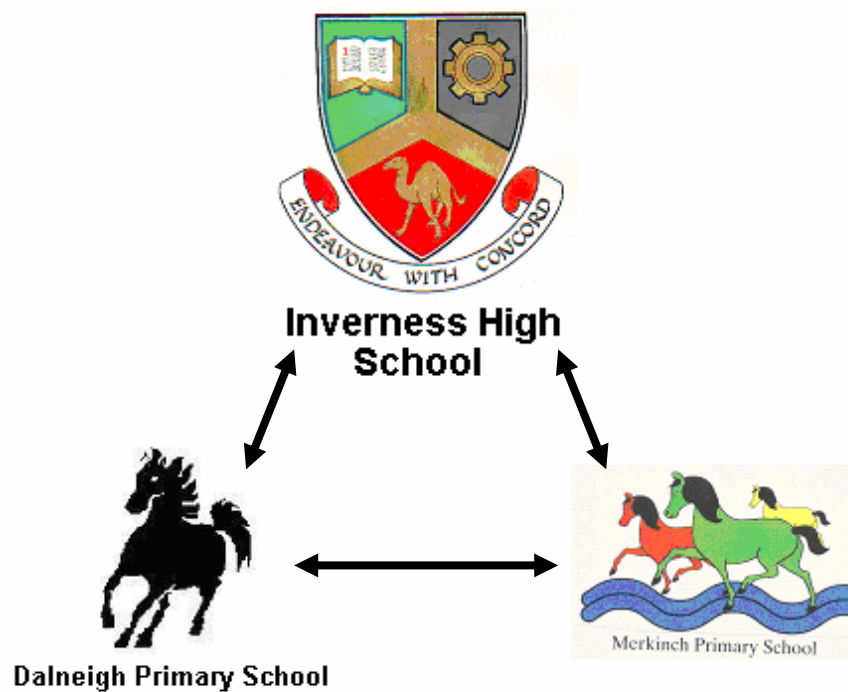


Building Bridges Project Inverness 2003/04

Developing Comprehension Skills P7



Reciprocal Teaching Handbook for Teachers

***Based on work done by Anne McNally,
Educational Psychologist, Stirling Council***

Introduction

Reciprocal Teaching is an excellent way of carrying out group reading. It aims in particular to promote comprehension and comprehension monitoring. The pupils work together in mixed ability groups helping each other make sense of what they are reading. Reciprocal Teaching develops metacognition in children – it helps them become more aware of their own knowledge and thinking.

What is Reciprocal Teaching

Reciprocal Teaching is an activity that takes place during the group reading of a piece of text. The pupils read the text aloud and the teacher uses strategies to facilitate understanding of the text. There are four main strategies:

- Predicting – hypothesising what the text is about
- Clarifying – picking out any difficult words or sections in the text and trying to make sense of them
- Questioning – asking questions about the text
- Summarising – selecting and identifying the main ideas in the text

Implementation

There are two phases of implementation

1. Instruction

Here the class teacher models one strategy at a time to the children through demonstration and modeling. The teacher controls the group activity. The children must become very familiar with the names of the strategies and the task each involves.

2. Independence

Gradually the children become more independent and use the strategies for themselves. The teacher reduces his/her support accordingly. Eventually the groups should be able to work independently using Reciprocal Teaching, with the teacher focusing his/her attention where it is most needed. By this stage a group 'chairperson' will have been allocated to take over the role of the teacher to some extent. There is also a group 'clarifier' – one pupil who is responsible for providing correct clarifications (using a dictionary) whenever the group cannot provide this. A third group member may be allocated a role as group 'recorder'. This pupil is responsible for keeping a running record of how many summaries, predictions, clarifications and questions the group produces each session. A fourth group member will be the group "reporter"- a pupil who will report back to a group or class.

The group moves gradually from instruction to independence. They must become proficient in one strategy before learning another. In this way, the different groups in a class will move at quite different rates – some groups will become independent in all strategies while others may become independent in one strategy but still require support in others.

How to teach Reciprocal Teaching

Introductory Discussion

Before reciprocal teaching is to be taught there needs to be a discussion on “roles and rules”. The optimum group size should be six of mixed ability. Within each group the following roles would be identified:

- Chairperson (initially the teacher)

The chairperson manages the group discussion, helping to make sure everyone is on task and participating; and where appropriate, reads the script.

- Clarifier

The clarifier is responsible for checking words in the dictionary and providing definition.

- Recorder

The recorder writes down the words clarified and during questioning, they record the number and type of questions on the appropriate sheet. When summarizing, the recorder highlights the text.

- Reporter

The reporter reports back to the class or teacher, when appropriate.

These roles should be rotated at the start of each group session.

Pupils should follow rules for group discussion. The pupils should generate rules. These may include:

- Listen actively
- Take turns
- Encourage everyone to speak and respond positively

Definition of roles and the rules should then be displayed.

Group Resources

Dictionary
2 colours of highlighter
Photocopied text
Colour coded recording sheets
Script cards
Role badges

Teaching Predicting

Predicting is describing what the text might be about. It is taught as a precursor to each of the other strategies. Using a variety of prompts, from non fiction texts (titles, illustrations, contents pages, headings, diagrams, bullet points etc.) children are encouraged to make reasoned predictions about the content of the text. The group will use brainstorming to make predictions about the text. During the group work it should become apparent whether or not the prediction was correct.

1. *Chairperson: What do you think happens in the passage?*
2. *Group members respond*
3. *Chairperson: "What clues made you think this?" then "or could anything different happen?"*

Teaching Clarifying

Clarifying means picking out a difficult word or phrase and asking what that particular word or phrase means.

The teacher (modelling the role of a group member) reads the text aloud, then uses the following script:

1. Chairperson: Are there any words we need to clarify?
2. Responses may be taken from pupils or the teacher will suggest some.
3. Chairperson: Could you tell the group where the word is?
4. Chairperson: Can anyone help to clarify this word?
5. Accept two or three suggestions from the group
6. Chairperson: Clarifier, can you look _____ up for us?
7. Clarifier gives definition
8. Chairperson: Are there any other words we need to clarify?...

Teaching Questioning

Questioning is a way of finding out information about a piece of text by asking someone else about it.

The text is read aloud like the one below and then questions are generated by the group based on what, **who, where, why, when and how**. Both *literal* and *inferential* questions are asked.

1. Chairperson: Does anybody have a question?
2. Group members ask questions.
3. Chairperson: That's a (who, what, where, why, when) question. Can anybody answer the question?
4. Replies should be in full sentences.
5. Chairperson: Are we happy with the answer?
6. (If yes) Chairperson: Does anybody have another question?
7. (If no) Chairperson: Can anyone else answer the question?
8. Continue until the group have no more questions.
9. The recorder should tick the number of different types of questions.

Inferential questions will require the most modelling. Pupils will begin to understand the importance of asking and answering inferential questions and reading between the lines. Phrases such as "What do you think?" and "Why might this be?" will help with modelling.

Example

It was the first day of the holidays and the family were getting ready to go to the beach. Everybody was busy doing something and the dog kept getting in everybody's way.

Questions

Where was the family going? (Literal)

Who was getting in the way? (Literal)

What sort of things would the family be doing? (Inferential)

How do you think they will get to the beach? (Inferential)

What sort of day might it be? (Inferential)

Teaching Summarising

Summarising involves giving a brief outline of a passage or story, noting the main ideas. The method used is "trash and treasure"- the text is read in short sections, using a red highlighter to identify parts of non-essential information; the green highlighter is used to identify essential information to create the summary. The passage is read aloud. The teacher (modeling a group member) then gives a brief summary of it.

1. *Chairperson: Let's find the main ideas using trash and treasure*
2. *The text is read in short sections by a group member.*
3. *Recorder highlights main points on photocopied text sheet, asking, "What is the trash? (Red marker) What is the treasure? (Green marker)*
4. *The recorder reads back to the group the main ideas highlighted in green.*
5. *The reporter summarizes in two or three sentences.*
6. *General consensus of an accurate summary.*
- 7.

● **Alternative approaches to summarising**

In Dalneigh, this alternative developed as some groups became caught up in arguing whether or not to trash or treasure individual and often insignificant words rather than focus on what the passage was about.

1. *Chairperson: Let's find the main ideas using trash and treasure.*
2. *Recorder reads text in short sections.*
3. *Recorder highlights main points on photocopied text sheet, asking, "What is the trash? (Red marker) Trash is:*
 - *Extra information*
 - *Explanations*
 - *Examples*
 - *Illustrations*
 - *Repetition*
4. *Recorder: What is the treasure? (Green marker)*
5. *The group ruthlessly select up to 5 main points that summarize the passage.*
8. *Chairperson: Let's read the main ideas (the reporter read back the summary to the group.*
9. *Chairperson: Are we happy with the summary?*
10. *The process continues until the group agrees.*

In Merkinch, as a development on from using the red and green pens to highlight trash and treasure, the children then began to just use the green pen for main ideas.

When using fiction text, it was found to be very time consuming to highlight the entire chapter, so the children have now been encouraged to read the entire chapter first. They are then asked to close the book and retell the chapter in their own words. The recorder writes this summary and it is read to the class during the reporting back session.

Concluding Statement

As pupils become more skilled and confident in reciprocal teaching strategies, they should be able to use these skills in other curricular areas.

Clarifying

Are there any words we need to clarify?

A group member asks to have a word clarified.
The Clarifier begins to look up the word.

Could you tell us where the word ----- is?

The group member identifies the paragraph and line.

Can anybody help to clarify the word -----?

Accept 2 or 3 suggestions from the group.

Clarifier, can you tell us what ----- means?

Clarifier gives the meaning that is discussed by the group.

Are there any other words we need to clarify?

Continue until the group has no more words to clarify.

Group _____

Date _____

Recorder _____

Words clarified

Total _____

Questioning

Does anybody have a question?

A group member asks a question.

That's a ----- question. Can anybody answer the question?

Group members take turns to offer answers to the question in full sentences.

Are we happy with the answer?

If yes

Does anybody have another question?

If no

Can anyone else answer the question?

Continue until the group has no more questions.

Group _____

Date _____

Recorder _____

Questions asked

Questions		Total
What?		
Who?		
Where?		
Why?		
When?		
How?		
Other		

Summarising

Let's find the main ideas using trash and treasure.

The text is read in short sections by a group member.

What is trash?

**The group offers suggestion of what is trash.
The recorder highlights trash with a red marker.**

What is treasure?

**The group offers suggestion of what is treasure.
The recorder highlights treasure with a green marker.**

Let's read the main ideas.

The text highlighted by the recorder in green is read back to the group.

Are we happy with the summary?

Continue until the group agree.

Summarising- an alternative approach

Summarising means finding the main point of the passage.

Treasure

Key information

Ask yourself: What is this passage about?

Trash

Extra information

Explanations

Examples

Illustrations

Repetition

Look for: such as...
 For example...
 This means...
 Which are...

Building Bridges Project Inverness 2003/2004

Developing Comprehension Skills in P7 using Reciprocal Teaching

Case Study



**Inverness High
School**



Dalneigh Primary School



Report compiled by
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Context

School Context

The Roll

Inverness High School 474 (27% free school meals)

Merkinch 251 (65% free school meals)

Dalneigh 220 (43% free school meals)

The project involved Inverness High school and two of its feeder primaries Merkinch and Dalneigh. The Local Authority had identified the three schools as having attainment in reading and writing in 5-14 National Tests below the national average.

Representatives from each of the schools attended the first National Conference for the Building Bridges Project in June 2003. All representatives were impressed with the Stirling group's workshop on Reciprocal Teaching and the presentation given by Ed Psychologist, Anne McNally. We decided to make this the focus for our project as we felt Reciprocal Teaching would enable us to address the issues of Raising Attainment in Literacy and of Inclusion in line with National Priorities.

Luckily Merkinch Primary had already identified improving attainment in reading as a focus for the development plan and Dalneigh were able to include the project under the Raising Attainment section of their development plan.

All schools felt that reading for information was an area that needed developing and so PT Science, Helen Hunter was invited to join the project. The project was therefore added to the development plan in both English and Science in the High School.

Key Focus

- To develop literacy across the curriculum, working with Secondary specialists in English and Science (QI 1, 3.3)
- To develop staff and pupil skills in Reciprocal Teaching (QI 3.1, 3.2)
- To raise and sustain achievement and attainment in reading in P7 by challenging strong readers and supporting developing readers (QI 2.1)
- To motivate and engage pupils with text to close the underachievement and gender gap (QI 3.3, 3.4)

What makes our project different is that, rather than Primary and Secondary staff working in their own schools, we decided to take the opportunity provided and use the funding to release Secondary staff to work collaboratively with Primary colleagues within the P7 classes. We felt that this would enable us to develop a consistent approach to delivering the 4 reading skills in the three schools. In addition, by focusing on P7 pupils, Secondary staff were able to build relationships with pupils prior to transfer to the High School. This approach therefore facilitated other aims of the project:

- To ease the transition from Primary to Secondary school by enabling pupils to build relationships with Secondary staff prior to transfer (QI 4.8)
- To develop collaborative working, critical friendships and the sharing of effective practice between Primary and Secondary colleagues. (QI 4.8)

Development of the Project

Management

Involved in the project were: Quality Development Officers; Head Teacher and Depute Head/P7 teacher, SFL teacher and Learning Support Auxiliary from Dalneigh; Depute Head/SFL teacher, P7 teacher, Learning support Auxiliary and Classroom Assistant from Merkinch; Depute Head, Inverness High School, PT English and PT Science. Also consulted were Educational Psychologists from Stirling and Highland.

Development meetings were held prior to delivery of the methodology to the pupils. These meetings were used to:

- Discuss the methodology and background reading of Reciprocal Teaching.
- Draw up an action plan in consultation with the Authority Quality Development Officer
- Agree Neall Analysis as a baseline test on recommendation of Bernadette Cairns, Educational Psychologist (Highland).
- Develop the handbook based on material written by Anne McInally, Educational Psychologist (Stirling).
- Develop scripts for pupil use.
- Develop record sheets for pupil use.
- Agree timescale for delivery of methodology.
- Decide on a suitable non-fiction text.
- Allocate staff to be involved in delivering the project.

Organisation

All P7 pupils were given a baseline test using Neall Analysis. Pupils were then grouped by mixed ability and mixed gender with an optimum group size of 6. Each group had their own tray containing all the necessary text, scripts, recording sheets, badges and highlighters.

An introductory session with pupils and staff identified the roles and rules for group discussion.

Pupils generated some of the following rules:

Listening actively
Take turns
Encourage others to speak
Respond positively to others

Roles of the group:

Chairperson
Clarifier
Recorder
Reporter
(Refer to Handbook for explanation of roles.)

Implementation

At the development meetings it was agreed that a regular slot in the weekly timetable of 40-60 minutes would be set aside for collaborative working to deliver the 4 skills. The PT English would work alongside staff and pupils in Dalneigh Primary School while the PT Science would work alongside staff and pupils in Merkinch Primary School. This session would be reinforced with a further session at another time in the week, led by the class teacher.

There was a high ratio of staff to pupils to implement the project in its initial stages, with one adult to each group.

The pupils were taught the 4 skills of Reciprocal teaching modelled by an adult in the role of chairperson and following the scripts. The 4 skills are:

- Predicting
- Clarifying
- Questioning
- Summarising

The three skills, Clarifying, Questioning and Summarising were introduced and reinforced over a two-week period, with Predicting being reinforced before each of the other skills.

Gradually the pupils became more independent in using the skills and the adult role of chairperson was given over to one of the pupils in the group, with staff adopting a more supportive role and moving between groups.

At the end of each session attended by a member of the High School staff plenary sessions took place to allow staff from both schools to collaborate and discuss experiences. This was felt to be very important to develop good working relationships between all staff, to evaluate the pupils' experiences and to inform the planning of the next session.

Sessions supported by Secondary PTs ran from October 03 to February 04. Both primaries continued to run sessions weekly until May 04 when retesting using Neall Analysis took place.

Both Primary Schools informed parents about the project through presentations by the pupils.

Differences in Implementation

In Dalneigh the session took place once a week at the time when the PT English was available to work with a group. These sessions focused on the non-fiction science text. While initially there was no other formal session involving the whole class, pupils were encouraged to transfer the skills to other areas of the curriculum, such as Environmental Studies and the Reading Scheme. Once pupils were confident using the skills a second formal session took place later in the week.

In Merkinch the sessions initially took place twice a week, one of which was supported by the PT Science, focusing on the non-fiction science text. After the pupils were confident with the skills Merkinch decided to increase the sessions to three times a week, with the third focusing on fiction texts.

Evaluation

Plenary sessions in both schools identified that:

- The methodology was very popular with pupils and staff.
- Pupils were motivated and engaged with the texts.
- Pupils became skilled in supporting each other.
- Confidence of less able readers was boosted.
- Non-readers were involved in accessing challenging texts.
- Pupils of all abilities were able to take on roles within the group.
- Boys disaffected with reading were particularly engaged with the methodology.

Predicting

Predicting was carried out at the start of each session. Pupils readily used titles, sub-titles and pictures as clues to predict the content of the texts. It was noted that pupils were transferring this skill to other areas of the curriculum such as personal reading and Environmental studies.

Clarifying

During the session pupils recorded the words and phrases they required clarified. They searched for clues in the text to help them work out the meaning and confirmed the meaning using a dictionary. In the early session adult support was needed to encourage the pupils to use the context of the word/phrase to find its meaning. Over time pupils became more confident in using this skill and became less reliant on the dictionary.

Questioning

During the session pupils recorded the types of question being asked. This enabled staff to monitor the balance of literal and inferential questioning. Unsurprisingly, the non-fiction sessions promoted mainly literal questions.

As the weeks progressed pupils in both schools showed evidence of enjoying being able to ask their own questions and began to make links between chapters in the text and to refer closely to the text to find answers. It was noted that boys often drew on their general knowledge and experiences beyond the text to provide an answer to a question.

All pupils gained confidence in answering their own questions without having to refer to the teacher and they particularly liked it when the teachers did not know the answers either! This provided opportunities to discuss other ways of accessing information and pupils sometimes followed up the sessions with reference to other texts, the Internet or occasionally asking the specialist science teacher.

In Merkinch, when the pupils were discussing fiction texts, finding answers was less straightforward as the questions asked were often inferential. What was interesting about this was that pupils engaged in a lot more discussion to come to an agreed answer.

Summarising

Summarising was the most challenging of the skills for the pupils. Development meetings had identified the 'trash and treasure' method of summarising, where the pupils used red highlighters to identify the 'trash' (which they rejected) and green highlighters to identify the 'treasure', which formed their summary.

In Dalneigh, initially this seemed to work, but it became apparent that groups were becoming bogged down in arguing over particular words and phrases rather than the main ideas of the passage. After discussion at the plenary session, it was agreed that a further session on summarising would take place led by the PT English, who developed a support sheet 'Summarising – an alternative approach'. This refocused the pupils' attention on the need to identify 'treasure' as the main points for the summary and offered them support in identifying which parts of the text might be 'trash'.

In Merkinch the sessions using 'trash' and 'treasure' worked well and after gaining confidence in summarising, pupils decided they no longer needed to use the red highlighter to eliminate 'trash', but only used the green highlighter to pick out 'treasure' and so form their summary.

However, the third session in Merkinch soon showed this method of summarising to be inappropriate for fiction texts. After discussion amongst the staff it was felt that whole chapters were too big to be summarised using this method. It was decided that the pupils would provide an oral summary. After reading the chapter pupils were asked to close the book and retell in a few sentences the main idea of the chapter. A later development was that the recorder from the group would scribe this oral summary.

In Merkinch it was noted that after the pupils had become confident in using the skills, motivation waned as pupils became bored listening to other groups reporting back on a text which they themselves had also discussed. When the class project moved on from Science to World War Two, the decision was taken to have each group discuss a different text on the same theme. This restored the pupils' motivation and engaged the attention of the pupils again.

Additional Activities

Pupils from both primary schools attended events hosted by Inverness High School such as the Science Roadshow and a World Book Day event.

Both P7 groups also took part in a session in the High School English department where they discussed a fiction text. This created an opportunity for the PT English to discuss the differences in questioning and summarising between non-fiction and fiction texts with the pupils and to evaluate with the pupils the different strategies they had employed.

Towards the end of the academic session pupils from each of the Primaries visited the High School to take part in a combined Reciprocal Teaching session. It was evident that although the pupils' experiences of the project had differed in the two schools they were able to work collaboratively to apply the 4 skills to the text they were presented with. This session was videoed to provide an aid to rolling out the project to other staff and pupils.

General observations

- Discussion skills developed through reciprocal teaching were transferred to other areas of the curriculum such as the Reading Scheme, Environmental Studies and Talking and Listening activities.
- The transition process from Primary to Secondary was made more effective for pupils through the development of relationships with High School staff throughout the 2003/04 session.
- Feedback from HMI, who inspected Dalneigh Primary during the course of the project, was positive and encouraging.
- Building Bridges Project improved liaison between staff in all three schools. As a result Opportunities also arose to share resources between staff e.g. a science unit of work was provided as a project for P7 pupils in Merkinch.
- Reciprocal Teaching was deemed to have had a positive impact on Learning in the classroom. Staff were impressed by the independence shown by pupils during the Reciprocal Teaching sessions which also impacted on their other learning, as increased confidence led to them seeking answers from their peers and relying less on the teacher giving the 'correct' answer.
- Reciprocal Teaching also had a positive impact on teaching methodologies. Staff enjoyed the discussion with pupils both during the group discussion of the texts and the plenary sessions. It was generally felt that, while it can be a big step for staff to

hand over control to pupils, it is a valuable process in encouraging independent learning. All teaching staff were keen to adopt this methodology in other areas of their teaching.

- It was noted that pupils were more skilled in tackling the sections of the 5-14 reading National Tests that require them to match meanings and to complete cloze passages.
- In Merkinch, by the end of 2002/03 session 18% of pupils had attained Level D or above in the 5-14 National Test of Reading. By the end of the 2003/04 session 42% of pupils had attained Level D or above in the 5-14 National Test of Reading, an increase of 24%.
- In Dalneigh, by the end of 2002/03 session 51% of pupils had attained Level D or above in the 5-14 National Test of Reading. By the end of the 2003/04 session 61% of pupils had attained Level D or above in the 5-14 National Test of Reading, an increase of 10%.

Results of Reading Project in Dalneigh

26 P7 pupils took part in the project. Before starting the project they were tested using a standardised reading test, Neall Analysis, to measure reading comprehension.

As 9 were already within 7 months of the upper limit of the standardised test for reading comprehension, they were not retested.

17 pupils were retested after 7 months and results were as follows:

- The average increase in reading comprehension was 7.2 months.
- The largest increase in reading comprehension was 2 years and 10 months.
- 3 pupils had an increase in reading age of 3 months but these pupil have significant problems with processing language.
- 3 pupils had decreased in reading age. These pupils had significant problems in group interaction and disrupted learning.
- 7 of the 17 had made significant gains beyond chronological expectations.

During the retest, pupils were seen to be using the skills taught in the project to scan the text for the keywords and to use clues in the text to clarify understanding.

Results of Reading Project in Merkinch

36 P7 pupils took part in the project. Before starting the project they were tested using a standardised reading test, Neall Analysis, to measure reading comprehension.

As 14 were already within 7 months of the upper limit of the standardised test for reading comprehension, they were not retested.

One pupil who has Learning Difficulties was well below the <6 threshold and was not retested.

21 pupils were retested after 7 months and results were as follows:

- The average increase in reading comprehension was 9.9 months.
- The largest increase in reading comprehension was 3 years and 7 months.
- Only 1 pupil had decreased in reading age. She was having difficulty seeing the print.
- 14 of the 21 had made significant gains beyond chronological expectations.

During the retest, pupils were seen to be using the skills taught in the project to scan the text for the keywords and to use clues in the text to clarify understanding.

Significant increase in reading comprehension was noted in both schools. Greater gains were noted in the results in Merkinch where Reciprocal Teaching took place three times a week, in comparison to Dalneigh where a formal session was held weekly.

Next Steps

Inverness High School

The P7 group involved in the project are now the S1 group in Inverness High School. Currently these pupils, who have already developed skills in Reciprocal Teaching, are participating in rolling out the project to staff in the English department and to pupils from other feeder Primaries who have not previously been involved in the project. Roll out of the methodology will also take place in the Science department after which it is intended to rollout the methodology to other departments in the school.

The attainment of pupils from the project will be tracked to the end of S2.

Merkinch Primary School

In Merkinch the Reciprocal Teaching methodology is being rolled out to involve Primary 6 and Primary 7 pupils. All staff in the upper primary will be effective in using the Reciprocal Teaching methodology. Pupils will use skills learned through Reciprocal Teaching across the curriculum.

Dalneigh Primary School

In Dalneigh the 4 skills of Reciprocal Teaching were taught to the P6 class before the Summer holiday. This meant that on return from holiday, the new P7 already knew the skills and could quickly move onto working more independent group work. The P7 teacher was using these sessions to train 2 more class teachers so that the methodology could be rolled out to the P6 pupils after Christmas.