



**Innovation Training Module**

# **Expert Jigsaw**

**Building the Future Peice by Peice**

Hello, Teachers and Future Innovators!

Is your classroom feeling a bit tired from the heavy daily curriculum? Sometimes, the best way to recharge is to change how we learn. Imagine an activity that feels like a break a lively, social game, but actually helps students master a difficult topic faster than any lecture could.

This is the **Expert Jigsaw**.

In the world of high - level science, nobody works alone. NASA didn't land a rover on Mars because one person knew everything; they did it because thousands of specialists shared their own "puzzle pieces" to create a mission that worked. The Jigsaw technique brings that same NASA - style teamwork into your classroom.

Let's progress through the four stages of this module to see how it turns your students into a team of **Innovation Architects**.

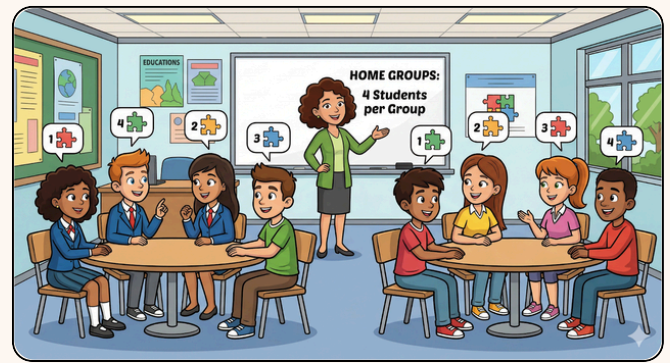
### Stage 1: The "Identity" Phase (Forming the Home Groups)

Every great mission starts with a team. In the Jigsaw world, we begin at **Home Base**.

**The Setup:** The teacher divides a big, important topic - like The Future of Energy into four different "clues":

1. **Solar Power** (The Physics)
2. **Wind Energy** (The Engineering)
3. **Nuclear Power** (The Safety & Science)
4. **Economics** (The Cost & Implementation)

Divide your class into groups of four. In each group, assign one student to be "Expert 1," another to be "Expert 2," and so on. At this stage, they are a team, but they realise they are all missing three - quarters of the information!



**Why this helps the student: It creates Positive Interdependence.** Students quickly realise that if they don't do their part, their friends won't be able to finish the "puzzle." This builds a sense of responsibility and team spirit.

### Stage 2: The "Expertise" Phase (The Specialist Meeting)

Now, the room moves! All the "Number 1s" from every group leave their home base and meet in a separate corner. All the "Number 2s" do the same. This is the **Expert Group**.

#### The Mission:

These students now have one job: **to become the smartest people in the room on their specific sub - topic**. They read a short article, look at a diagram, or discuss a few key facts together. They brainstorm the best way to explain their "piece" to their friends back at home base.

#### How it Grooms an Innovation Mindset

- **Deep Diving:** Students learn that to teach something, you have to truly understand it.
- **Peer Support:** If one student is confused, their fellow "experts" help them out. This is how scientists collaborate in real labs.
- **Confidence:** Even a student who is usually shy feels empowered because they are now the only ones with specific, "secret" knowledge.



### Stage 3: The "Transmission" Phase (The Return of the Experts)

The specialists now fly back to their original **Home Groups**. The atmosphere changes from quiet study to an active "Knowledge Exchange."

#### The Action

One by one, the experts take the floor. Student 1 teaches the group about Solar. Then Student 2 explains Wind. No teacher is standing at the whiteboard; instead, mini-teaching sessions are happening at every single desk.

#### Why this is a game-changer

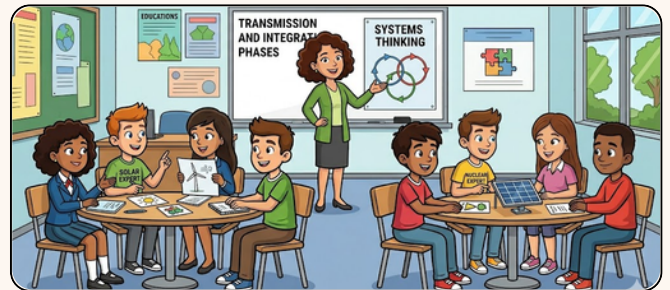
- **Communication Skills:** Students learn to simplify hard ideas so their friends can understand them.
- **Active Listening:** The other students take notes because they know they will be tested on the whole topic, not just their own part.
- **Breaking Hierarchies:** It proves that every student has a brain capable of mastering and sharing complex information.

### Stage 4: The "Integration" Phase (Completing the Puzzle)

Finally, it's time to see the "Big Picture." The teacher brings the class together for a **Synthesis Challenge**.

#### The Challenge:

Now that your group has all four pieces (Solar, Wind, Nuclear, and Economics), design a power plan for a new city. You must use the data from all four experts to make it work.



#### The Innovation Outcome:

This stage mimics **Systems Thinking**. Students learn that in science, nothing exists alone. A change in the "Economics" piece affects the "Solar" piece. They stop looking for "the right answer" and start looking for the "best solution", which is exactly what innovators do.

#### Why the Jigsaw is Recommended

Using this technique as a "curriculum break" actually makes the curriculum stick better. It transforms the classroom into a laboratory of human connection.

1. **Critical Thinking:** They don't just memorise; they connect the dots.
2. **Empathy:** They learn to value what their classmates say.
3. **Leadership:** Every student gets a turn to be the leader of their topic.
4. **Efficiency:** You can cover a massive chapter in 45 minutes because the work is shared!

**Teacher’s Quick-Start Checklist:**

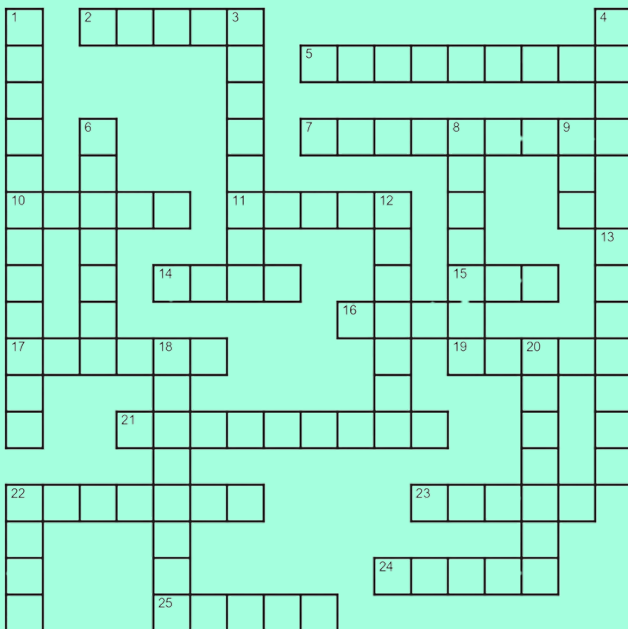
- **Mix it up:** Put different personalities together in Home Groups.
- **The "Check - In":** Roam between Expert Groups to make sure their "facts" are accurate before they go back to teach.
- **The Reward:** Give a "Team Bonus" if every member of a Home Group passes a quick quiz at the end.

**Conclusion: Building the Future, Piece by Piece**

The **Expert Jigsaw** proves that while individual brilliance is great, **collective genius** - like the teams at NASA is what truly changes the world.

Give your students their piece of the puzzle today, and watch them build a masterpiece tomorrow.

**Word Search 2602 - Wild Animals**



**Down**

1. Large water-dwelling mammal.
3. Hops on its hind legs.
4. Big and furry land mammal.
6. Waddles on ice.
8. Long-necked animal.
9. Wise bird.
12. Has eight tentacles.
13. Fastest land animal.
18. Largest land mammal.
20. Close relative to humans.
22. Antlered animal.

**Across**

- |                                |                                   |
|--------------------------------|-----------------------------------|
| 02. Feared ocean predator.     | 16. Howls at the moon             |
| 05. Large reptile with scales. | 17. Swings from tree to tree.     |
| 07. Similar to a crocodile.    | 19. Soars high in the sky.        |
| 10. Black and white bear.      | 21. Has stinging tentacles.       |
| 11. Has a horn on its nose.    | 22. Known for their intelligence. |
| 14. King of the jungle.        | 23. Sleeps in eucalyptus trees.   |
| 15. Clever and sly mammal.     | 24. Black and white striped.      |
|                                | 25. Orange and black striped.     |

*(Answers on Back Cover Inside)*

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|-----------|--------------|
| Alligator | Panda        |
| Kangaroo  | Elephant     |
| Bear      | Penguin      |
| Koala     | Fox          |
| Cheetah   | Rhino        |
| Lion      | Giraffe      |
| Crocodile | Shark        |
| Monkey    | Gorilla      |
| Deer      | Tiger        |
| Octopus   | Hippopotamus |
| Dolphin   | Wolf         |
| Owl       | Jellyfish    |
| Eagle     | Zebra        |