



Complex Instruction with Equal Social Status in Small Group Work



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Introduction

Eight Mathematical Practices

Complex Instruction

• NCTM – *Navigation* series

Objective:

Students will actively engage in a group activity that is rigorous and holds all participants accountable to self and others by working through a complex math task.

Rigorous Math Group Activities

<u>Team Organizer</u>



- · Keeps group focused.
- Makes sure directions are read and followed.
- Takes up roles of group members who are absent.
- Resolves conflicts.

Team Correspondent



- Gives progress of group
- Monitors that each group member is recording information or data.
- Organizes group information.

Supply Regulator



- Gets group supplies
- · Takes proper care of supplies
- Takes all supplies back

Cohen, E. G. (1994) Designing groupwork: Strategies for the heterogeneous classroom. New York: Teachers College, Columbia University.



Team Inquiry Hunter

- Asks questions of team members
 - Can you tell me why?
 - Is there an example?
 - Do we need more information?
 - Do we need clarification from the teacher?





Principles of Complex Instruction

Redefining smartness/status

Provide purposeful, groupworthy tasks

- engage students in rigorous mathematics focused on conceptual big ideas
- require multiple mathematical abilities
- encourage problem solving and non routine tasks
- develop individual skill in context of shared group performance or task

Rigorous Mathematics Support students in using the group as a learning resource

- construct task card to provide sufficient yet minimal direction
- establish norms and roles to support positive group interaction
- intervene in ways that preserve the group's autonomy and interdependence

Accountability to self and others for learning

Raise expectations for all students (including expectations of students for each other)

- address status issues
- introduce task with multiple ability orientation
- assign competence
- hold all individuals and groups accountable

Featherstone, H. F., Crespo, S., Jilk, L. M., Oslund, J., Parks, A., & Wood, M. B. (2011). Smarter Together! Collaboration and Equity in the Elementary Classroom, Reston, Va: NCTM.

Adapted from Teachers Development Group 2005 and

Resources

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NTCM – Navigation series. Grades 3-5, 6-8

Jackson, Kara J.; Shahan, Emily C.; Gibbons, Lynsey K.; Cobb, Paul A. *Mathematics Teaching in the Middle School*, v18 n1 p24-29 Aug 2012.