The Jigsaw Classroom: Building the Big Picture

By Peter Connor

A good jigsaw puzzler dumps all the pieces on the table—spreading them out print-side up—and then separates the straight-edged pieces from the rest. Out of those, between one and two hundred in a standard, 1000-piece puzzle, four will have two straight edges. These are the corner pieces. Found, the puzzler begins building the border.

The remaining pieces are sorted by color and other visible clues: dark blues with dark blues, light with light; water with water, clouds with clouds, boat parts with boat parts, and so on, assembling the puzzle bit-by-bit, in pieces-parts, one section at a time, watching as the big picture emerges.

Can these same strategies be turned into learning and teaching strategies? Elliot Aronson says yes: Author of *The Jigsaw Classroom* (1978), Aronson used them to develop a teaching concept built on cooperative learning exercises aimed at actively engaging all students.

"Designing an effective jigsaw requires different, but overlapping, team assignments and a meaningful group task, plus attention both to how students will prepare effectively for peer teaching and how the instructor will evaluate what individual students have learned" (Tewksbury, 2010, "How to Use Jigsaws" para. 1).

Here's how it works:
- Divide your class into small "home groups"
- Give each student in each group a number: 1, 2, 3, 4, etc. Five home groups of four students each, for instance, will give you five students with the number 1, five with the number 2, and so on.
- After each student has their number, break the home groups apart, reorganizing them by number, into new "expert groups," all the 1s together, all the 2s together, all the 3s, etc.
- Assign each expert group a specific research idea, a chapter, or maybe a film related to the focus of your overall lesson
- The expert groups must then discuss their specific assignment, share ideas, and collaborate on any assigned activities

This strategy facilitates students teaching each other and can be particularly useful when exploring core ideas or examining complex problems.

For example:
Suppose your lesson plan involves a journal article on the environmental consequences related to deep sea oil spills:

> Your five expert groups will each put under their collective microscope just one part of the puzzle. The 1s will examine the section dealing with environmental effects below the surface of the sea, the 2s will take the section on coastal environmental effects, the 3's the section on wetlands and marshes, and the 4's will look at short and long-term economic effects.

When the experts break apart and return to their original home groups, each brings with them the knowledge gained in their group examination. In the home group, each member has one piece of the puzzle. For the exercise to be successful, everyone must take part, swapping pieces and learning from each other. Through peer-teaching and group collaboration the larger picture emerges.

You may use this strategy in homework assignments, having your students communicate via email and outside meetings, or you may make it a week-long collaboration producing journals, videos, or blogs about the assigned topic. It is highly adaptable.

You may limit the strategy to one class meeting or extend it out over several sessions. It can be used in conjunction with most any curriculum materials your lesson plan calls for: film, chapters of a book, an entire book, experiments, etc. It can lead to in-class presentations by each home group, summarizing their final results, analysis, etc., as well as individualized interpretations.

Sources

Aronson, E., Blaney, N., Stephin, C., Sikes, J. & Snapp, M. (1978). The jigsaw classroom. Beverly Hills, CA: Sage Publishing Company.

Tewksbury. B, (2010). Jigsaws. *On the cutting edge – professional development for geoscience faculty*. Retrieved from http://serc.carleton.edu/NAGTWorkshops/teaching_methods/jigsaws/index.html