Heads and tails	
5.	Sequence	20
SECT	TON 7: HELPING BOYS AND GIRLS TO PARTICIPATE	21
1.	Equal Participation	
2.	Checking	21
3.	Using strategies to encourage participation	21
4.	School policy	

SECTION 1: HELPING LEARNERS TO SPEAK

1. Giving opportunities for speaking.

Learners need the opportunity to talk. They need this so that they can think about what they are learning and show teachers that they understand. In addition, when learners learn in a second language they also need opportunities to speak the language. Teachers can give these opportunities in different ways.

2. Speaking in the plenary classroom.

Learners need to be encouraged to speak in the plenary classroom. You can do this in various ways.

2.1 Asking questions.

Learners need help in answering questions, in both L1 (mother-tongue) and L2 (English). Some are shy. When working in English, some know the answer but can't give it in English.

a) Short answer questions

One way of helping learners answer questions is to use questions with **short answers**, like this:

Q: What is the metal inside a thermometer?

A: Mercury.

You can also use **Yes/No questions**, like this:

O: Does a thermometer have a metal inside it?

A: Yes

You can also ask guestions with **alternative answers**, like this:

Q: Is the metal in a thermometer mercury or iron?

A: Mercury.

Short-answer questions allow you to make questions cognitively difficult, but linguistically easy.

b) Long-answer questions

Sometimes learners also need the chance to give longer answers. This helps them to develop their ideas in L1 or L2. In English, it gives them the opportunity to make full sentences. **Open questions** often require longer answers, like this:

Q: Why should we boil water?

A: It makes it safe to drink.

Q: What causes air pollution?

A: It is caused by chemicals, gases or smoke,

So do questions which ask for **opinions**, like this:

Q: Do you think it is good to have supermarkets? Why?

2.2 Prompting.

You can also help learners give longer answers by giving prompts, in L1 or L2. That means you start the answer for them, like this:

Q: How can we protect plants? One way is to stop cutting down...

Q: What causes erosion? Erosion happens when we remove the...

You can also prompt them to continue by using connectors, such as:

And...? So...? And then...? But... For example...

2.3 Nominating.

Some learners are shy: they may not put their hand up. If you think they can give the answer, nominate them. Try nominating a wide range of learners in a given lesson. Sometimes girls are reluctant to put their hand up. Try nominating boys and girls equally.

If you know a learner knows the answer but can't give it in English, you can ask them to say it in their L1. Don't get into a regular habit of doing this; but use it to help learners talk in the plenary classroom. When a learner gives an L1 answer you can sometimes translate it into English or ask another learner to say it in English.

2.4 Wait time

Some learners need time to get ready to answer, in their L1 and especially in L2. Sometimes you can ask a question and give 'wait time': you wait for some seconds – maybe 10 or 20 seconds – while learners formulate their answers. Tell them you are going to wait while they think. Sometimes you can ask the learners to talk quickly to a partner and formulate their answer before giving it. Tell them you will give them time to agree their answer with a partner – maybe 30 seconds, or longer.

3. Giving opportunities for speaking in pairs and groups.

Not many learners speak in the normal plenary classroom, in L1 or L2. To give a lot of learners a speaking opportunity, they need chances to do pairwork and groupwork. These offer them the chance to think through a question and understand it better. It also gives you a short break from talking at the front of the class!

Give at least one short pair/groupwork opportunity in every lesson (e.g. 5 minutes). You can also give a longer pair/groupwork opportunity or two short opportunities. While the learners talk, go round and listen to them, intervene where necessary, praise, offer ideas etc. When you do this, talk to them in English if possible. Encourage responses either in English or in L1. Pairwork is easier to organise than groupwork: learners don't need to take time to move and form groups.

3.1 Talking in the L1.

When learners talk in pairs or groups, they will naturally use their first language. This is often good for them, even in a lesson where you teach a subject in English: learners need the chance to talk through in their L1 what they have learned in the L2.

When they have finished working in L1, learners in English-medium lessons should be ready to report what they said in their groups in English. You can get them into the habit of this by saying, towards the end of pair- or groupwork time: 'Get ready to report in English'. The learners can then help each other formulate a simple report in English. It is sometimes easier to report in English if the learners have talked in their first language and understood the question well. The learners may need some help in reporting in English. You can see a lot of ways of providing help in section 3.

3.2 Groupwork skills.

Working in groups isn't easy. Learners need to learn some groupwork skills. At the beginning, they will need help with these skills, but with time, they will be able to do groupwork without too much help. The skills learners need for groupwork include:

- How to stick to the task
- How to keep time
- How to make notes
- How to listen to each other
- How to give everybody a chance to say something
- How to give and support an opinion
- How to reach agreement
- How to sum up and get ready to report
- How to report briefly

It is often good for groups to allocate some roles quickly before starting their work, for example:

- Chairperson
- Secretary
- Timekeeper
- Reporter

Teach learners gradually how to work in groups. It will take quite a long time, but after a while they should be able to do it more autonomously. It helps if you teach them to do it in L1-medium lessons, as well as English-medium lessons. In this way they can then transfer the skills more easily to lessons where they have to work – or at least report – in English.

4. School policy.

If all the teachers in the school adopt a policy of using groupwork some of the time, in both L1 and English-medium lessons, learners will learn to do it more quickly. In addition, if they learn these skills well in the L1 first (in L1-medium lessons), they will find it much easier to use them in English-medium lessons later.

SECTION 2: HELPING LEARNERS TO WRITE.

1. Giving opportunities for writing.

Give learners writing opportunities, in both L1 and English: it helps them to think carefully about what they have learned. If possible, give a short writing opportunity (i.e. the learners take a few minutes to write a sentence or two) in every lesson. You can also give a longer writing opportunity or two short opportunities. A longer writing task can take up to 15 minutes. You can also give a writing task for homework – ask the children to bring their writing to the next lesson.

While the learners write, go round and talk to the learners about their writing: offer help, correct, praise, etc. When you do this, if possible talk to them in English. Encourage responses either in English or in L1.

2. Encouraging writing for meaning.

Copying from the board or from a book is sometimes useful, but don't do it too often: learners can do it without thinking either about the content of what they are writing or about how to say something. Learners need to write with meaning, in other words they need to write 'their own' sentences and texts; they need to think about the content of their writing and about the best way to put it into words. You can give them this opportunity by asking them to write about personal things, like their weekend, their diet, their likes and dislikes. If you want them to write about the subject they have learned, you can use a writing support task which makes them think, like this:

	stores water in its trunk		withstand fire.
The baobab tree	loses its leaves		prevent water loss.
The acacia tree	has small leaves	to	cut down water loss.
	has thick bark		reach moisture.
	has long tap roots		help it survive in the dry season.

Many learners cannot write independently without some support: you need to put some support for writing on the board (or find it in a textbook). The task types in section 3 will help learners to write meaningfully. It is very important to get used to using some of these.

3. Encouraging learners to talk about the text.

Sometimes it is useful to encourage learners to work on their writing in pairs or groups. Their writing might be better and they will have the chance to discuss both the content and the form of it. They can talk in their L1. That is good, even in the English-medium classroom. Talking in L1 about how to write something clearly in English is very good for English language development: it helps learners think about the use of English.

4. School policy.

If all the teachers in the school help learners to write meaningfully in these ways, the learners will learn these skills more quickly. In addition, if they learn these skills well in the L1 first (in L1-medium lessons), they will find it much easier to use them in English-medium lessons later.

SECTION 3: TASKS FOR HELPING LEARNERS TO SPEAK AND WRITE.

You can use these tasks to help learners report groupwork in English after talking in L1. In addition, if you want, you can use them to help learners to use at least some English in their pairs and groups. You can also use them to help them write in English (or in L1).

1. Sentence starters.

You can help learners make simple sentences, when they talk or write in English, by starting the sentence for them and putting it on the board. For example, after the class has learned about flood prevention, this may help them talk or write:

Talking about preventing floods

- We could burn fewer...
- We could build...
- We could plant...

It is easy to put sentence starters on the board; for the teacher they are one of the easier ways of helping learners talk or write.

To make sentence starters, what you have to do is to ask yourself: what do I want the learners to say or write? Then you write out the sentences for yourself when you prepare your lesson. Then you shorten them to make sentence starters.

2. Word lists.

You can also help learners talk or write by giving them a group of words. For example, here is a group of nouns and verbs for talking about the water cycle:

Talking about the water cycle

sun heat
water rise
water vapour turn into
wind blow
rain fall
drops run into
flow
condense

To talk using a group of words is a bit more difficult than to talk using sentence starters, because words do not help the learner with the grammar of the sentence.

To make a word list, you have to ask yourself: what do I want the learners to say or write? Then you write out the sentences for yourself when you prepare. Then you reduce them to a list of key words.

3. A writing/speaking frame.

You can also give help by putting headings on the board as well as sentence starters, so that learners can organise their talk or writing into sections. Here are three examples:

My diet

The foods my body needs You should eat 3 kinds of food:andand You needto give you......to You needto help Where to find these kinds of food You can findinin You can findinin My diet These words will help you: I eat a lot of..... I eat too much energy fruit I don't eat enough carbohydrates bread vegetables protein How I should change my diet vitamins milk maize I should eat more..... sugarcane and less/fewer..... Write about the uses of trees. Why are trees good for people? These words will help you: They give us... shade carpenters carving They give us wood for ... builders medicine protection from They give jobs to ... fires carvers wind furniture fruit Why are trees good for the environment? Trees... These words will help you: Leaves...

hold

keep

clean

cover

cover

fertilise

soil

air

water

wet

ground

together

The water cycle

1. Evaporation

The sun warms...
The water turns into...
The water vapour...

2. Condensation

The temperature in the upper atmosphere... The water vapour turns into... The droplets form...

3. Precipitation

The wind carries the clouds... The droplets grow... The drops fall...

4. Complete cycle

Some water runs along... Some water soaks... The river carries...

These words will help you:

bigger
water vapour
rain
cool
surface
sea
water droplets
clouds
sea water
land
ground
rise
water

To make a writing/speaking frame, you have to ask yourself: what do I want the learners to say or write? Then you write out the headings and the main sentences for yourself when you prepare. Then you reduce them to a list of headings and sentence starters – and maybe a word list, as above.

4. Substitution tables.

You can use a table to help learners talk or write. It can help them use simple repeated sentence structures to say cognitively complex things. Here are some examples:

Cardboard

	we make a solid substance cold		become cooler.
If	water evaporates	it will	expand.
	a gas becomes hotter		contract.

The baobab tree The acacia tree	stores water in its trunk loses its leaves has small leaves has thick bark has long tap roots	to	withstand fire. prevent water loss. cut down water loss. reach moisture. help it survive in the dry season.
------------------------------------	---	----	---

You can also make a substitution table which can be used as a dialogue, like this.

Do	cats elephants chickens cows snakes dolphins	have	hair? scales? fur? feathers?
----	--	------	---------------------------------------

Yes they do. No they don't.

To make a substitution table, you have to ask yourself: what do I want the learners to say or write? Then you write out the sentences for yourself when you prepare. Then you make them into a table, as above.

5. Charts and graphs.

A chart is a good way of helping learners talk or write. Charts can help them make a lot of easy, repeated sentences. You can also put them very quickly on the board. Here are some charts which help learners talk or write.

a) Learners put ticks in the chart; then they talk or write

Talking about the properties of materials:

	Plastic (a plastic bag)	Paper	Rock	Wool/ cotton	Rubber
Rough					
Smooth					
Soft					
Hard					
Rigid					
Flexible					
Shiny					
Dull					
transparent					
Translucent					
Opaque					
Bounces		·		_	·
Does not bounce					

Talking about plant and animal cells:

Cell type	Cell wall	Cell membrane	cytoplasm	nucleus	Vacuole
Plant cell					
Animal cell					

Talking about the results of an experiment in dissolving:

	Dissolves in water	Does not dissolve in water
Sugar		
Chalk		
Rice		
Salt		
Flour		
Soap		
Washing powder		
Instant coffee		

b) Learners talk or write using a completed chart.

Talking about the functions of parts of plants:

Roots	Stems	Leaves
Hold the plant firmly in the soil	Hold up the leaves, flowers and fruits of the plant	Make food fro the plant
Absorb water and mineral salts from the soil	Carry water and mineral salts from the roots to the leaves	Absorb carbon dioxide from the air
	Carry food to other parts of the plant	Give out oxygen and water
Store excess food (in some plants)	Store excess food (in some plants)	Store excess food (in some plants)

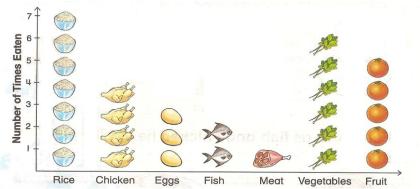
Source: Primary Integrated Science (Ghana)

c) Learners use a chart to make a survey by asking each other questions.

Talking about the results of a class survey on diet:

What did you eat last week?	rice	fish	chicken	eggs	meat	veget- ables	fruit
How many times?							

Then they make a graph:



Talk/write about the graph:

Source: Tee Chin Ho: KBSR Science: Pearson

I	had	rice fish chicken eggs meat vegetables fruit	once. twice. three times. four times.
---	-----	--	--

Here is another example:

Name		
How many family members fetch water?		
Do males or females fetch water?		
How many hours per day do you spend fetching water?		
How far is it between your home and the water source?		
How many litres do you carry a day?		
What type of container do you use?		
How many times a year does the water supply dry up?		
What do you do when the supply dries up?		

You might use sentence starters to help them talk about the results of their survey:

 \dots family members fetch water.

Males/females fetch water.

People spend ...hours a day fetching water.

It is...miles between people's homes and the water.

People carry...litres a day.

People use...

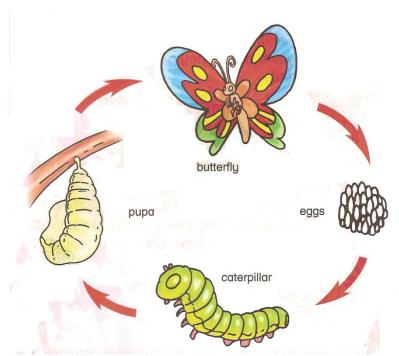
The supply of water dries up...times a year.

When the supply dries up, people...

6. Diagrams.

A diagram can also help learners talk or write. If there is a diagram in the textbook, or if you can put one easily on the board, use it to help learners talk in pairs or groups. You might need to add a substitution table or some sentence starters. Here is an example.

The life cycle of the butterfly



Source: Tee Chin Ho: KBSR Science: Pearson

You can add sentence starters, like this:

First the butterfly lays... Then the eggs... After that the caterpillar... Finally the pupa...

Or you can add a substitution table, like this:

First	the butterfly	lays eggs.
Then	the caterpillar	changes into a butterfly.
After that	the pupa	hatch.
Finally	the eggs	comes out.
		changes into a pupa.

Or you can add a word list, like this:

butterfly lay
pupa hatch
eggs change into
caterpillar come out

SECTION 4: HELPING LEARNERS TO READ.

1. Try to get each child access to a book.

Learning will always be very limited if the learners don't have books. If there aren't enough books in the classroom, try to increase the number, by appealing to parents or in any other appropriate way.

If there aren't enough books in the classroom, it is adequate if there is one book between 2 or 3 learners; i.e. if a child can share a book and read the text.

2. Giving opportunities for reading.

Learners need practice in reading, in both L1 and English. Practice in reading in L1 is also useful for reading in English: the learners will transfer some of the reading skills from L1 to English. In addition, learners need extra practice in reading in English, because they are not confident in the language and because they will learn a lot of vocabulary from their textbook. They also need practice in reading in English if their textbooks are all in English.

Give reading opportunities. If possible, give one in every lesson. The reading task should not take up too much time: 5 minutes reading time is adequate. Then you need time to check and discuss what the learners have read. It can take longer, but it is still good practice if it takes just a short time. The more you and the learners become accustomed to doing quick reading tasks, the less time they take.

Give time for:

- the learners to read
- you to check their understanding and discuss what they have read

3. Giving opportunities for reading for meaning.

Encourage the learners to read silently and to search for meaning. Reading aloud is sometimes useful in the English lesson. But it can take up a lot of time and is often not necessary, especially in the science or maths classroom; the children may also read without understanding, which can waste time.

Help the learners search for meaning by giving them a reading task. For example, tell them to find the answer to a question: to do this they have to search the text, silently and as quickly as they can. You can see a lot of reading support tasks in section 6. It is important to get practice in using these: learners will find it difficult to read without them, especially in English.

4. Giving opportunities for search-reading.

Occasionally give opportunities for search-reading (or scanning). i.e. the learners do not read along the line, but downwards, from side to side, like this:



Encourage them to find the information as fast as possible; a competition for the fastest reader is sometimes good, or set a time limit (e.g. 10 seconds for a simple question, 20 seconds for something more difficult; gradually reduce the time you allow). This activity gives them confidence that they can be master of the text, not the other way round. If you can, teach the learners to do this first in their L1: then they will do it more easily in English.

5. Encouraging learners to talk about the text.

After learners have done a reading activity, get them sometimes to quickly compare their answers: if they are different, get them to discuss (in their L1) who is right. It is often very good for learners to talk in their L1 about what they have read in English.

6. School policy.

If all the teachers in the school help learners to read meaningfully in these ways, the learners will learn these skills more quickly. In addition, if they learn these skills well in the L1 first (in L1-medium lessons), they will find it much easier to use them in English-medium lessons later.

SECTION 5: HELPING LEARNERS TO LISTEN.

1. Giving support for listening.

Learners do a lot of listening: teachers often talk from the front. Even in the L1, it's important to teach them how to listen carefully. When they learn in English, listening becomes more difficult and support becomes more necessary.

2. Talking clearly.

One way of helping learners listen, in L1 and English, is to talk clearly. You can help yourself do this by:

- using visuals to help learners understand (e.g. objects, diagrams, charts, drawings in the textbook and on the board)
- using body language (e.g. hands, facial expressions, etc.)
- using your voice to keep learners' attention (e.g. loudness, softness, high, low etc.)
- putting the main ideas in the lesson on the board
- announcing the contents of the lesson at the beginning
- summarising each point, summarising at the end
- numbering all the main points you make
- writing important terms on the board
- checking learners' faces to see if they understand

3. Using listening support activities.

You can also help learners to listen carefully by giving them an activity to do while they listen to you. You can, for example, give them a question (or questions) to answer while they listen. You can also give them a chart or table to fill in. Section 6 contains a lot of tasks you can use to help learners listen carefully.

4. School Policy.

If all the teachers in the school help learners to listen carefully in these ways, the learners will learn these skills more quickly. In addition, if they learn these skills well in the L1 first (in L1-medium lessons), they will find it much easier to use them in English-medium lessons later.

SECTION 6: TASKS FOR HELPING LEARNERS TO LISTEN AND READ.

You can use these tasks to help learners to listen carefully to you, or to read the textbook, in either L1 or English.

1. Ask questions.

Ask learners questions <u>before</u> they read a text. Questions are a simple way of getting learners to search for meaning. You can set questions easily. Write the question on the board. Start with simple ones, like this:

What happens if we remove the forest?

1. Land and Forest

Farmers clear the land before they can make farms. Builders also clear the land before they can build houses. If we clear the land for farming and building purposes, we remove the vegetation. When we remove the forest the land becomes bare of vegetation. This allows rain water or wind to remove the top soil of the land and destroy it. This is called erosion. We remove the forest when we clear the land. The removal of the forest is known as deforestation.

We damage or endanger the forest if we fell all trees. We endanger the land and the forest when we burn the bush. We also endanger the soil when we put too many animals on the same piece of land for too long. This is called overgrazing. We also endanger the land when we dump toxic or poisonous waste on it.

Source: Environmental studies for primary schools Book 4 (Ghana)

Then use more difficult ones; like this:

What is erosion?

You can also use questions to help learners listen carefully to you. When you introduce a new topic, put a question (or questions) on the board first. Tell the class you are going to talk about the topic for 5 or 20 minutes. When they have finished, they should have found the answer to the question(s).

Imagine you are going to talk to them about lions. First put these questions on the board.

How much do lions eat? How long do lions sleep? How far can lions jump?

Then talk with the class about the topic, covering the following points.

Lions usually live together in groups. Sometimes more than 30 lions live together. They like living together. They often greet other lions and play with the baby lions in the group.

Lions eat a lot of meat. They usually eat about 5kg of meat a day. They sometimes eat 25kg in one day!

Lions also sleep a lot. They usually sleep about 20 hours a day.

Lions can run very quickly. They can also climb trees. They sometimes sleep in trees. Lions can also jump a long way. They can jump 10 meters.

There are not very many lions in Africa now. They are dying because they cannot find food.

2. Fill in a chart.

You can help learners listen carefully to you, or read a text, by getting them to fill in a chart. Here is an example of a chart to help learners read:

The female crocodile lays her eggs in a hole in the sand of the river bank. She covers the eggs with sand and guards them for about 13 weeks. The eggs are large and the shells are soft like skin. They are not hard, like chickens' eggs.

The female fish lays her eggs in the water. Most fish lay thousands of very small eggs. The eggs have a soft shell. Many fish leave their eggs when they have laid them.

Hens lay about 6-10 eggs. The eggs have a hard shell and are about 5 cm long. The hen lays them in a nest in a safe place. She sits on them and keeps them warm. After about three weeks, the baby chickens hatch.

Source: Science and Technology for All Grade 5 (South Africa)

	fish	crocodiles	chickens
Where are the eggs laid?			
Are the eggs big or small?			
What do the eggs have round them?			
How do the parents take care of the eggs?			

You can also use charts as a way of helping learners listen carefully to you as you talk. Imagine you are going to talk with the class about vegetables. They have to fill in a chart as they listen and talk in the plenary classroom. Here is a chart (you may need to use different vegetables).

Food from plants

We can eat the parts of some plants. Tick the right box for the part we eat.

	leaves	root	fruit
carrot white			
lettuce			
apple			
peach 💍			
beetroot			
cabbage			
grapes			

Source: Hall 1992 At Home with Science. Oxford University Press.

You can make a chart for a reading text if the information in the text is organised in some way, as in the texts above. It isn't always so well organised.

3. Label a diagram.

You can also help learners listen or read by asking them to label a diagram, like this:

Read the text and write labels in the boxes

Source: Williams. Biology for You. Stanley Thornes

On each side of the heart there are two chambers.

The upper chambers are called **atria** (singular **atrium**).

Blood empties into them from veins.

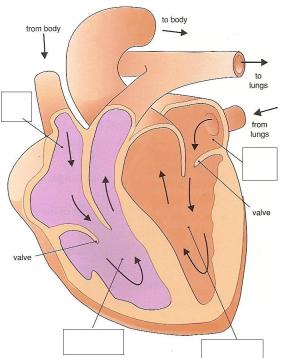
When the atria contract they pump blood in to the lower chambers.

The lower chambers are called **ventricles**.

These have much more muscular walls.

When the ventricles contract they pump the blood out into arteries.

Between each atrium and ventricle is a **valve**.



The arrows show how the blood moves through the heart

4. Heads and tails.

You can also get the class to read carefully by making a 'heads and tails' activity, like this: learners have to draw arrows to match the beginnings and ends of sentences, or they write out the full sentences.

The microscope

The eyepiece lens
The objective lens
The stage
The mirror
The focus control

holds the slides.
gives a sharp picture.
makes things look bigger.
shines light through the slide.
makes things look bigger.

Source: Orientation secondary course Science Book 1 (Zanzibar)

To make a heads and tails activity, when you prepare your lesson, write out a set of sentences. Split them in half. Jumble up the 'tails'. Make sure the learners have to use their knowledge of the topic to join the heads and tails. Make sure it isn't too easy.

5. Sequence.

You can also get students to read carefully if you ask them to sequence set of sentences, like this:

Write the sentences in the correct order

- a) The larvae change into pupae.
- b) Small white animals come out of the eggs; they are larvae.
- c) The pupae break open and new flies come out of the pupae.
- d) The male and female fruit flies mate.
- e) The larvae eat the fruit and grow bigger.
- f) The female fruit-flies lay eggs in fruit

To make a sequencing activity, write out a sequence of sentences (from science, or from a story, for example). Then put them in the wrong order. Number them. Here is another example. The diagram which goes with this activity is below.



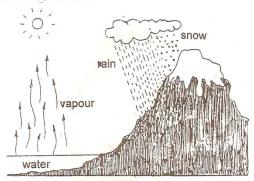
Put the following sentences in order to describe the water cycle. The first and last sentences have been numbered. Write out the sentences in the correct order.

The water vapour cools and condenses to become clouds.

- Heat from the sun makes sea water evaporate.
 Evaporation produces water vapour.
 The clouds are made of drops of water. The large ones fall as rain.
- (6) The rivers carry the water back to the sea. If it is very cold, the rain falls as snow.



Copy the diagram into your books.



Source: Orientation secondary course Science Book 1 (Zanzibar)

SECTION7: HELPING BOYS AND GIRLS TO PARTICIPATE.

1. Equal Participation

It is important for boys and girls to participate roughly equally in the lesson, in L1 and English. Sometimes girls are more reluctant to participate, sometimes boys. For example, they may be more or less willing to:

- Put their hands up
- Talk in the plenary classroom
- Give longer responses in the plenary classroom
- Talk in small groups
- Write or read

It is sometimes suggested that girls take a less prominent part in lessons than boys. In addition, they may be more or less willing to take part in lessons in English. Sometimes it is suggested that girls are more shy about useing English, but sometimes it is felt that they are more willing to talk in a second language than boys.

If you notice that girls or boys are on average more willing, or less willing to do these things, it may affect their achievement and progress in school in the long term.

2. Checking.

It is useful to check whether girls and boys are participating equally. This may differ according to whether the lesson is in L1 or English, whether they are working in the plenary classroom or in groups or pairs. It may depend also on the subject, or the gender of the teacher.

It is also useful to check your own teaching habits. Do you, for example, tend to nominate boys more than girls, or vice versa? Do you try to encourage both boys and girls equally?

3. Using strategies to encourage participation.

If you feel that either boys or girls are participating less, it is important to take steps to enable them to increase their participation. You can, for example:

- Nominate girls or boys more then you normally do
- Encourage longer responses from girls or boys if you think their responses are normally short
- Allow pair or groupwork if you think girls or boys work better in pairs or groups
- Allow pair or groupwork in the L1 if you think girls or boys are reluctant to talk in English
- Give opportunities for reading and writing if you think girls or boys work better in that way

4. School policy.

If all the teachers in the school pay attention to whether boys and girls are responding well in all circumstances, it will be easier to ensure equal participation.

EdQual RPC - Implementing Education Quality in Low Income Countries

Contact:

EdQual RPC Graduate School of Education 35 Berkley Square BRISTOL BS8 1JA T 0044 (0)117 331 4288 F 0044 (0)117 925 7584

www.edqual.org

