



EduTrend Contents

G4C · BUILDING AND CONSTRUCTION GAMES · PRIMARY

Cup Tower Challenge

Plan without touching, then build the tallest free-standing cup tower in eight minutes

Ages 5–10

Level: Developing

20 minutes

Teams of 2–4 · 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

Cup Tower Challenge

Teams get 30 paper cups or 40 blocks. They have two minutes to plan without touching the materials, then eight minutes to build the tallest free-standing tower. The tower must stand on its own for ten seconds to be measured. Teams then talk about what made the tallest towers stable and try a second round with one improvement.

Learning outcomes

By the end of the session pupils can:

- plan before building;
- test and improve a design;
- measure height;
- work as a team.

KEY WORDS

plan · base · stable · measure ·
improve · team

CURRICULUM LINKS

Design and technology: structures.
Maths: measuring. PSHE:
teamwork.

1**WARM UP**

Hands and ideas
ready

2**EXPLAIN**

One challenge,
clear rules

3**BUILD**

Try, test, rebuild

4**TEST**

What happens?

5**TALK**

Why did it stand or
fall?

6**TIDY**

Photo, then clear
up

Materials (per team)

- 30 paper cups or 40 blocks per team
- Tape measure
- Timer
- Worksheets 1, 2 and 3

Before the session

- Count materials.
- Set timers.
- Model planning.
- Agree the ten-second rule.

SAFETY

Keep towers below shoulder height if children
must stand close; build on the floor.

ACTIVITY 02 · SESSION PLAN

Step by step

Take photos so children can tidy up without feeling their work has disappeared.

Time	What happens	Say or ask
0–2 min Warm up	Stack five cups.	<i>“What shape base is steady?”</i>
2–4 min Plan	Plan without touching.	<i>“What is your plan?”</i>
4–16 min Build	Build, measure, improve.	<i>“What will you change?”</i>
16–20 min Talk	Compare towers.	<i>“What made the tallest stable?”</i>

CHALLENGE CARD (print or copy onto the board)

Build a free-standing tower and improve its height in round two.

ACTIVITY 02 · FACILITATOR NOTES

The building game know-how in brief

A wide base holds more weight and makes towers more stable.

Planning before touching helps teams share ideas.

Common ideas to listen for

- “Thin towers are tallest.” They often fall.
- “The first plan is best.” Testing improves it.
- “A fall wastes time.” It shows what to fix.

Adapting the activity

Support

Allow longer building time and a shared goal of beating the last height.

Stretch

The tower must hold a small book on top, or use half the pieces.

WORKSHEET 1

Tower plan

Name: _____

Class: _____ Date: _____

Draw your plan.

Plan

WORKSHEET 2

Heights

Record heights.

Rounds

Round	Height (cm)	Change we made
1		
2		

WORKSHEET 3

Reflection

Draw or write.

Our tower stood because...

FOR THE TEACHER

Assessment checklist

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

Pupil	Plans before building	Improves design	Measures accurately

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

ABOUT THIS ACTIVITY

Cup Tower Challenge is a sample activity from the EduTrend Contents G4C Building and Construction Games 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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