WHAT IS "JIGSAW"?

"Jigsaw" is a collaborative group activity with a twist: students effectively teach each other (with the teacher’s guidance). Students learn through the process of communicating with one another about a given skill or procedure, topic or problem.

It can be tricky to set up a jigsaw activity, given its reliance on student numbers. Despite that, the process can be very successful for deeper learning, and can assist students in learning a large variety of information by sharing the load.

HOW DOES JIGSAW WORK?

Here is a diagrammatic view of one arrangement of jigsaw groups (25 students):

The squares represent tables or breakout groups. During Stage 1, students group together to focus on learning about one topic (in this diagram) and how best to teach it to others. When they are sufficiently "expert", they regroup to teach and learn from fellow students who are expert in the other topics during Stage 2. Stage 3 consists of a whole-class discussion.

This method is extremely adaptable for a number of situations. Original groupings may be based on different topics (as above), skills, or concepts (that is, course content). When students regroup, they do so to consolidate or synthesise these into a whole, or bigger picture. Alternatively, original groupings may be based on perspectives, procedures, or methods applied to the same content. When students regroup, they do so to compare, contrast and evaluate these in context.
Example 1: Jigsaw based on varying topics

Students are learning about five major government policies relating to public health. The class is divided into 5 groups of the same size, and each is given a policy to focus upon. Students are also given a set of questions or points, which will guide them through developing a shared, sound understanding of the essential features of the policies. After 20 minutes of discussion, they are now the experts on that policy, and sufficiently prepared to teach their peers. They move such that one student from each of the original groups is at each table. In turn the students teach their peers what they have learned, answering their questions as required. They finish by drawing together what they have learned, ready to take part in a class discussion.

Example 2: Jigsaw based on varying approaches to the same topic

The issue of social disadvantage can be approached using a variety of theoretical standpoints. Students at each table have the same problem scenario, but are asked to examine this and provide solutions using one only of the theoretical standpoints. After their group discussion in order to do this, when students are sufficiently prepared to teach others what they know, they move such that one student from each of the original groups is at each table. In turn the students teach their peers what they have learned, answering their questions as required. They finish by drawing together what they have learned, ready to take part in a class discussion that evaluates the solutions.

MAKING JIGSAW WORK

The emphasis on students teaching students

An important feature of this activity is the development of students' teaching skills. Part of the purpose of this activity is to focus students' attention on how they go about learning the material or new skills; this will result in deeper, more long-lasting learning. As far as possible, avoid having students memorising information in a rote fashion, and then repeating this to others; this will result in shallow learning, and a significant loss of efficiency.

Each group, during Stage 1, is tasked with not only learning the material, but with devising the best ways to teach it to others. In other words, the 'experts' will jointly construct a mini-lesson. Here are some questions you might give your students:

1. How can I explain this clearly?
2. Will I need diagrams, examples, and/or analogies?
3. What keywords and definitions should I explain?
4. What questions will I ask my 'students' to assess if they have understood?

The importance of class discussion

The final class discussion is critical for a number of reasons. First, the main points can be drawn out, bringing the activity to a logical conclusion. Moreover, students can still learn from other groups, as it is unlikely that each group had the same discussion. Importantly, the final discussion allows the teacher to clarify points and address issues or limitations, and in this sense allows for assessment of students' learning, as well as evaluation of the effectiveness of the process itself.
Setting up a jigsaw lesson

1. Decide if this learning activity is the most effective for the purpose of the lesson and the students in your class.

2. Calculate the number and size of the groups. It is recommended that you have no more than 6 students in each group to ensure everyone has the opportunity to contribute. There may be opportunities for running parallel groups. Your decision will be based on the number of key concepts or strategies you want the students to learn.

3. Prepare resources for both Stages 1 and 2. This will include materials, questions or guidelines.

4. Prepare questions for the Stage 3 discussion.

5. Draw up a fairly strict timeline for the lesson and its stages. Always have a buffer and ensure you consider the lesson introduction, giving instructions, and movement of students between stages.

6. Set up your room and be prepared to alter the configuration for the second stage.

Considerations

- Timing can be challenging, and there will be a need for keeping students on track. It may be useful to have a timer, clock and/or bell at hand.
- Absentees can affect your plans, so it is advised that you have a back-up plan or variation.
- Ensure you visit each group at least once before moving into Stage 2 so that you can assess students’ understanding.

Variations

- If you have larger numbers of students, consider using parallel groups (that is two groups simultaneously working on the same topics).
- If you have several students without a group, consider giving them the role of pulling the final discussion together.
- Have students carry out some research or reading before they begin the exercise.
- Any or all of this activity can be adapted easily for online delivery, using Blackboard Collaborate, for example.
- Group the students by having them randomly choose numbered or coloured pieces of paper, corresponding to each Stage 1 topic, out of a box. This can happen in an earlier class to save time, and so that students can research or prepare.

For more information, contact the Centre for Teaching and Learning.