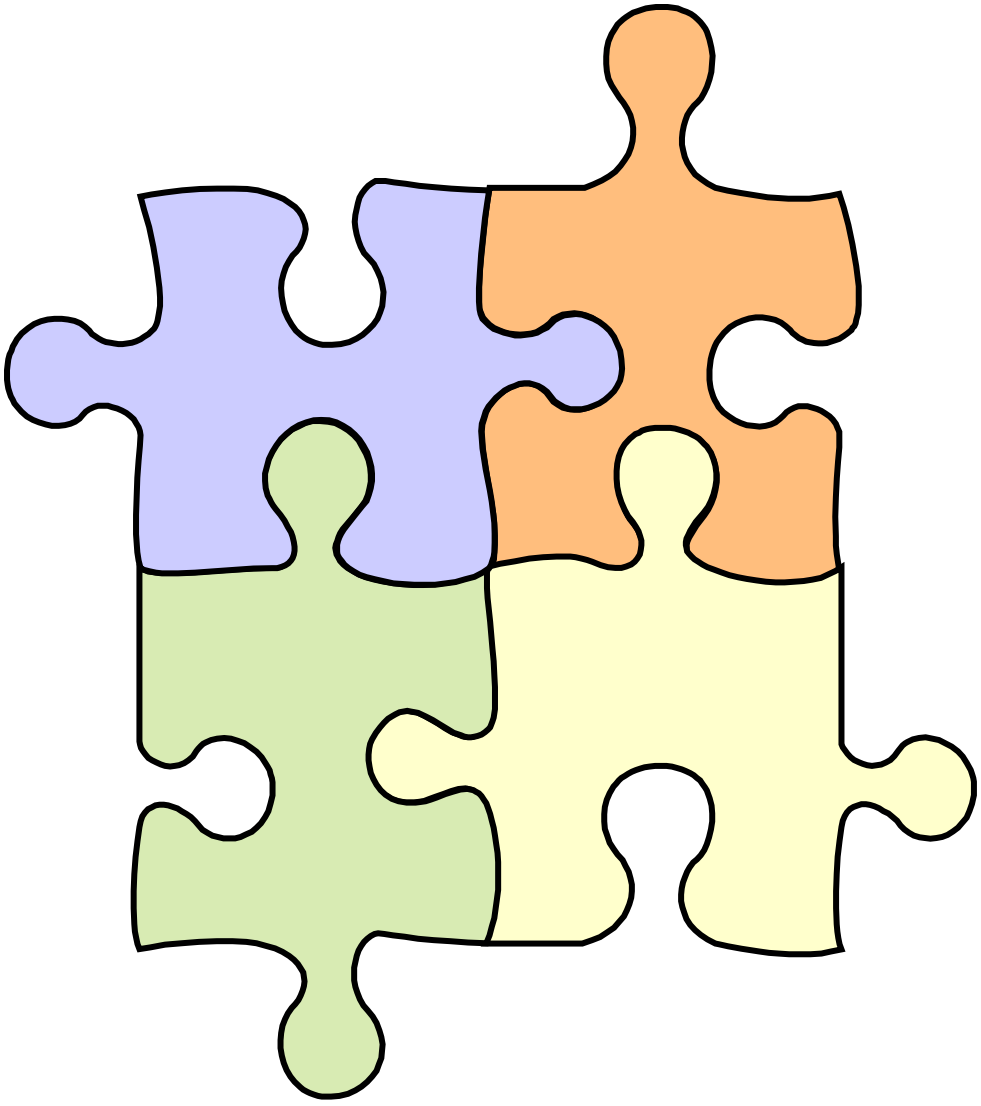
# Learning Newsletter

*Jig sawing*

**The Marlborough Science Academy**

All resources to be found on U drive in the teaching and learning folder



**Inside this issue:**



Created by M Fitzgibbon

# What is a jigsaw?– The basic concept.

In a typical jigsaw activity, students are given a topic on which to become an expert, either individually or as part of a group. The student or group of students then teaches the material to the rest of the class. This is usually done by having the students redistribute into new groups with one expert from each topic present in each of the new groups. The new group then takes turns teaching each other the materials for which each individual is an expert. Alternatively, the expert group might be responsible for active participation while the teacher leads a discussion of the material for which they are experts.

Jig sawing in its most basic form =

Read two parts of a book and share back to a partner

## Jigsaw in 10 Easy Steps

The jigsaw classroom is very simple to use. Just follow these steps:

1. Divide students into 5- or 6-person jigsaw groups.
2. Appoint one student from each group as the leader. Initially, this person should be the most mature student in the group.
3. Divide the topic into 5-6 segments.
4. Assign each student to learn one segment, making sure students have direct access only to their own segment.
5. Give students time to read over their segment at least twice and become familiar with it. There is no need for them to memorize it.
6. Form temporary "expert groups" by having one student from each jigsaw group join other students assigned to the same segment. Give students in these expert groups time to discuss the main points of their segment and to rehearse the presentations they will make to their jigsaw group.
7. Bring the students back into their jigsaw groups.
8. Ask each student to present her or his segment to the group. Encourage others in the group to ask questions for clarification.
9. Float from group to group, observing the process. If any group is having trouble (e.g., a member is dominating or disruptive), make an appropriate intervention.
10. At the end of the session, give a quiz on the material so that students quickly come to realize that these sessions are not just fun and games but really count.

**The Marlborough Science Academy**

| How to Divide Jigsaw Groups<br>Phase I = Information gathering and learning | | | | |
|---|---|---|---|---|
| A<br>***** | B<br>***** | C<br>***** | D<br>***** | E<br>***** |
| **Phase II = Teaching groups** | | | | |
| 1<br>***** | 2<br>***** | 3<br>***** | 4<br>***** | 5<br>***** |

The goal of a jigsaw activity is generally to give students responsibility and control over their own learning. Sample outcomes include:

During and after performing the Jigsaw activity, students will...

- develop expert knowledge of a given concept,
- teach a given concept to other students,
- integrate a collection of concepts into a topic level understanding

Benefits of a Jig saw activity:

1. Students have ownership of material. By delivering to others they first have to understand it themselves.
2. We know that peer teaching is effective. Students are required to articulate and rearticulate material several times over, by which time it should have gone in!
3. The activity encourages the use of visual, auditory and kinaesthetic intelligences.
4. It builds the skills of independent learning, including time management, working with others, handling a range of resources, selecting information and memorising.
5. Material is put into student language so it should be easier to listen to and understand.

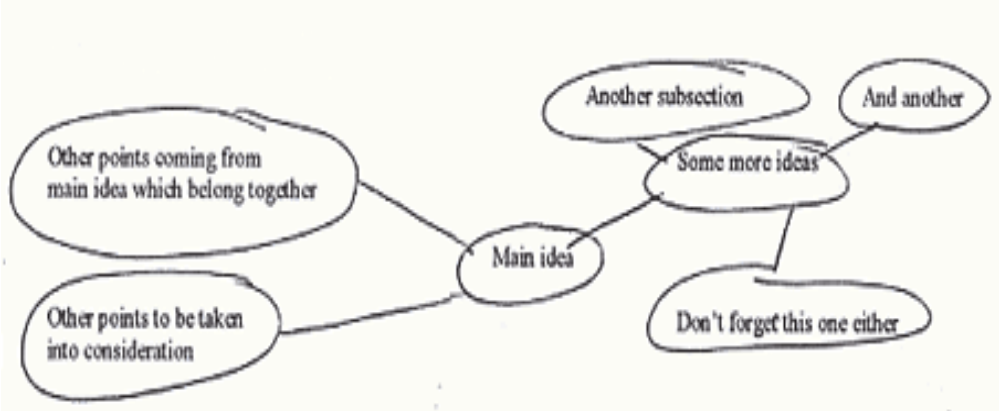
# How to make a jig saw activity more challenging!

- Increase the size of information given to groups.
- Having to problem solve a particular question or topic
- Timing the tasks
- Give some irrelevant information and students then need to select the correct information and find the information that is missing
- What parts of the information would you use to make up a model answer in an exam

# How you set about capturing the information

**Spider diagrams**

Spider diagrams are useful because they allow you to think about the main idea and then how the ideas are seen to be present in many parts of a topic




- Presentations
- Notes / students own choice
- Devising a mnemonic

This exercise is conducted through a series of strictly timed stages. The number of stages, and the timing of each, will vary according to the topic, the complexity of the material and the readiness of the students.

Students work in groups of three (fours are too big for this} Allocate a subdivision of the topic to each group and give them resource material on their subdivision only (one copy per person). The material should be mainly text. Also give each group a large piece of sugar paper (or flipchart paper) and three or four differently coloured thick felt pens.

Write up the sequence and timing of stages on the board or overhead projector so that students can follow the exercise easily.

Have a gong or bell or buzzer to signal the start and end of each stage. Occasionally during the Stages, let the students know how much time is left.

**Stage 1 (1 minute)**

Show the students the learning objectives and the test that they will take later. It's a good idea to use an overhead projector for this. Give them just a minute to read through the test, then switch off. They are not allowed to take notes. Make sure they understand that they will sit this test under exam conditions, without reference to any materials, or anybody, at Stage 5.

**Stage 2 (15 minutes)**

Each group converts the resource material for its subdivision into a visual display/ a "poster"/ using the large paper and pens. The poster must be designed for visitors to view and understand (at Stage 3). **The poster can have up to ten words and no more** (adjust according to the material/ but don't let them have too many words or the activity will be spoiled). The group is encouraged to use as many numbers/ diagrams/ symbols/ pictures/ graphs/ cartoons/ sketches and initial letters as it wishes/ but not more than ten words. **Abbreviations count as whole words**. The group collaborates on this/ making sure that everyone in the group understands the material and contributes to the "poster". If necessary, give each member of the group a different colour of felt pen and expect to see all three colours in the final product.

Towards the end of this stage/ issue each group with its minimum requirements. These are the precise details to be included on the poster that will ensure that visitors get access to the right information for the test. The minimum requirements can simply be questions taken from the test that are relevant to each group's material.

**Stage 3 (10 minutes)**

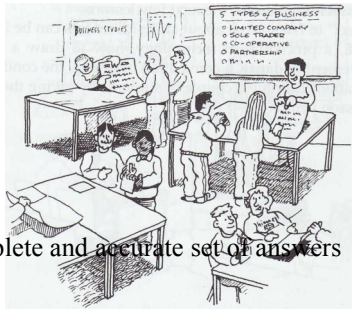
By now each group has only a fraction of the information needed for success in the test. So groups have to learn from each other. In preparation/ each group has to decide which one of its members will stay home and be its "stallholder". The others will go out into the "market-place" to gather information. The stallholder touts for business by calling out the title of his group's subdivision, so customers can find their way around. The stallholder explains the poster to visitors, but is allowed to answer only questions asked by visitors. The researchers who go out into the marketplace will need to visit all the other subdivisions of the topic. They have to organise themselves to get the job done within the time limit, so they might decide to divide up the labour and operate individually. They should all take notes so that they can teach their group effectively at Stage 4. Their job is to look at other groups' posters, try to work out the ideas and information portrayed and ask the stallholders questions for clarification/ explanation and expansion. If they have enough time/ they should go to other versions of the same subdivision to cross-check information.

**Stage 4 (10 minutes)**

Everyone returns to their home base. Those who went into the marketplace to research information should now take turns to teach what they found out. It is an opportunity to clarify understanding. Students can run back to look at posters again or to ask quick questions in order to check details. The aim is for everyone by the end of this stage to be ready for the test.

**Stage 5 (10 minutes)**

All notes/ posters and original source materials are put out of sight. The test is conducted under examination conditions/ individually and in silence.




**Stage 6 (5 minutes)**

In each group/ students now put their heads together to see if they can come up with a complete and accurate set of answers between them.

# Evaluating and planning a jig saw activity

Below is a template that could be used to plan a jig saw activity

Remember it is unpicking the process with the students that is just as important as the activity

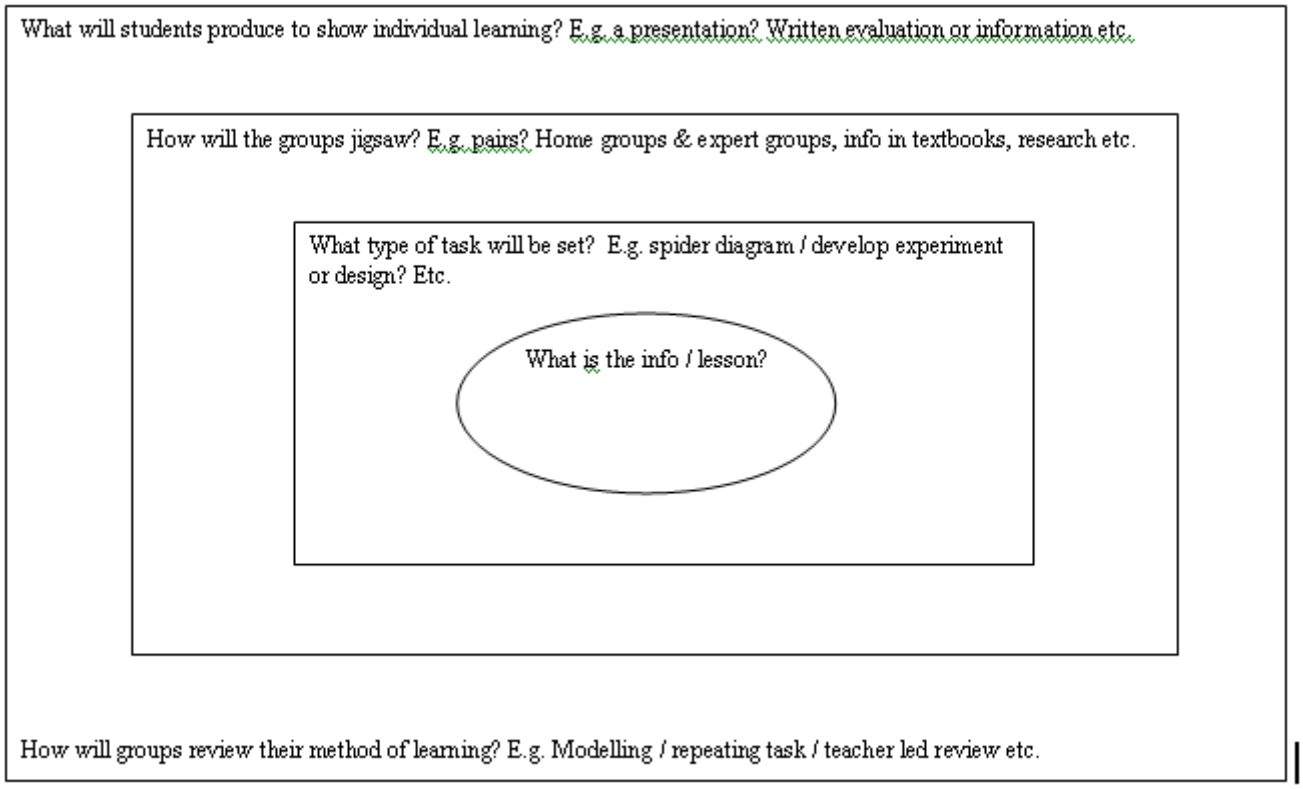
It may also be useful to do the jig saw activity twice each time unpacking the strategies used.

What would you do differently and why?

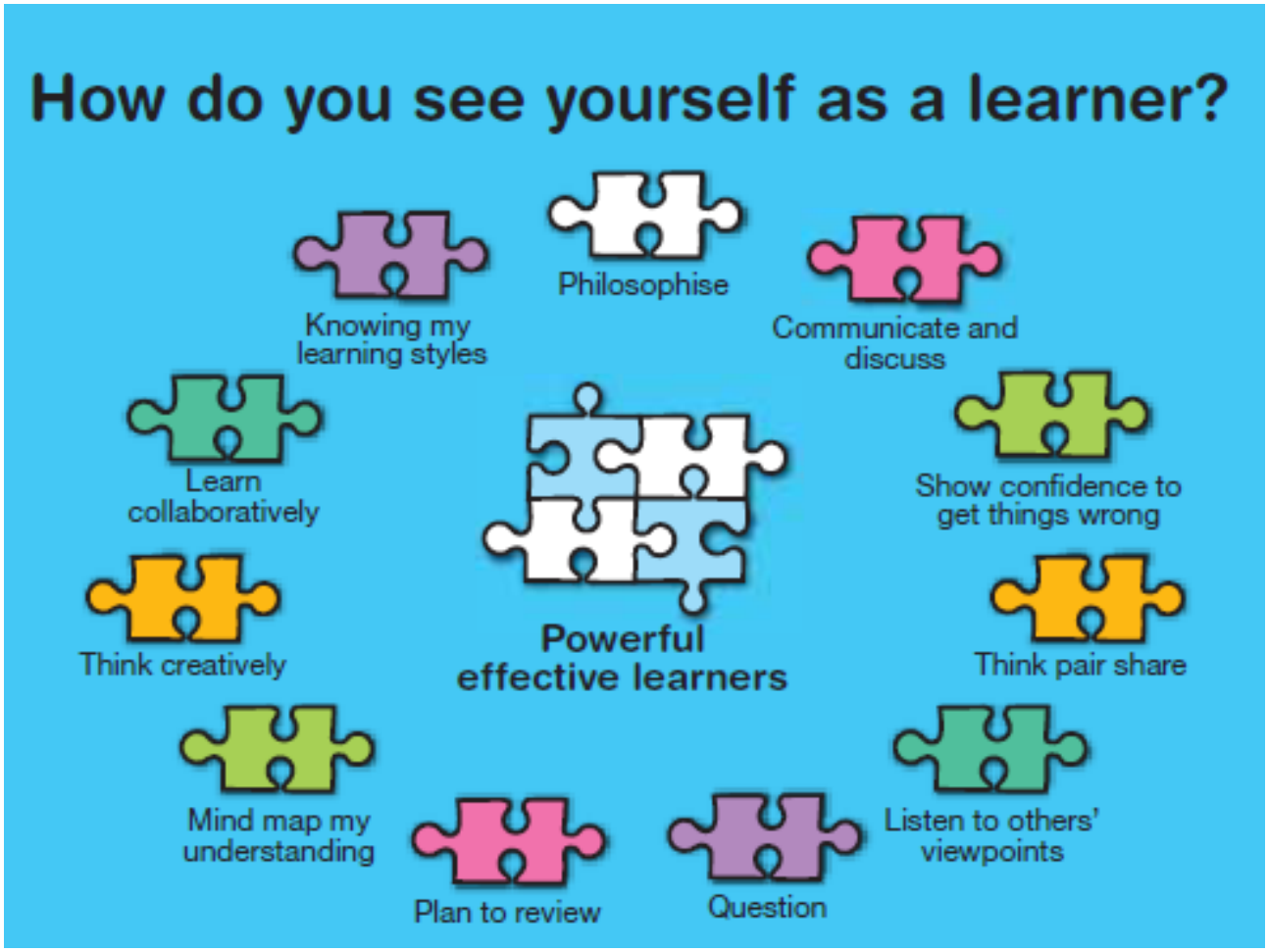
What was effective?

Would you present the information the same way next time?

## The template below can be found on the U drive




When will a jigsaw task be set again for these students?




**Why not share your ideas with others, or show new resources you have found / created.**

If you want to talk about learning and teaching feel free to email me at

**m.fitzgibbon@marlborough.herts.sch.uk** or drop into my office for a chat.