

# The Marshmallow Challenge

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A design challenge created by Peter Skillman.

This team building (or end of the semester) activity allows students to collaborate, actively search for, and apply (critically think about) concepts and principles in an engaging and memorable manner.

**Place students in groups of four. Each group receives:**

- 20 sticks of uncooked spaghetti (regular spaghetti is best, not thin or fettuccini)
- 1 yard of string and 1 yard of masking tape
- 1 scissors
- 1 regular-sized marshmallow
- 1 measuring tape

**Task:**

Build the tallest freestanding structure the group can using only the materials provided. Students can cut string and tape, break the spaghetti, use the tabletop but the whole unaltered marshmallow has to be at the top of their structure. Groups have 18 minutes to complete the task.

If your classroom has the capability, to keep time, use an online stopwatch to project on screen (<http://www.online-stopwatch.com/>).

When teams complete their structure they are measured with the TA recording the height. You might want to consider a prize for the winning team or the class. Hot chocolate, perhaps!

To bring the challenge back to the class, ask your students to reflect on the course concepts the exercise reinforced. Below is a sample from Steve Piscitelli's course but you can easily change the concepts based on your class goals.

Pre-planning	Communication	Collaboration	Creativity
Reflection	Leadership	Collective monologues	Assumptions
Compromise	Kinesthetic style	Priorities	Unequal resources
Quick doesn't equal quality	Group dynamics	Energy vampires	Excuses
Failure can lead to progress	Focusing on your base	Balance	Civility

Other class goals:

Working in a team	Communication	Locus of Control	Importance of building a foundation
Planning	Listening	Paying attention	

Here is a TED Talk showing the activity in action: [http://www.youtube.com/watch?v=H0\\_yKBitO8M#t=25](http://www.youtube.com/watch?v=H0_yKBitO8M#t=25)

**Interesting/fun comments to share with the class:**

Consistently business school graduates perform poorly while kindergartners perform the best!

Average height of structures - approximately 20 inches (business school students – 10”, kindergarten students 25”, architects/engineers 40”, CEOs 22”, CEOs with executive administrators 30”).