



Structuring In-class Group Work

Gina Frey, Ph.D.

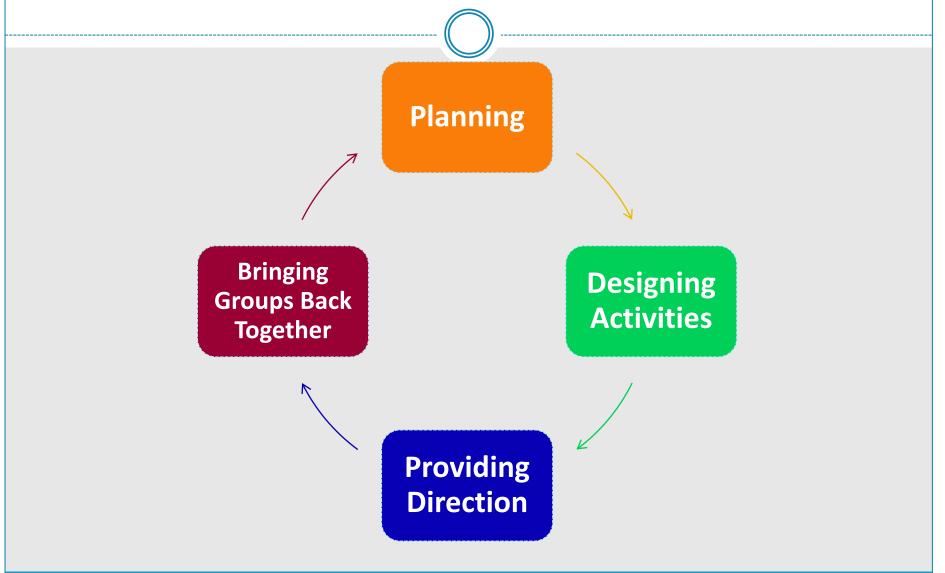
Florence E. Moog Professor of STEM Education, Chemistry

Co-director, Center for Integrative Research on Cognition, Learning, and Education (CIRCLE)

128 Umrath Hall

gfrey@wustl.edu

http://circle.wustl.edu



Group Activity - Aussie Football

- Please get into groups of 3-4
- Select roles, use role cards
 - Take 3 minutes to discuss roles
- Work on activity for 5 minutes
- Come back to discuss. Be able to justify your answer/reasoning.
- Take 3 minutes to reflect on your experience
 - Write down 2 questions or insights from this experience
 - Think about the process and about the different types of questions

Collaborative Learning Continuum

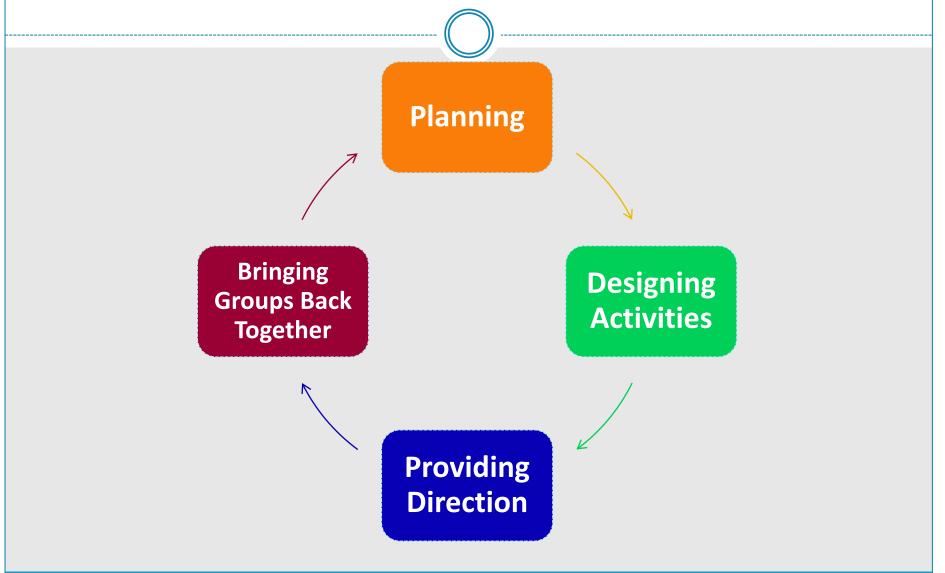
Short, partnered or small group activities.

Class-length activities.

Not done every week.

Done every day.

*Supplemental Activities (outside of class)





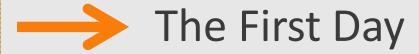
Planning



Before the Course

- Determine the objectives for the in-class group work
- Decide how much time will be spent in group work – modify the curriculum appropriately
- Decide if you want to grade the group work
- Decide if groups will remain together or change

Planning



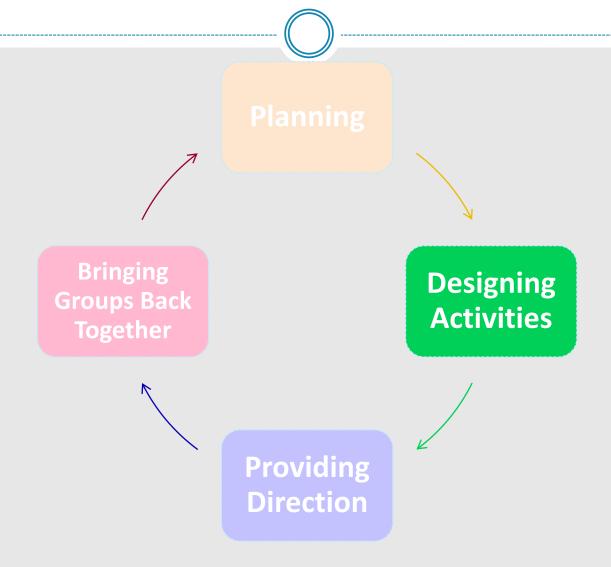
- Set the environment to be conducive for all
- Explain why group work is an important part of this class
- Explain the structure of the group work
- Set ground rules for cooperative environments
- Perform a group activity on the first day

Planning



Before the Activity

- Determine the objectives for the in-class group-work activity
- How you will integrate the activity into the class objectives
- How will you transition to and from activity
- Consider logistics and group assignments

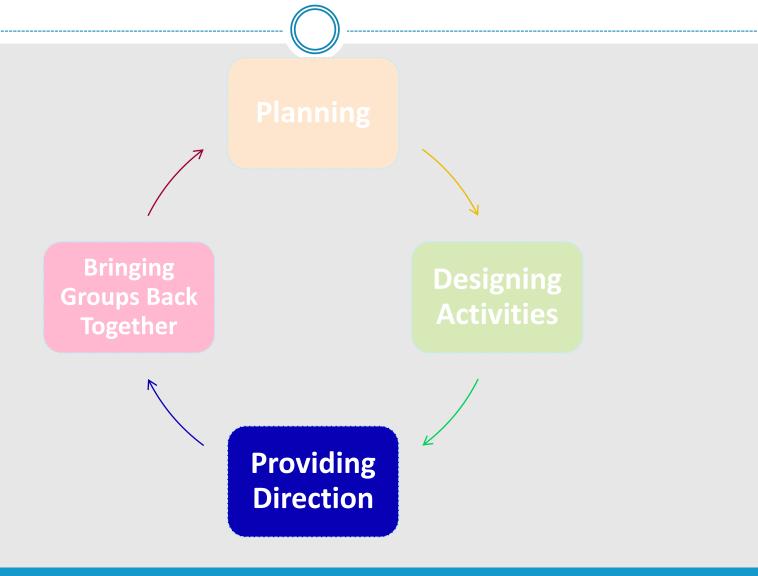


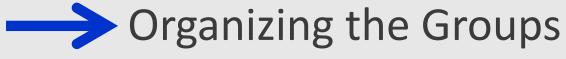
Designing the Activity



Before the Course

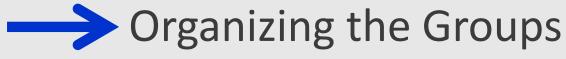
- Determine the objectives for each in-class group-work activity
- Activities should generate discussion among students
 - Synthesize ideas from readings, assignments, videos, or lectures
 - Draw conclusions about tables, graphs, figures, or data
 - Determine predictions of demonstrations or experiments
 - Solve multi-step problems
- Most activities should be able to be performed in 8-10 minutes; can be less time also (3-5 minutes)





Group Roles (rotating)

Role	Description
Facilitator/ Manager	Keeps the group focused and ensures that all members participate and understand.
Recorder	Keeps notes of what the group has done in consultation with others
Spokesperson/ Presenter	Presents group results to the class for discussion. Uses the recorder's notes.



Group Roles (rotating)

Role	Description
Questioner	Questioner: Asks members if they have questions. Collects questions group has for the instructor.
Reflecter	Considers the group dynamics; Facilitates members working together
Others?	Instrument expert, subject expert





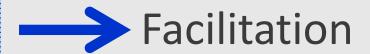
Sample instructions

- Please get into groups of 3.
- You will have 4-6 minutes to solve this problem.
- Then we will come back together and discuss. Please be able to justify your answer/reasoning.
- Please get into groups of 3.
- You will have 4-6 minutes to work on this question.
- Then I will start the poll for the clickers.
- Afterwards we will discuss the reasons why you selected your answer.

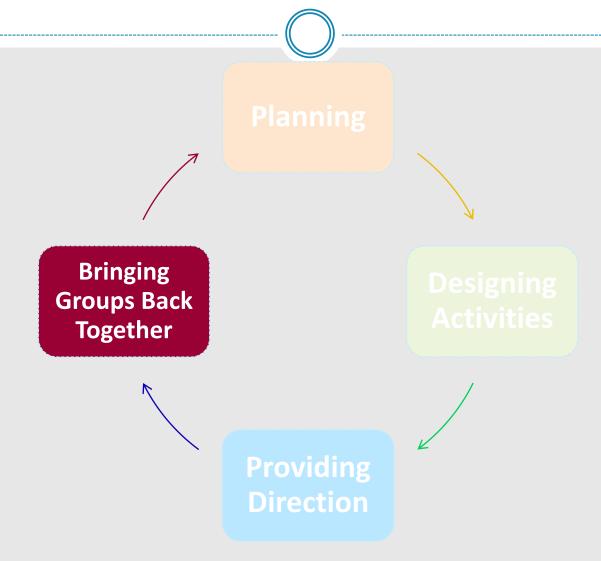


Sample instructions

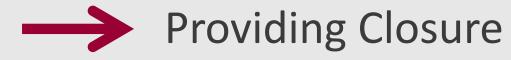
- Please form groups of 3 (work with someone new!)
- Each group should choose: a manager, a spokesperson, and a recorder
- Manager: raise your hand when you are ready and I will bring you the handout
- You will have 4-6 minutes to answer the 2 questions on the handout.
- We will then come back together as a group to discussion. Please be able to explain your reasoning.



- Check in to determine role assignments
- Be an "active listener"
 - Where are the peaks and valleys?
 - What common mistakes do you notice?
 - Which groups will you call on later?
- Monitor without interfering
- Provide logistical directions (1-minute warning)



Bringing Groups Back Together



Making the Key Points visible

- Provide structure to the whole-group discussion
 - 1 idea or piece of information from each group
 - Do not have to collect from EVERY group
 - Have groups explain their reasoning
 - "Would someone like to add on?"
 - Use wait time
 - Use the board!
 - Do a re-cap of key points

Evaluating Group Work

- Is the group work part of participation or part of an assignment?
- If part of an assignment, grade both individual performance and group performance.
- Who will apply the assessment?
 - Instructor, students, or both?
- What will be the assessment?
 - The group-work process, the group-work product, or both?

Think-Pair-Share Reflection Activity

Please, individually, reflect on the questions below and write down your ideas (~3 min)

What insight did you learn today about incorporating in-class group work?

What concerns/challenges do you still have about incorporating in-class group work into your course?

Now, talk to your neighbor about your ideas (~5 min)

Choose a topic.

Develop learning objectives.

Choose an activity that is appropriate for the topic and the students' knowledge and skills.

Develop an activity that encourages discussion.

Develop grading criteria for the assignment.

It does not have to be graded.

Reflect on the effectiveness of the assignment.

What went well?

What did not go well?

Develop instructions that outline your expectations for the students.

Set up groups and have students take up specific roles.

Planning and Designing Activities

Incorporating Group Work

Providing Direction

Evaluating

Group

Work

Facilitate the activity: constantly monitoring without interfering.

Discuss the activity as a class.

Ask each group to report one idea or piece of information.

Follow up by asking the group to explain their reasoning.

Closure

Promote participation by asking other groups to respond.

