

Using Logic Puzzles to Promote L2 Interaction

An Example for Students and Teachers

(to accompany Chapter 7 of

Teaching Listening and Speaking in Second and Foreign Language Contexts)

Logic Puzzles

Jigsaw Principle

Two or more students have different pieces of information. They must use the target language to share information and solve the puzzle.



Logic Puzzles: Teacher's Note

This logic puzzle is an activity for pair work or groupwork. Before doing this puzzle, talk to the students about different cultures' naming conventions. What some cultures consider "last" names are "first" names in other cultures. So please introduce the concepts of "given names" and "surnames" or "family names."

Logic Puzzle: Lost Pets

Four people lost their pets.
Who owns the bird, the
cat, the fish, and the dog?
Here are ten clues to the puzzle.



Logic Puzzle Clues

1. Alice, Ms. Black, Ms. Brown, and the fish's owner all have different pets.
2. The cat doesn't belong to Bette.
3. The dog doesn't belong to Alice.
4. Ms. Grey doesn't own the cat.
5. Ms. Grey lives next door to Chloe.

Logic Puzzle Clues

6. Bette isn't Ms. Brown.
7. Bette doesn't own the fish.
8. Ms. Black doesn't own the dog.
9. One woman's family name is Ms. Green.
10. One woman is named Ruth.

Now you can decide who owns which pet!

Logic Puzzle Clues

Let's return the lost pets to their owners.

We will start by making a chart of what we know for sure from the clues.

We know there are four people.

We know their given names, family names, and what types of animals are their pets.

Logic Puzzles for Interaction

	Person #1	Person #2	Person #3	Person #4
Given Name				
Family Name				
Type of Pet				

Logic Puzzle: Step 1

	Person #1	Person #2	Person #3	Person #4
Given Name	Alice			
Family Name		Ms. Black	Ms. Brown	
Type of Pet				The fish

Logic Puzzle: Step 2

Because of the clues, there are other things we can figure out about these people and their pets.

These things can be determined by the process of elimination. Each step is added in yellow writing in the chart.

Logic Puzzle: Step 2

	Person #1	Person #2	Person #3	Person #4
Given Name	Alice		(not Bette)	(not Bette)
Family Name		Ms. Black	Ms. Brown	
Type of Pet	(not the dog)	(not the dog)		The fish

Logic Puzzle: Step 3

Now we know that

1. Persons 1, 3, and 4 are not Bette.
2. Therefore, Person 2 is Bette, and
3. Bette is Ms. Black.
4. Ms. Black doesn't own the dog.
5. Neither does Alice (Person 1).
5. Person 4 owns the fish. Therefore, we know that Person 3 owns the dog.

Logic Puzzle: Step 4

	Person #1	Person #2	Person #3	Person #4
Given Name	Alice	Bette!!	(not Bette)	(not Bette)
Family Name		Ms. Black	Ms. Brown	
Type of Pet	(not the dog)	(not the dog)	The dog!!	The fish

Logic Puzzle: Step 5

	Person #1	Person #2	Person #3	Person #4
Given Name	Alice	Bette!!	(not Bette)	(not Bette)
Family Name		Ms. Black	Ms. Brown	
Type of Pet	(not the dog)	(not the dog <u>or</u> the cat)	The dog!!	The fish

Logic Puzzle: Step 6

Now we know that

1. Bette Black owns the bird.
2. Ms. Brown owns the dog.
3. Ms. Grey doesn't own the cat.
4. Therefore, Alice owns the cat.
5. Therefore, Alice is not Ms. Grey.



Logic Puzzle: Step 7

	Person #1	Person #2	Person #3	Person #4
Given Name	Alice	Bette!!	(not Bette)	(not Bette)
Family Name	(Not Ms. Grey)	Ms. Black	Ms. Brown	
Type of Pet	The cat!!	The bird!!	The dog!!	The fish

Logic Puzzle: Step 8

	Person #1	Person #2	Person #3	Person #4
Given Name	Alice	Bette!!	(not Bette)	(not Bette)
Family Name	(not Ms. Grey)	Ms. Black	Ms. Brown	Ms. Grey!!
Type of Pet	The cat!!	The bird!!	The dog!!	The fish

Logic Puzzle: Step 9

	Person #1	Person #2	Person #3	Person #4
Given Name	Alice	Bette!!	(not Bette)	(not Chloe or Bette)
Family Name	(Not Ms. Grey)	Ms. Black	Ms. Brown	Ms. Grey!!
Type of Pet	The cat!!	The bird!!	The dog!!	The fish

Logic Puzzle: Step 10

	Person #1	Person #2	Person #3	Person #4
Given Name	Alice	Bette!!	Chloe!!	(not Chloe or Bette)
Family Name	(not Ms. Grey)	Ms. Black	Ms. Brown	Ms. Grey!!
Type of Pet	The cat!!	The bird!!	The dog!!	The fish

Logic Puzzle: Step 11

Now we know that

1. Bette Black owns the bird.
2. Alice owns the cat. For this reason, Alice is not Ms. Grey.
3. Therefore, Person #4 is Ms. Grey.
4. Therefore, Alice must be Ms. Green.
5. Therefore, Person #4 must be Ruth.
6. Ms. Chloe Brown owns the dog.

Logic Puzzle: Step 12

	Person #1	Person #2	Person #3	Person #4
Given Name	Alice	Bette!!	Chloe!!	Ruth!!
Family Name	Ms. Green!!	Ms. Black	Ms. Brown	Ms. Grey!!
Type of Pet	The cat!!	The bird!!	The dog!!	The fish

Logic Puzzle: Lost Pets

Congratulations! You have successfully returned the bird, the cat, the fish, and the dog to their owners!

