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Jigsaw Strategies: Using the Jigsaw Method for Cooperative Learning in Your Classroom

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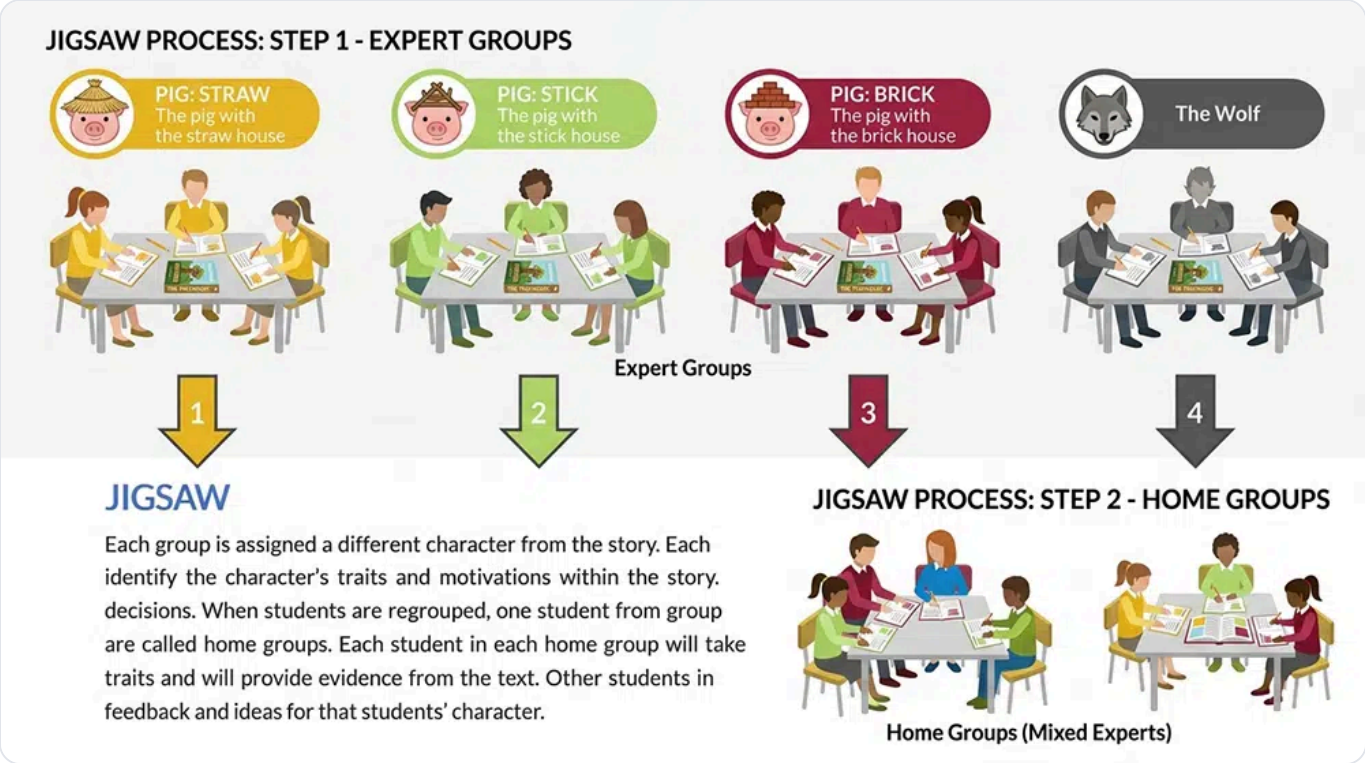
Think about a lesson where every student in your class is responsible for one piece of the content, and no one will be able to understand the content fully unless they all work together and learn from each other. Consider one student group who have studied the causes of an event, another has studied the key figures responsible for the event, and a third has studied the consequences of that event. When these students regroup, each student becomes the source of information that they then share with their peers. To understand the entire concept for the lesson, every student has to teach one piece, and every student has to listen to the others.

This is the foundation of a popular cooperative learning strategy in education: the **jigsaw method**. Jigsaw strategies break a topic into parts, make each student an expert in one part, and then rely on students to teach one another until the full concept comes together. But, in order for it to be actually effective and promote learning, you must consider a specific structure and planning process when implementing this into your classroom.

What the Jigsaw Strategy Is

The jigsaw strategy is a cooperative learning model in which a concept is divided into components, students first become “experts” on one component, and then they teach that component to their peers. It sits within the broader family of collaborative learning, a term for the variety of educational approaches that center on interaction and discourse between peers, with the teacher acting as a facilitator rather than the primary source of information.

In a jigsaw activity, the teacher breaks a particular concept into specific components. Students start out in **expert groups**, where each group researches, studies, and analyzes one component of the concept. After their discussions, students from the expert groups are regrouped into **home groups**, with each new home group made up of one expert student from every component. Students in these home groups then take turns teaching and discussing their specific component so that all students learn about every part of the concept.



Expert groups (left) each master one character. Home groups (right) bring one expert on every character together.

The group structures are what give the jigsaw method its name. Expert groups are where students master a single "piece of the puzzle." The home groups are where the "pieces" of each content piece are assembled. Because each student holds knowledge that no one else in the home group has, the jigsaw activity builds in a level of individual responsibility that many other cooperative learning structures do not.

Some Benefits of the Jigsaw Method

The jigsaw classroom was first developed and named by social psychologist Elliot Aronson and his graduate students in 1971 in Austin, Texas. Aronson designed the jigsaw method as a structure that made students depend on one another to succeed, so that cooperation replaced competition. The approach spread quickly because it addressed both academic learning and the social climate of the classroom at the same time (jigsaw.org).

The jigsaw method is one of the most studied cooperative learning strategies, and the research base is generally favorable. A 2023 systematic review and meta-analysis published in *Frontiers in Psychology* examined dozens of studies and found a large overall effect on academic achievement as long as the implementation was structured, though, of course, results varied across different school settings.

While the jigsaw method seems important in the classroom for various reasons, the idea that students are required to learn from each other facilitates "positive interdependence," meaning that individual students succeed only if the entire group succeeds. This method also promotes individual accountability, because each student is required to bring specific content to the table and share with others. Without that content, the group

cannot successfully learn all material. Finally, we know that students can also learn by teaching content. Because the jigsaw method requires students to be an expert in one idea and then teach it to others, they will learn that concept well. And students can also benefit from learning material from their peers as opposed to their teacher, so the collaborative sharing of ideas tends to not only motivate students but also help facilitate more learning.

The jigsaw strategy reflects several elements that research associates with strong collaboration.

01 **It promotes active learning.**

Active learning involves engagement and peer discussion that lead students through a process of investigation and discovery, allowing for application of content and deeper mastery rather than passive reception of information. When students research an expert topic and prepare to teach it, they are applying content, not just receiving it.

02 **It supports higher-order thinking and open-ended responses.**

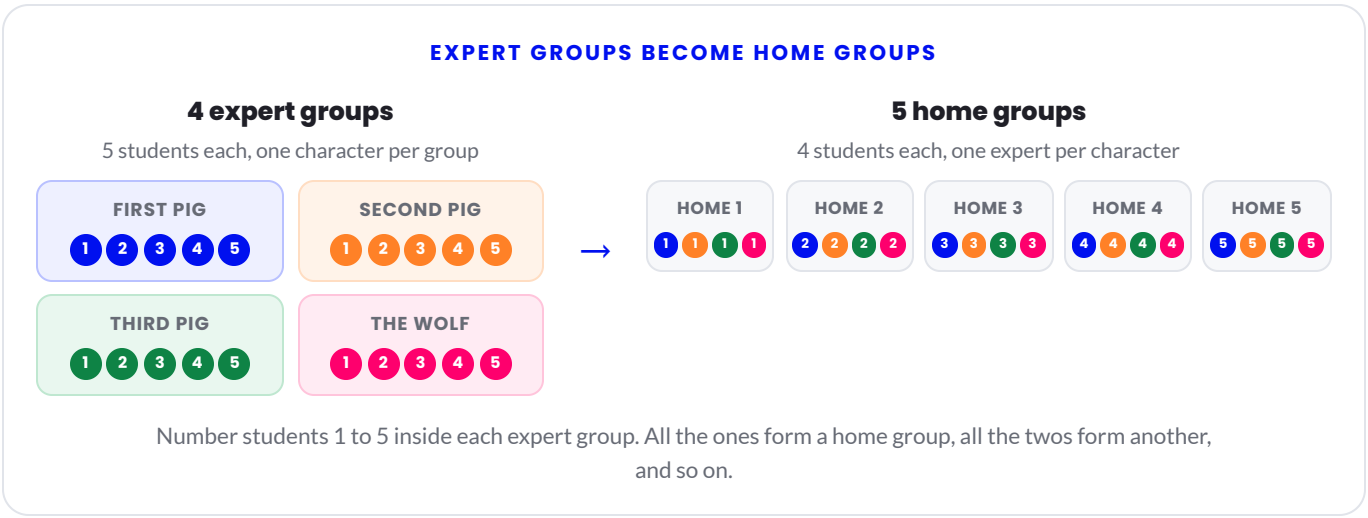
Collaboration is most effective when students analyze, compare, and construct ideas rather than answering low-level questions with one-word responses. A jigsaw works best when each expert topic asks students to interpret or evaluate, such as analyzing a character's motivation or comparing perspectives, rather than simply locating a fact, because it allows more dialogue and depth of discussion in each group.

03 **It shifts responsibility toward the student.**

Collaborative learning is a component of the gradual release model of instruction, in which students take on increasing responsibility while the teacher provides support and guidance. In a jigsaw, students take on the majority of the responsibility for learning and teaching content, while the teacher facilitates, checks for understanding, and corrects misconceptions.

How to Implement a Jigsaw Activity into Your Classroom

The jigsaw method should always follow a structured, predictable sequence of events. The steps below move from preparation to expert work to home-group teaching, and they can be adapted for elementary through high school.



Number students 1 to 5 inside each expert group. All the ones form a home group, all the twos form another, and so on.

1 Divide the concept.

Break the concept you are teaching into specific components, one for each expert group. You should choose components that are roughly equal in difficulty and that each require analysis rather than simple recall. You can also adapt the jigsaw activity to your lesson in several ways so that students are engaging in the right content for your classroom. Use it to analyze content from multiple perspectives, to teach specific concepts by requiring students to prepare the lesson content, or to allow students to generate new ideas and show creativity within their expert groups.

> **For example:** *For a character analysis of "The Three Little Pigs," divide the story into four components, one character each: the first pig, the second pig, the third pig, and the wolf.*

2 Assign expert groups.

Place students into expert groups and give each group one component to research, study, and analyze. Provide a clear task or question, along with the resources students will use. You will also want to consider how you actually group your expert groups as well, and what students will be assigned to each expert and home group. If possible, it's also best for you to assign the same number of students in each expert group. For example, every expert group contains 5 students.

> **For example:** *The expert group assigned to the first pig uses the book to identify his character traits and motivation, describe what happens to him, and explain the lessons learned, using evidence from the text. This same format applies to each other expert group for the remaining characters.*

3 Support the expert groups.

As expert groups work, you should plan to monitor each group, provide feedback, and confirm that every group has accurate information before students move on. You want to ensure all students are discussing the correct topics and at the right level of depth before they re-group.

> **For example:** *Confirm that the first-pig group has correctly identified that he built his house of straw, did not seem worried about the wolf, and was careless, and that they can point to evidence in the text before they teach it.*

4 Form home groups.

Once your expert groups have taken the time to learn all relevant content, you will then re-group students so that each home group contains one expert from every component. This ensures that every home group contains one piece of the content puzzle, and each student gets to contribute his or her expert knowledge to the group. One way to manage this is to number students within each expert group and then have all the ones form a group, all the twos form a group, etc. For example, let's say you had four groups of 5 students each in your expert group. You'd assign each of your five students in each expert group into its own home group, creating five groups of 4 students each.

> **For example:** *Each home group now includes one first-pig expert, one second-pig expert, one third-pig expert, and one wolf expert.*

5 Teach and learn in home groups.

In their home groups, students take turns teaching their component while their peers take notes. Every student both teaches once and learns from every other expert. You should encourage note-taking, so students have a record of all components to reference later. At the end of this article, you will find a downloadable template you can use for student note-taking, if you wish.

> **For example:** *The first-pig expert explains that he built a straw house and it was easily blown down, while peers record the traits, details, and lessons for each character on their home group worksheet.*

6 Debrief as a whole class.

Bring the class back together to recap the full concept, answer lingering questions, and address any confusion. This is your opportunity to confirm that all students learned every component, not only the concept they were responsible for.

> **For example:** *You plan to connect the four characters to the shared lesson that hard work and preparation pay off, and as a group, discuss questions like, "Would the first pig have learned his lesson if the wolf had not come along?"*

Grouping Students for a Jigsaw Activity

Purposeful grouping is an important component of the jigsaw method. Building groups based on the lesson objective helps ensure that collaboration actually meets your goals, and it can strengthen academic skills, deepen mastery of content, improve lesson efficiency, and build the soft skills that come from working with others.

For a jigsaw activity, heterogeneous grouping generally works well for expert groups, so that students at varying levels can interact with the content together and support one another as they prepare to teach. Groups can then be arranged so that the teacher can provide additional support and assistance to home groups that need it.

However, you should group your students based on your classroom's needs and goals. As long as you are purposefully considering your groupings, you can feel confident that your students will be successful in this collaborative activity.

You can also consider your grouping strategy based on the diverse learners in your classroom. One reason the jigsaw method has stayed popular is its flexibility for differentiated instruction. Because you control how the concept is divided and how each expert topic is framed, you can completely differentiate tasks for all students in your classroom. For example, for English language learners, you can ask students to complete their expert content with the help of visual support, sentence frames, and graphic organizers. For students with special needs, you might modify the expert topic groupings and break tasks into smaller steps or work with a group of students together, or provide modified tasks that still meet the end goal of the activity (like providing a text at a modified reading level that still allows students to fully answer your prompts). Jigsaw can work across different student groups and be utilized in various ways for differentiation! And, because every student is required to teach a concept and every student is required to learn from others, the home grouping aspect of the jigsaw method allows for varied student perspectives and all ability levels to be able to contribute to learning.

Some Final Thoughts

The jigsaw strategy supports your instruction, not replaces it. Peer learning does not simply push all of the responsibility for instruction to students, but it does give them an environment to explore and share ideas more deeply. Keep these best practices in mind:

Pair the jigsaw activity with strong instruction. Drilling facts or practicing low-level skills is an inefficient use of student collaboration. Reserve the jigsaw method for content that focuses on fostering critical thinking through analysis and discussion.

Teach students how to work within a group. Model appropriate discourse, set clear expectations for how students should interact, and provide continuous support and reinforcement as they work.

Monitor and assess throughout. Watch for each student's contribution of knowledge, cooperation with peers, and understanding of content, rather than assessing only the final product. When necessary, you can intervene to correct misconceptions or assist students in their discussions.

Use your own teacher judgment for pacing and grouping. There is no single correct number of components or minutes. Adjust based on your students' readiness and the complexity of the content.

TRY THIS

Plan an activity for an upcoming lesson that includes this jigsaw strategy. You can utilize this downloadable resource with your student groups, helping to guide them on recording their notes both in their expert groups and in their home groups. Page one is the **Expert Group Jigsaw Worksheet**, which students use to record their expert topic or question, the resources they access, their notes and evidence, and their solutions and conclusions. Page two is the **Home Group Jigsaw Worksheet**, where students take notes on each expert's presentation and record any questions they still have to discuss with the whole group and teacher.

Download both pages from the article online, or from the Collaborative Learning Models in the Classroom course (MT114) at modelteaching.com.

Frequently Asked Questions About the Jigsaw Method

What is the jigsaw method?

The jigsaw method is a cooperative learning strategy in which a concept is divided into multiple parts. Each student becomes an expert on one part, and students then teach their part to their peers. Because every student is an expert in a piece of content that the other students need, the group can only understand the full concept by teaching and learning from one another.

What is the difference between expert groups and home groups in a jigsaw?

Expert groups are where students first study and master one component of the concept together. Home groups are formed afterward, with one expert on each component, so that every student teaches their piece and learns the remaining pieces from their peers.

Who created the jigsaw strategy?

Social psychologist Elliot Aronson and his graduate students developed the jigsaw classroom in 1971 in Austin, Texas.

Is the jigsaw method effective?

Research on the jigsaw method suggests it does positively impact student performance. A 2023 systematic review and meta-analysis in *Frontiers in Psychology* reported a large overall effect on academic achievement, while noting that results vary and that the strategy works best when it is well structured and monitored by the teacher.

What grade levels and subjects work best for a jigsaw activity?

The jigsaw strategy can be adapted from elementary through high school and across subjects such as reading, science, social studies, and math. It works best with content that can be divided into parts and that rewards analysis and discussion rather than simple recall.

How long does a jigsaw activity take?

A typical jigsaw activity should fit within one lesson. As a general rule, you can plan for roughly fifteen to twenty-five minutes of expert group work, followed by time for home groups to teach one another and a short whole-class debrief, adjusting for the age of your students and the complexity of the content. However, there is no single correct number of components or minutes. Adjust based on your students' readiness and the complexity of the content.

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