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A Team Mission: Online Team Discussions in Math

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Research

- Group work is an essential tool for students' future lives and, therefore, a key component of the online classroom (Morgan et al., 2014)
- Higher education institutions are paying more attention to the development of students' communicative abilities and critical thinking.(Rezaei, 2017)
- Online group work can be complicated because of its asynchronous characteristics and lack of physical presence, and its requirements for skills in handling technology, human relationships, and content-related tasks (Chang et al. 2016)
- To motivate students' interest in group work, instructors need to point out the benefits of group work... the team spirit and teamwork skills group members can develop, such as communication, leadership, shared vision, and negotiation (Jackson et al., 2014).

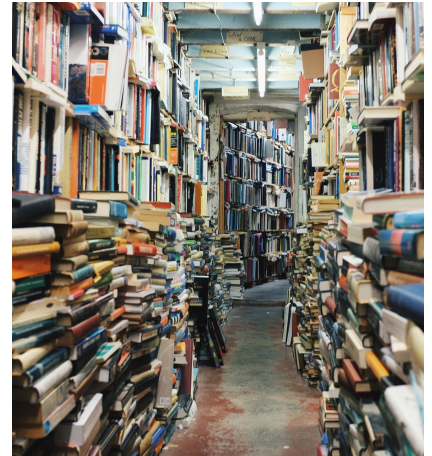


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Recommendations

- Structure task to allow for a climate of collaboration and true engagement
- Create preliminary assignment
- Assign roles or allow choices
- Make participation by group members visible
- Individualize grades

The Creation of a MATH Team Discussion

New Bright Space feature gave us opportunity to create a TRUE group project. But how to do that and still avoid common “group project” complaints from students?

- Independent portions: One project, individual assignments
 - No need to wait for or rely on other group members to post.
 - Collect all individual portions at the end of the week into one post to represent a group presentation
- Create small groups from class (5-8 students per group)
 - Give more options than max team members
 - Freedom to choose something that interests the student - the earlier in the week they post, the more options they have.

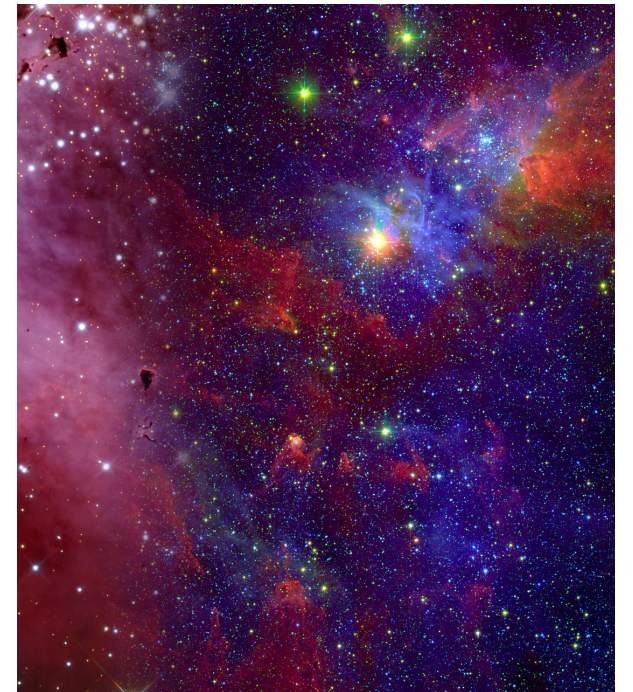


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MM150 Survey of Math Team Discussion

You have volunteered to be part of a team that will build a new home for a needy family in your area. Your team's task is to calculate some of the construction costs involved in building this home. Please go to your assigned group discussion board to begin the project.

First group member to post will select the floor plan for the home. Search online and choose a ranch style home floor plan that lists the dimensions of each room (include the URL as a citation).

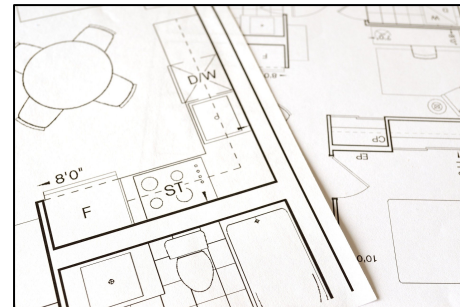


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Once the floor plan is chosen, each group member (including the student who posted the floor plan) will pick one of the following costs and post the results. You will explore online for construction materials and using the dimensions of the floor plan, calculate the total cost for:

- **Bedroom Flooring:** Calculate the floor area of all the bedrooms in the home.
- **Main Living Area Flooring:** Calculate the floor area of the main living areas (kitchen, dining room, living room/great room) in the home.
- **Bedroom Walls:** Calculate the area of the four walls of all the bedrooms (standard ceiling height is 8' unless otherwise noted).
- **Main Living Area Walls:** Calculate the area of the walls of all the main living areas (kitchen, dining room, living room/great room). (Standard ceiling height is 8' unless otherwise noted).
- **Bedroom Crown Molding:** Calculate the perimeter of the four walls of all the bedrooms.
- **Main Living Area Crown Molding:** Calculate the perimeter of the walls of all the main living areas (kitchen, dining room, living room/great room) .
- **Exterior Gutters:** Calculate the outside perimeter of the roof including the 2-foot overhang extension
- **Roofing Materials:** Calculate the area of the entire home using the outside dimensions including the 2-foot overhang extension. For this calculation, we will assume a simple gable roof with a 4/12 pitch. Multiply your area calculation by 1.054 to determine the actual area of the roof.

MM212 College Algebra

Team Discussion

You have been selected to be on Secret Spy Team! As a mathematician in training, your expertise with functions will be helpful in securing top secret communications between your team members. Your team's goals and objectives are to encode/decode secret messages with details on your next team's meeting. Each member of the team will contribute with one detail for the team's secret meeting and use functions to encode and decode the messages to make them unreadable to anyone outside of your team.

First group member to post will select the coding/decoding function/inverse pair.



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Part 1: Encode the message "THIS IS FIRSTNAME"

Part 2: Pick one of the following details that hasn't yet been chosen to coordinate your team's secret meeting. Encode a short message to the team (4 words or less).

Location: Decide on a location to meet. For example, MEET AT STARBUCKS

- **Where to Be:** Decide where to be at the location. For example, SIT BY THE DOOR
- **Time:** Decide on the time to meet. For Example, MEET AT NOON
- **What to Bring:** Decide on what to bring. For example, BRING THE MAP
- **What to Wear:** Decide on what each team member should wear. For example, WEAR A STOCKING CAP
- **What to Do:** Decide on what to do at location. For example, BUY A COFFEE
- **Password to Say:** Decide on password to say for meet up. For example, I LIKE TEA
- **Password to Reply:** Decide on password to reply for meet up. For example, I PREFER SODA

Brightspace Setup Summary

- Discussion Board is set as Group Discussion by C&I with # of group/teams.
- Instructor enrolls students into groups.
- Each Student ONLY sees their group's posts.

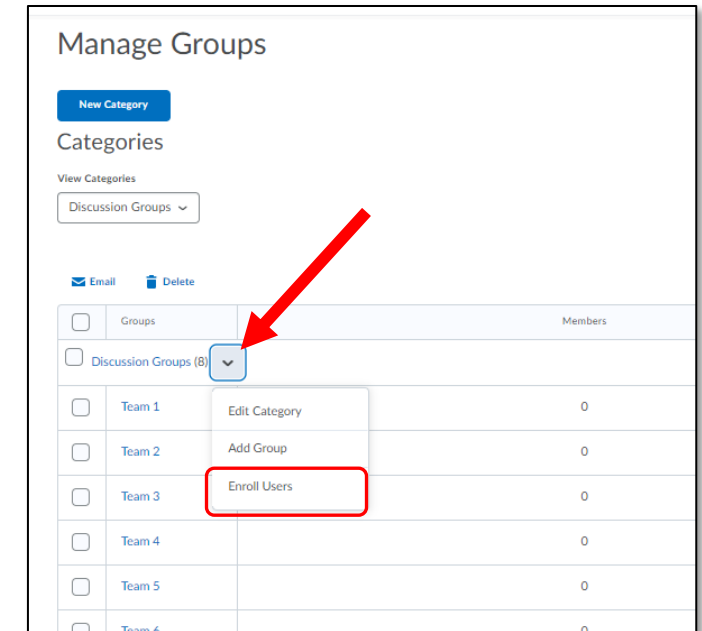
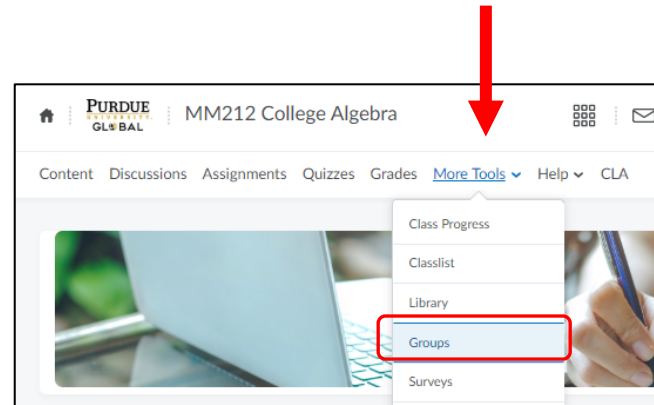
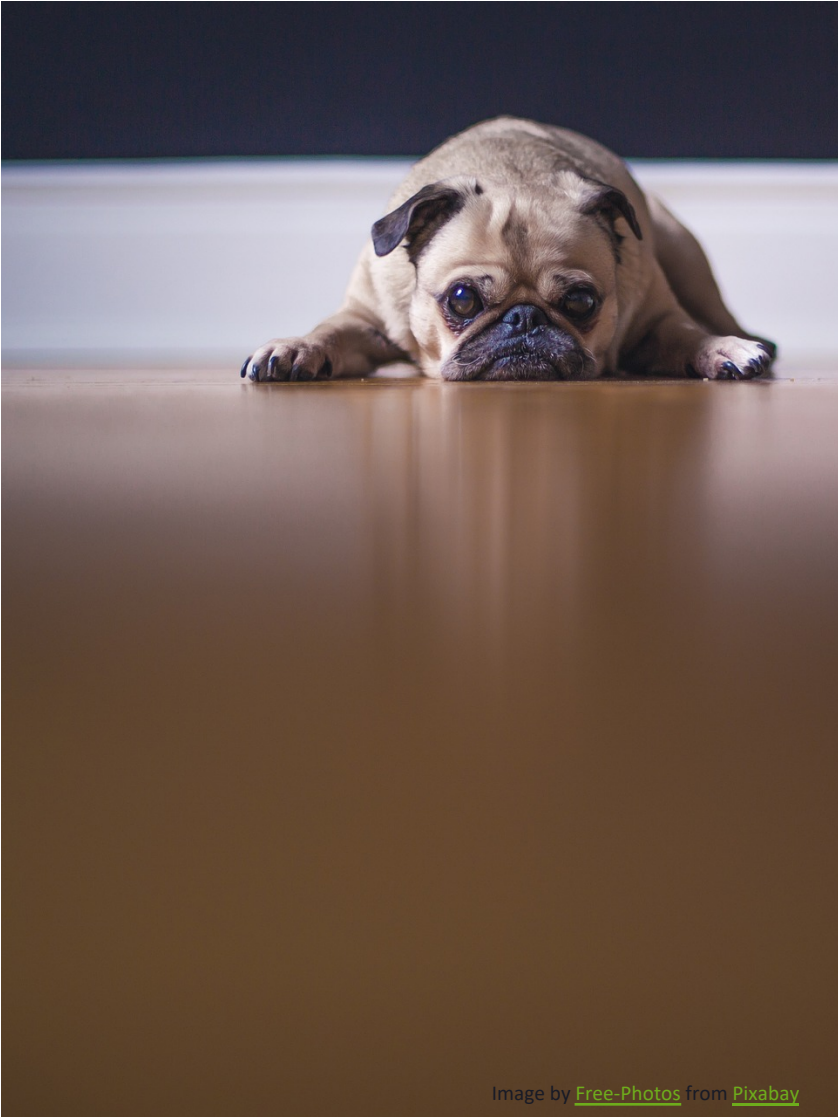




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Student Concerns

- Timing
- Participation
- Grading

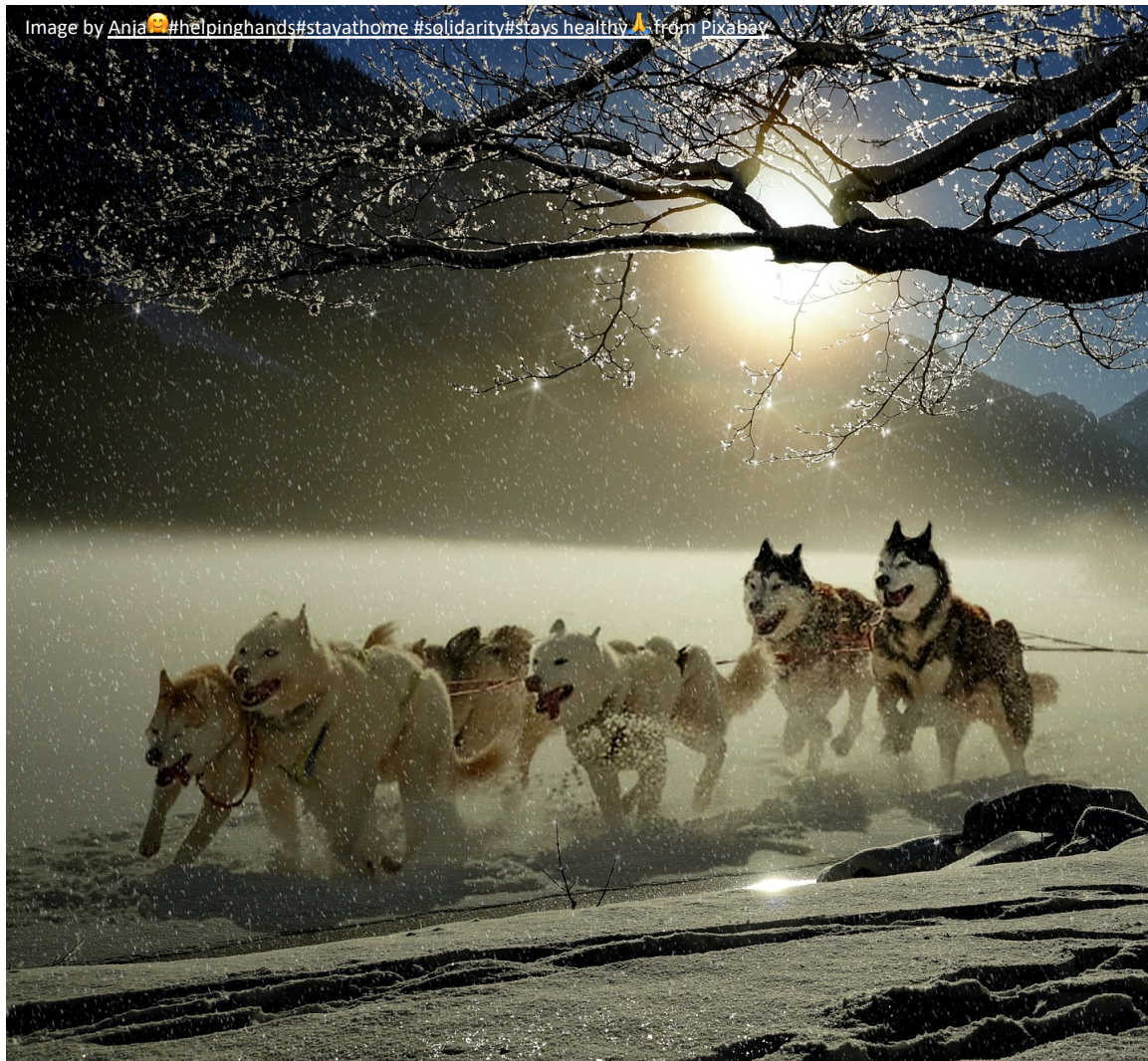


Faculty Concerns

- Timing
- Participation
- Grading

Selected References

- Blackmon, S. J. (2012). Outcomes of Chat and Discussion Board Use in Online Learning: A Research Synthesis. *Journal of Educators Online*. Vol (9)2.
- Chang, B.m Kang, H. (2016). Challenges facing group work online. *Distance Education*. Vol 27(1), pp. 73-88.
- Jackson, D., Hickman, L. D., Power, T., Disler, R., Potgieter, I., Deek, H., & Davidson, P. M. (2014). Small group learning: Graduate health students' views of challenges and benefits. *Contemporary Nurse*, 48, 117–128.doi:/10.1080/10376178.2014.11081933
- Morgan, K., Williams, K.C., Cameron, B.A., Wade, C.E. (2014). Faculty Perceptions of Online Group Work. *The Quarterly Review of Distance Education*. Vol 15(4), pp. 37-41.
- Illera, J. L. (2001). Collaborative environments and task design in the university. *Computers in Human Behavior*. 17, 481–493.
- Rezaei, A. R. (2018). Effective Groupwork Strategies: Faculty and Students' Perspectives. *Journal of Education and Learning*. Vol 7(5), pp. 1-10.doi:10.5539/jel.v7n5p1



Thank You!

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