

EduTrend Contents

G4C · PUZZLE PLAY · PRIMARY

Tangram Silhouettes

Cover an outline using all seven tangram pieces, then design a new outline for a partner

Ages 6–10	Level: Developing	15 minutes	Individuals and pairs · up to 30	Activity 02

Inside: activity at a glance · step-by-step session plan · facilitator notes · 3 pupil worksheets · assessment checklist

ACTIVITY 02 · AT A GLANCE

Tangram Silhouettes

Show an outline card, such as a cat, a boat or a house. Children cover it using all seven tangram pieces cut from a paper square. Pieces may be turned and flipped but must not overlap. When a child finishes, they draw round their solution to make a new outline for a partner to solve.

Learning outcomes

By the end of the session pupils can:

- rotate and flip shapes;
- fit shapes together;
- test and adjust;
- design a puzzle for others.

KEY WORDS

tangram · rotate · flip · fit · outline · shape

CURRICULUM LINKS

Maths: shape, rotation and reflection. Art: design.

1	2	3	4	5	6
WARM UP	**EXPLAIN**	**PLAY**	**CHECK**	**TALK**	**CLOSE**
Minds ready	One game, clear rules	Think before you move	Was it a good move?	How did you work it out?	Calm and positive

Materials (per child)

- One tangram set per child
- Outline cards
- Paper and pencils
- Worksheets 1, 2 and 3

Before the session

- Cut tangram sets.
- Prepare outlines.
- Model turning and flipping.
- Plan pairs.

SAFETY

Paper pieces only; keep sets together.

ACTIVITY 02 · SESSION PLAN

Step by step

Offer a strategy, such as placing the biggest triangles first, rather than the answer.

Time	What happens	Say or ask
0–2 min **Warm up**	Make a square from two triangles.	*"How did you turn them?"*
2–4 min **Explain**	Rules: all seven, no overlaps.	*"Can you flip a piece?"*
4–12 min **Play**	Solve outlines; design new ones.	*"Which piece was hardest?"*
12–15 min **Talk**	Swap designs; share strategies.	*"What strategy worked?"*

CHALLENGE CARD (print or copy onto the board)

Cover an outline with all seven pieces and design a new one for a partner.

ACTIVITY 02 · FACILITATOR NOTES

The puzzle game know-how in brief

Spatial reasoning includes rotating a piece in the mind before placing it.

Designing a puzzle for others deepens understanding of how shapes fit.

Common ideas to listen for

- “Pieces can overlap.” They must not.
- “Big pieces go last.” They often go first.
- “There’s only one solution.” Some outlines have several.

Adapting the activity

Support

Show the outline with some internal lines drawn in.

Stretch

Use a smaller outline so pieces cannot be placed on top.

WORKSHEET 1

Outline solved

Name: _____ Class: _____ Date: _____

Draw your solution.

Solution

WORKSHEET 2

My outline

Draw a new outline for a partner.

New outline

WORKSHEET 3

Reflection

Draw or write.

The trickiest piece was... because...

FOR THE TEACHER

Assessment checklist

Use during the session. One sheet covers up to eight pupils; copy as needed.

Pupil	Rotates and flips	Fits all pieces	Designs a puzzle

Suggested codes: W = working towards · E = expected · G = greater depth

ABOUT THIS ACTIVITY

Tangram Silhouettes is a sample activity from the EduTrend Contents G4C Puzzle Play programme (primary, level: developing). Every activity in the programme follows the same format: a practical challenge, a clear session plan, facilitator notes and ready-to-print worksheets, so that teachers, club leaders and parents can run it without extra preparation.

Full 15-, 20- and 32-week programmes are available from EduStore at edutrend.org.

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