**QUEST TEAM HANDOUT - Knights Tournament: The Marshmallow Challenge**

***Materials***

* 20 sticks of dry spaghetti
* 1 marshmallow
* 1 yard of masking tape
* 1 yard of string
* 1 pair of scissors

***What to do***

1. **Build the tallest freestanding structure:** the winning team is the one that has the tallest structure measured from the tabletop/surface to the top of the marshmallow. That means the structure cannot be suspended from a higher structure, like a chair, ceiling or chandelier.
2. **The entire marshmallow must be on top**: the entire marshmallow needs to be on the top of the structure. Cutting or eating part of the marshmallow disqualifies the team.
3. **Use as much or as little of the materials**: you can use as many or as few of the 20 spaghetti sticks as much or as little of the string or tape. You cannot use any other materials.
4. **You can break up the spaghetti, string or tape**: you are free to break the spaghetti and cut up the tape and string to create new structures.
5. **The challenge lasts 18 minutes:** you cannot hold onto the structure when the time runs out. Any team touching or supporting the structure at the end of the exercise will be disqualified.

***Discussion starters***

* **Teamwork:** How helpful was everyone on your team? Did anyone appear to be an expert? Were all members of the team able to contribute their ideas? Were all members fully engaged? Did you learn from others? Did you have a variety of skills in your team? Did any one person dominate? Did your team try and fail at different approaches before agreeing on a final structure?
* **Collaboration**: How was collaboration demonstrated in your team? Were all teams collaborative? Is there a difference between teamwork and collaboration?
* **Leadership:** Did your team have a leader? Who was it and who decided this? How did a leader help in the challenge? If you had no leader, how did you go? Would you have benefited from having a leader?
* **Creativity:** How did your team create its design? Did you learn from others in your team or from other teams? Take a look around at the structures built by other teams. Are any significantly different to the others? Why might this be?
* **Ideas generation:** Where did the ideas come from for building your structure? Did everyone contribute? Were ideas received in a systematic way? Did you use a method of trial and error? Rapid prototyping? Rebuilding? Redesigning? Plan and execute? Did you fail? Did you learn from your failures?
* **Energy:** Did you feel the time pressure? Did you think that this was a possible task or not? Was there a good vibe in your team?
* **Learning from experience:** In retrospect, what could you have done better? What might you have changed?
* **Innovation:** How many standing structures are there in your classroom? Are the structures similar in design or different? What roles did team members play – leader, follower, doer, thinker, risk-taker, planner, others? Can you identify some of the key steps in the process of innovation? How did the winning team succeed? What do you think the key to their success was?