

Promoting group work, collaborative and co-operative learning in the primary school

Tip sheet for teachers

Introduction

'While it is important that children experience a variety of classroom organisational frameworks, working collaboratively provides learning opportunities that have particular advantages. Children are stimulated by hearing the ideas and opinions of others, and by having the opportunity to react to them. Collaborative work exposes children to the individual perceptions that others may have of a problem or a situation. These will reflect the different personalities and particular abilities of other members of the group and make for an interactive exchange that will help to broaden and deepen individual children's understanding. Moreover, the experience of collaborative learning facilitates the child's social and personal development, and the practice of working with others brings children to an early appreciation of the benefits to be gained from co-operative effort.'

(Primary School Curriculum Introduction, p. 17)



The use of pair work and group work as a teaching and learning methodology is of great benefit to all children. Through participation in group work, the children learn from and with one another. The children will learn to clarify and consolidate their thoughts and to generate ideas by working within groups. The children hear the ideas and opinions of others, and they are exposed to different perceptions of problems and/or situations. The range of personalities in the group makes for interaction that broadens the children's understanding of the area that is being studied or investigated. It helps to develop the children's language and

higher order thinking skills. It is of special benefit to shyer children who may be reluctant to speak and/or contribute in front of the whole class. Participation in group work also helps the children to develop important social and personal dimensions.

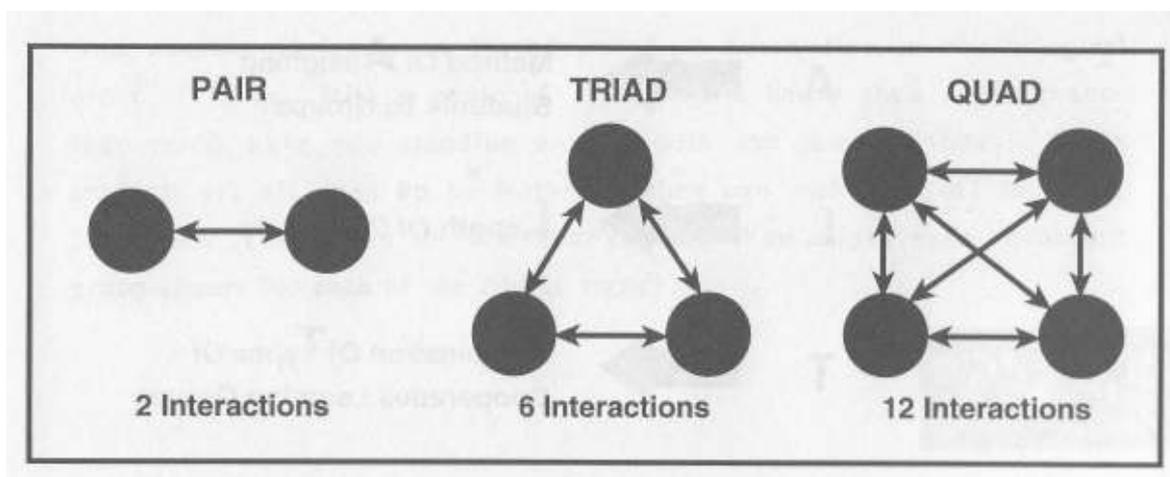
When children are working in pairs/groups, they are working **collaboratively**. **Co-operative** learning is a form of collaborative learning, in which the group works together to maximise their own **and** each other's learning. In co-operative learning, the development of social skills is very important. The groups are formally structured, and each person in the group is assigned a certain role. It could be said that in **collaborative** learning, the children are working **in** a group, whereas in **co-operative** learning they are working **as** a group!

The benefits of co-operative learning may be summarised as follows:

1. It helps to raise the achievement of all students
2. It helps to build positive relationships among the students, thus creating a learning community in which diversity is valued
3. It gives students the experiences they need for healthy social, psychological and cognitive development (Johnson, Johnson and Holubec, 1994).

What is the ideal group size?

The more children that are in a group, the more interactions that are possible, and the greater the challenge. However, the larger group also gives a greater richness in terms of the range of contributions.



It may be useful to consider the following:

- The shorter the time available, the smaller the group should be, as there is less setting up time, and the children have more time to be heard.
- The larger the group, the more skilful children must be in terms of turn taking, and the more support they will need to process the task/learning.
- The nature of the task or the resources available may dictate the size of the group. For example, if you have a class of thirty children, and you have ten percussion instruments, you may decide to group the children in threes, and allocate an instrument between each three (also called triad).

Getting started: Working in pairs

Children need to be explicitly taught the skills of working collaboratively/co-operatively. They should be taught first to work in pairs, then in threes and later in fours.

The following is a useful **starting point** for teaching young children to work in pairs:

1. The teacher prepares an equal number of pictures of an ear and of a mouth.
2. The pictures are distributed so that every second child has a picture of either an ear or a mouth.
3. The child with the picture of the mouth is the **speaker** while the other child is the **listener**.
4. After a short time, the teacher signals, and the children switch roles.
5. The teacher emphasises the importance of being a good listener as well as being a good speaker, so that both sets of skills are developed.
6. When they have mastered this first step, the children could be assigned other roles in pairs, such as:

- **speaker** and **questioner**
- **reader** and **listener**,
- **reader** and **questioner**
- **performer** (music instrument) and **listener**.



A smaller group size is beneficial to group success (Dishon and O'Leary, 1994). The student's age and experience of working in groups, the nature of the learning activity, the time available, and the materials will all influence the size of the group. Students should work in pairs until they are good at working together. As they gain in experience, the children should experience working in threes (triads) and later in fours and perhaps fives.

Teaching the children to work in groups of three (triads).

When the children can confidently work in pairs, the teacher begins to introduce opportunities to work in threes, or triads. Again, the children are assigned roles, and given clear instructions, both about the role, and about the task. For example, the children could be assigned the roles of **speaker, listener** and **encourager**. The **encourager** should encourage the other children to take their turns, and to speak clearly. If resources are available, the encourager could also time the speaker, through use of a stop watch.

Some other possible roles when working in threes include:

- **speaker, listener** and **encourager**
- **speaker, listener**, and **noise monitor** (to ensure that the noise levels and/or voices stay at an acceptable level)
- **writer, reader** and **questioner**
- **speaker, questioner**, and **writer/recorder/note taker**.

Can you suggest other such roles that may be useful when working in threes?

**Don't forget to switch roles after a certain period of time.
The younger the children, the shorter the period before
switching.**

Working in larger groups: i.e. more than three children

The following is an adaption of Bennet and Dunne's key roles:

Role in co-operative group	Function
Manager	keeps the group on task, ensure contributions from all and guide discussion or activity
Encourager	encourages speakers and to promote tolerance within the group
Record keeper/ Data gatherer	takes notes or summarise ideas, clarifies ideas reads aloud from some materials when appropriate
Spokesperson/Reporter	acts as spokesperson when reporting to the class
Secretary	gathers/distributes resources that the group may need
Evaluator	keeps notes on the group process (how well individuals in the group are working together) to lead any evaluation at the end of the session

Do not feel that you have to use every role when doing group work. The main roles are the manager, encourager, recorder keeper and reporter. The entire group/class could evaluate and reflect at the end of the activity.

How this may look in action

- Assign each child within the group a role (**manager, encourager, record keeper, reporter, secretary and evaluator**)

- **Model** group work by choosing one group of children, go through the strategy with them while the rest of the class observes. When modelling the teacher is the **manager**.



- The teacher gives the group a task based on the lesson to be taught, for example,
We are going to study volcanos. Can your group think of four things that they already know about volcanoes, and four new things they would like to learn.

- The teacher chooses the less able child in the group to speak first. S/he may know less information than the others in the group and his/her confidence is developed if the group agrees with them or reiterates what they have to say.
- The **manager** gives each child an opportunity to say what they know about the topic in question.
- The **encourager** praises all those in the group who have spoken. It is important to ask the children in the class how they could/why they should encourage others. Allow children to give their suggestions, for example, *well done, cool, ace, brilliant, thumbs up, high 5* and so on.
- The **record keeper** writes the points stated by the individuals within the group. This could be in the visual form of a **concept map** where single words are linked to the main idea (volcanoes) in the centre of the page.
- If the record keeper is a weaker speller, the teacher should employ strategies that will alleviate any worry or tension around spelling and so help them to improve. Children should be encouraged to take risks with spellings and reminded that making a good effort is what is most important.
- The **reporter/spokesperson** reports back to the whole class on what the group has decided/found out/already knows. The job of reporter becomes very sought after as children gain confidence at group work. Even less able children realise that they will be able to read from the record keeper's notes. They also become more confident at speaking through talking within the smaller group of their friends and peers.
- The **secretary** distributes materials that the group may need, for example, fact books if the group are researching a topic or a specific worksheet to be filled out by the group. They may also need to collect and hand up documentation at the end of the group task.

- The **evaluator** keeps a record/short notes on how well the group have worked together, what they did well, where they might improve and so on. Reflecting on and evaluating the group work experience is very important.

Remember

- Do not feel that you have to use every role when doing group work . The main roles are the **manager, encourager, recorder keeper** and **reporter**. The entire group/class could evaluate and reflect at the end of the activity.
- Revolve the roles within the group on a regular basis.
- Adapt the roles to suit the activity and needs of the class, for instance, if you are using group work in creating art, you may not always need a record keeper.
- Groups work best when there is no more than four/five within the group. It is proven that groups of seven or more are not productive and do not work efficiently.
- After modelling allow the children time to create rules for group work in order to optimise time and learning.

Assigning children to a group

The main ways of assigning children to a group are as follows:

- **Random selection** – the children are selected randomly, perhaps by choosing a coloured piece of paper or a ticket from a jar.
- **Teacher selected groups** – the teacher strategically decides on the composition of each group, perhaps to ensure that there is a good reader in every group, or that the talkative children are well distributed. In a multi-class situation, the teacher may wish to ensure that each group consists of a child from each of the class levels.
- **Self selected groups** – the children choose their own partners. It is sometimes stated that this is the least preferable way of assigning children to groups, as high-

achieving children tend to select other high achievers, or boys tend to choose other boys. (Johnson, Johnson and Holubec, 1994). There is also a danger that the same child may be frequently left out. However, the teacher knows his/her class best, and there may be occasions when the self selected group is a good option.

Promoting group work: some strategies

The following strategies can be used in any subject area.

1. *Think-pair-share*

- Children consider an issue individually (think)
- They then explain their ideas to a partner (pair)
- Then they share views with a larger group or the class (share)



For example, before beginning to read a book, tell the children to look at the cover and/or title, and ask children to predict what the story will be about. Allow the children to think about this for a short period of time, (less than a minute until they are well used to the routine) then they turn to their partner and share their idea.

- Begin with a very focused task so that children become confident and clear on the strategy.
- Try to let the less confident child within the pair speak first, otherwise s/he may just reiterate the partner's thoughts.
- Initially ask individual children to report on their own response to the question posed at the beginning of the strategy, but when the children are competent at ***think-pair-share*** ask them to tell you and/or others what their partner thought. This develops the children's listening and retelling skills.
- Create rules with the children regarding ***think-pair-share*** so that it is introduced and developed in an organised way.

This strategy can be developed further by moving from literal questions to inferential questions and questions that look beyond the text or by focusing on developing

comprehension strategies e.g. by asking the children to sequence, retell, analyse, summarise and so on.

Always model a strategy before getting the children to do it.

2. *Think-pair-share-square*

This is similar to the above activity, except that at the end, each pair joins up with another pair, and they share their learning/ideas.

3. *Two minute recap*

At the end of a lesson/activity, ask the children to turn to a partner and tell his/her as much as s/he can remember about the lesson in two minutes. The teacher times the activity, and after two minutes, signals it is time to change roles. The second person now takes two minutes to tell as much as s/he can remember about the lesson/activity.

4. *Two minute papers*

Give the children two minutes to summarise the most important points that they have learned in the lesson. Alternatively, they could write about their favourite part of the lesson. Then, using a 'turn-pair-share' strategy, they turn to a partner, read their paper, and answer any questions. Roles are then reversed.

5. *Doodle it!*

At the end of a lesson/activity, the teacher asks the children to illustrate their response to the lesson. After a short period of time, the class is divided into pairs/triads/quads. Each child shows his doodled response to the other children, and explains the illustration.

6. Question and answer pairs

When the lesson is finished, the children divide into pairs. Each takes a minute to think of a question, based on the lesson. The aim is to try to 'stump' the other. Then the roles are reversed.

7. The jigsaw technique

This technique can be used whenever the material to be learned can be divided into segments, and where no one segment must be taught before the other. An example of this might be where the class are studying the world's different climates. The teacher prioritises four climates ; Tundra, Tropical, Mediterranean and Equatorial.

The procedure is as follows:

- The class is divided into study groups, for example in fours, and each child is numbered 1,2, 3 or 4.
- The learning material is divided into 4 segments, and each child is given a segment, in this case a different type of climate.
- Each child studies their allocated material (climate)
- The children now form 'expert groups' – all the 1s come together, all the 2s and so on.
- The expert groups discuss their learning, and agree on the main points of their material (climate) to be learned.
- Each child now returns to his home group, and 'teaches' the home group about the climate that s/he studied.

This technique is useful because it offers structure to investigative learning, demands individual responsibility and stresses co-operation rather than competition.

8. Snowballing

Children discuss something or investigate an issue in pairs. Each pair joins another pair to form a group and discuss their findings. The small groups then join together to make a larger group, so we start with 2, then 4, then 8 and so on.

9. Pass the paper

At the end of a lesson/activity, each child gets a piece of blank paper, and writes his/her name on top. S/he then writes one thing that s/he has learned during the lesson. After one minute, the paper is passed to the person on the right, who writes an additional fact. After one minute, the paper is again passed to the right. The paper is passed a number of times, depending on the skill level of the children. Finally, each piece of paper is returned to the original owner, and it serves as a mini-review of the lesson.

(The teacher could play soft music in the background during this activity.)

10. Inside outside circles

- The children are divided into two groups. One group makes an inner circle and the other group makes an outer circle
- The children in the inner circle and the outer circle face each other to form pairs.
- The children take turns to report their information to the partner. At the end of a set period of time, the children are asked to move (for example, the children in the outer circle moves two places to the left), thus creating new pairs.
- The children now share their information with a new partner.

11. Muddiest point

Following a lesson/activity/unit of work, the children discuss what they have learned in groups of two or three or four. Each group chooses a 'muddy point' - in other words, they identify something that they are still not clear about, and they write this on a piece of paper, or a post-it, which they attach to a wall. This also serves as an excellent assessment tool for the teacher, and will inform the next stage of teaching and learning.

12. Muddiest point and clearest point

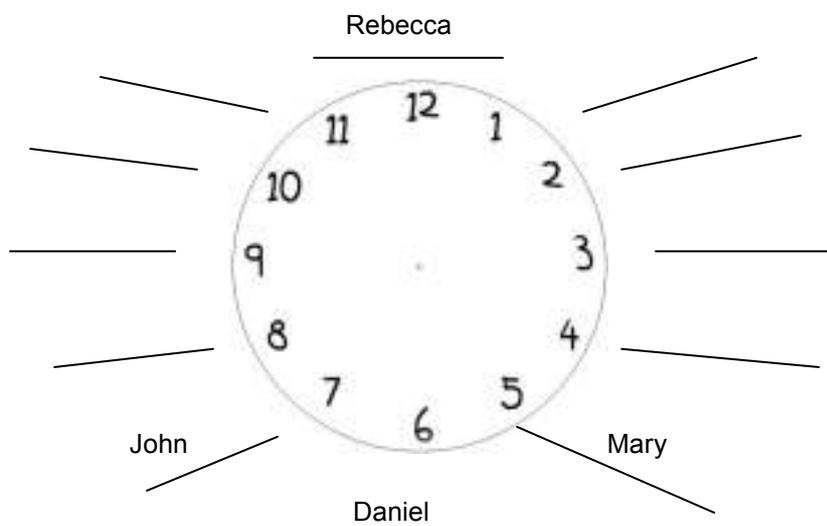
Similar to the above. Following a lesson/activity/unit of work, the children discuss what they have learned in groups of two or three or four. Each group identifies the point they are clearest about from the lesson, and also the 'muddiest point' – the area they are still not clear about. These are written in two separate pieces of paper, and displayed in two separate locations. Again, this can be used as an assessment exercise, and the teacher can involve the children in their own learning, by allocating them tasks to help further the learning.

13. Burning questions

This is similar to the above activity, except that each group is asked to identify and display a 'burning question' following the activity/lesson. Rather than merely answering the question, the teacher could group the questions, and ask each group to research the answer in a given time frame.

14. Clock Buddies

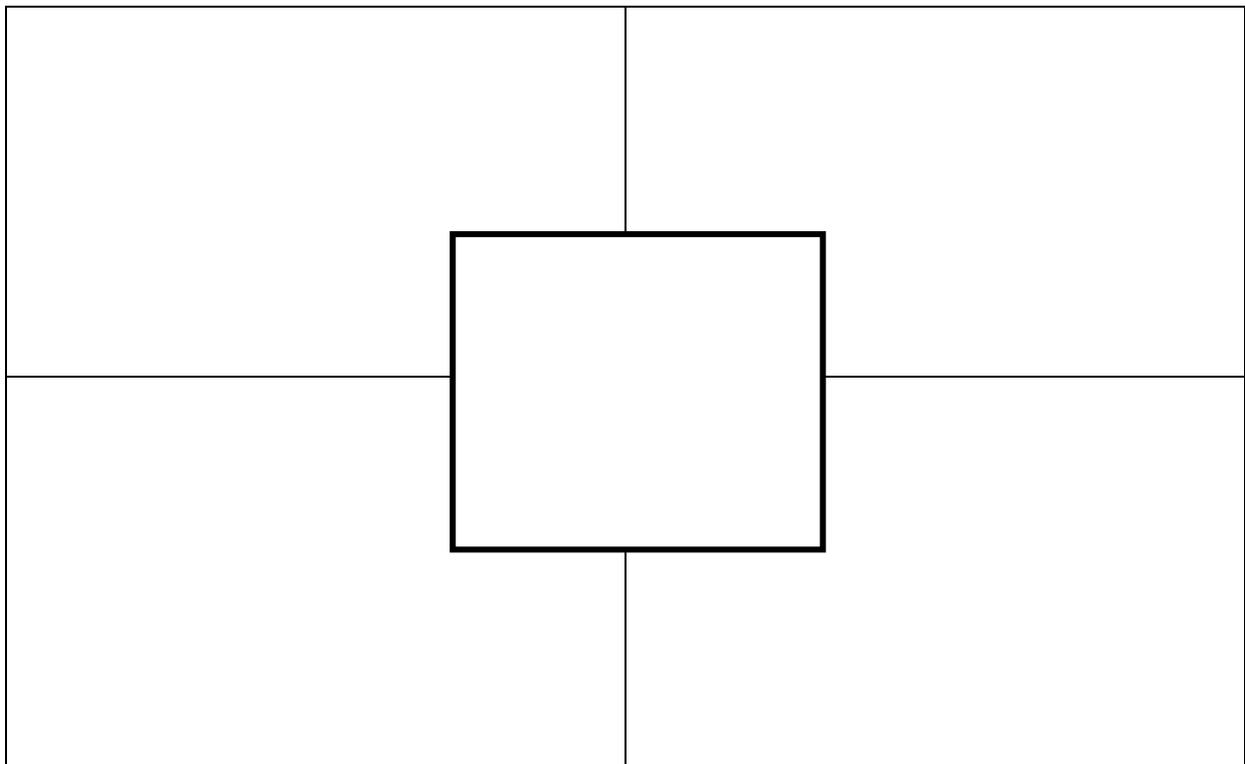
Clock Buddies is a quick and easy way to create pairs for partnered activities while avoiding the problem of children repeatedly having the SAME partners. Clock buddies are chosen by giving each student a clock template with a blank line next to each hour as shown.



Each child then walks the classroom to find a buddy for each hour. If Mike goes to Joe, Joe signs Mike's clock at 4 o'clock say, and Mike signs Joe's clock for the same time. Children cannot use a name twice and all hours must be filled in. The clocks can be attached to the inside cover of a workbook. When the children are required to work with a buddy, the teacher calls out a random time, for example, "It's time to work with your 6 o'clock buddy." Children will then move to and work with the buddy whose name is at that time slot.

15. Place mat

Place mat involves groups of students working both alone and together around a single piece of paper. The paper is divided up into sections depending on the number of members in the group and in the centre is a large square or circle as shown. Children record their ideas in their allocated section and the composite result in the centre belongs to the group.



Place mats like this are easily made from chart paper. The mat should be big enough for children to be able to write in their own section comfortably.

Using place mat

- When embarking on a **new topic** such as electricity in science, the children take time to reflect individually and record what they currently know in their allocated section.

The collective initial ideas are recorded in the centre square and are seen to be representative of the whole group. This also works really well for making predictions as a group before an investigation.

- If children have been assigned a mathematical **problem to solve**, each child works on the problem in their own section and the group then share their thinking. The agreed methods and outcome is recorded in the centre square. Alternatively, a separate problem can be given to each child in the group of say, four; i.e. teacher presents four maths problems. When finished, children can share their solutions with others who have also completed the same problem as them, or else the four separate solutions can be discussed in the same group.
- When writing up a drama contract, the class may be required to reach a **consensus** about the ground rules that should appear in the contract. Each child in the group could record five rules that they consider to be important. They take turns in reading their ideas to their group and the group place a star beside any ideas that are common. These are then recorded in the centre box as the prioritised rules of that group.
- Children are listening to a piece of music and asked to **respond** to the mood by recording a list of suitable adjectives. As above, the children pool their ideas about their responses and choose the top three most suitable words to describe the piece. Again these are written into the centre square.

Walk about!

Place mat can be adapted to allow one child from each group to move to another table, taking the completed place mat with them to share the key ideas with another group. If possible they should discuss the reasons for their own group's choice of ideas.

Managing group work

Collaborative and co-operative learning activities are generally unlikely to be very quiet activities as children are engaging socially and intellectually through the exchange of ideas.

However the teacher may wish to remind children now and again to remain on task, or may need to get their attention as a whole class.

Quiet signal

It is a good idea for the teacher to have an agreed signal ready for whenever s/he wishes the class to convene or to stop working in their groups; it could be a hand signal, a bell or a card with a symbol on it. When the teacher uses the signal, everyone understands that the whole class is being called to attention.



Team stop signs

The teacher could prepare simple *Team Stop Signs* for the class. These are used to manage noise levels during group activities. When a team becomes too noisy, the teacher places a *Team Stop Sign* in the middle of the group. That team must be silent for one minute. This often has a domino effect on other groups who are very noisy.



Working as a group - specifying desired behaviours

Remember that children will not instinctively know how to interact effectively in a group setting. The **social skills** required for high quality co-operative work need to be taught explicitly and children will need plenty of practice to refine their aptitude to work as a team. There are two areas being assessed during group work; the learning task in hand and the teamwork. If the teamwork skills are not developed, the task will not be completed properly. It can be helpful for the teacher and the children to collectively draw up a charter of agreed behaviours for working in groups. The children could be asked to suggest teamwork skills that are needed for them to work well together. Examples might include:

- *We all have a chance to speak*
- *We listen when others in the group are speaking*
- *We use our quiet voices*
- *We encourage other group members*
- *We stay on task*
- *We stay in our own group*

The teacher can informally assess the groups by seeking out the desired behaviours above. Disruptive behaviour can be prevented if the teacher publicly affirms good practice in a group. This may be related to the quality of the group task but it should also focus on how well the children are adhering to the charter above. As the teacher circulates around the groups, s/he could unobtrusively place a “good work” sign or symbol in the middle of the group’s table.

Individual accountability

“What children can do together today, they can do alone tomorrow” (Vygotsky)

As well as assessing the ability of the group to work effectively, the teacher needs to ensure that individual children are also held accountable to learn the assigned material and to help others in the group to learn. A group is not truly co-operative if some individuals allow others to do all of the work. Listed below are some simple ways of structuring individual accountability.

- Keep the size of the group small and manageable.
- Allocate defined roles as described above.
- Select individual children randomly to share their group’s progress so far with the class.
- Observe one group at a time and record the frequency with which each member contributes to the group.
- Ask children to explain or teach what they have learned to someone else or to edit each other’s work.

Ultimately, each child needs to feel responsible for the success of their group’s progress. Shared responsibility makes each group member accountable to their peers within the group and creates a climate of working in the best interests of all.

Some useful resources

PPDS website – www.ppds.ie

Active Learning: 101 Ways to Teach Any Subject (1996) Mel Silberman.

The Nuts and Bolts of Cooperative Learning (1994). David W. Johnson, Roger T. Johnson and Edythe Johnson Holubec

