

Histogram Sorting Using Cooperative Learning

Instructor Lesson Plan

A Cooperative Learning lesson plans involve four steps:

1. Making preinstructional decisions.
2. Explaining the task and cooperative goal structure.
3. Monitoring and intervening during the lesson.
4. Assessing and processing the lesson.

Preinstructional Decisions

1. Group Size: Groups of 4 students.
2. Assigning student groups: Students count off in order to form groups of four. For example, in a class of 28 students ($28/4 = 7$), count off by 7. This creates seven groups of four students.
3. Roles: Within each group of four students, divide students into two pairs.
4. Room Arrangement: Groups of four students.
5. Materials: One stack of 18 histograms for each pair of students.

Explaining Task and Cooperative Goal Structure

1. Instructional Task: Today's lesson involves three steps. First, groups of two will sort histograms into different categories of their own choosing. Second, groups of two will compare their sorting method with another pair, after which the group of four must reach consensus what categories to use to sort histograms. Third, individuals will complete a short quiz based on today's lesson.
2. Criteria for Success: Students are to (1) sort histograms into categories and (2) be able to explain why they chose those categories.
3. Positive Interdependence: To begin, each pair will sort histograms into categories. Then, each pair will explain their categories to the other pair. Each group of four must then reach consensus on what categories to use to sort histograms. At random, I will ask one individual from each pair to explain their categories. Groups will receive one bonus point for (a) sorting the histograms and one bonus point for (b) being able to explain why.
4. Individual Accountability: Each group member is responsible for presenting their results. I will call on individuals at random to explain their sorting categories. Also, at the end of class we will individually take a quiz based on today's lesson. answer on a particular problem.
→ See sample assessment with the original activity at <http://www.causeweb.org/repository/StarLibrary/activities/garfield2002>.

5. Intergroup Cooperation: Should any group of four be unable to reach consensus, compare your categories with another group of four. If your answers differ, choose the best answer.
6. Expected Behaviors: I expect to see the following things while you are working: (1) group members will contribute ideas, and (2) group members will ask clarification when they do not understand a particular reason for a sorting category..
→ See “Teaching Social Skills” in the Cooperative Learning module for tips on encouraging expected behaviors.

Monitoring and Intervening

1. Systematically observe each group’s taskwork (efforts to solve the problems) and teamwork (efforts to work together effectively).
2. When a group is struggling, watch for the right moment, then point out the problem (whether it be taskwork or teamwork). Then, ask the group what can be done about it. This establishes the teacher as a consultant rather “answer-giver”.

Assessing and Processing

1. Assessment of Individual Learning: Randomly select a student to explain an answer.
2. Assessment of Group Productivity: Reward one bonus point for sorting and one bonus point for being able to explain the group’s categories.
3. Small Group Processing: “How well did we manage our time?”
4. Whole Class Processing: Lead a discussion on how well groups worked together. Model good processing by sticking close to actual, specific observations of positive behaviors.
5. Celebration: Turn to your group and say, “We did it! Thanks for your help!”