

The tallest spaghetti tower wins!

- Collaboration

EXPLANATION:

Team challenges promote collaboration. Together students must pool their ideas using a design mindset to create a spaghetti tower. The tower must support a marshmallow and the winning team will have built the tallest tower! With limited resources but with the power of teamwork who knows how tall the towers will get!

YEAR LEVELS: Years 4–6

STUDENT GROUPING: Small groups of 3–4 students

ACTIVITY LENGTH: 45–60 mins

LINK TO CURRICULUM:

English: Sequence of content F–6

Strand Language

- Language for social interactions – How language used for different formal and informal social interactions is influenced by the purpose and audience.

Strand Literacy

- Listening and speaking interactions – Purposes and contexts through which students engage in listening and speaking interactions
- Listening and speaking interactions – Skills students use when engaging in listening and speaking interactions.

See also Personal and Social Capability learning continuum sub elements:

- Appreciate diverse perspectives
- Communicate effectively
- Work collaboratively
- Understand themselves as learners
- Make decisions.

SCOPE OF TASK:

Working in a team requires planning, communication and turn taking. This activity will also require design skills, maths concepts and patience!

1. Gather the students together in a group. Share with them the introductory video from Molly Strano. Molly Strano is an Australian cricketer. She shares her experiences of collaboration as a team member and in her daily life introducing the activity:



2. Arrange students into groups of 3–4 or allow to self-select their groups.
3. Give each group the resources that they can use to complete the task – but don't let them touch them until the challenge commences.
4. Share the objectives of the challenge with the students:
 - The goal of the task is to design and build the tallest structure that will support a marshmallow
 - Each team will be given resources and a set time period (teacher to determine)
 - Each team is encouraged to draw a plan of how the spaghetti tower will be built to and discuss building techniques as a group.
5. Before students begin the task, ask if there are any questions about the task?
6. Start the stopwatch to begin the task.
7. Walk around the groups reminding students.
 - The marshmallow must be on the top of the structure
 - The structure must be free-standing
 - Keep students informed about how much time remains.

8. When time is up, each group can present their spaghetti tower. The group shares their plan and explains how they built their tower.
9. Each tower is measured – use a measuring tape – how measuring occurs can be negotiated with the students. Create a table on the whiteboard to record the heights of the spaghetti towers and determine a winning group!



At the end of the challenge ask students questions to reflect on how they worked together. Example questions include:

- Was there a leader on your team? Who was it and who decided who the leader would be?
- Was anyone an expert?
- Did everyone assist?
- Did people have particular roles in the group?
- What could you have done better as a group to improve your tower height?
- What was the most important team skill your team used?

Photos of the towers can be taken, and students can write reflective reports to share with other classes or members of the school.

RESOURCES:

- Paper and pen for developing plans
- 20 sticks of dry spaghetti
- one metre of string
- one metre of masking tape
- one marshmallow
- a desk to build the structure on
- a measuring tape.