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Resource ID#: 30558

Primary Type: Teaching Idea

**Direct Link:** https://www.teachingchannel.org/videos/middle-school-lesson-idea?fd=1

# Students Collaborate to Solve Compound Inequalities

In this activity, the student teacher role is reversed using the "jigsaw activity." This is where there is an original group, and they are separated into different groups. They are then given a particular case, and solve it as a group until they understand it enough to be able to go back to their original group and teach their case to the rest of the students. Each student coming from a different group, they will all have the opportunity to do some teaching.

## General Information

**Subject(s):** Mathematics
**Grade Level(s):** 6, 7, 8
**Intended Audience:** Educators

**Suggested Technology:** Interactive Whiteboard, LCD Projector

**Freely Available:** Yes

**Keywords:** math, inequalities, grade 8, jigsaw

**Instructional Component Type(s):** Teaching Idea

**Resource Collection:** CPALMS

## Additional Information/Instructions

***By Author/Submitter***
This lesson primarily involves the following math practice standards:
MAFS.K12.MP.1.1 - Make sense of problems and persevere in solving them.
MAFS.K12.MP.6.1 - Attend to precision.

## Source and Access Information

**Contributed by:**
**Name of Author/Source:** Teaching Channel
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## Aligned Standards

| Name | Description |
|---|---|

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|---|---|
| MAFS.6.EE.2.8: | Write an inequality of the form x > c or x < c to represent a constraint or condition in a real-world or mathematical problem. Recognize that inequalities of the form x > c or x < c have infinitely many solutions; represent solutions of such inequalities on number line diagrams. |
| | Use variables to represent quantities in a real-world or mathematical problem, and construct simple equations and inequalities to solve problems by reasoning about the quantities.<br>a. Solve word problems leading to equations of the form px + q = r and p(x + q) = r, where p, q, and r are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach. *For example, the perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width?*<br>b. Solve word problems leading to inequalities of the form px + q > r or px + q < r, where p, q, and r are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem. *For example: As a salesperson, you are paid $50 per week plus $3 per sale. This week you want your pay to be at least $100. Write an inequality for the number of sales you need to make, and describe the solutions.* |
| MAFS.7.EE.2.4: | **Clarifications:**<br>**Fluency Expectations or Examples of Culminating Standards**<br><br>In solving word problems leading to one-variable equations of the form px + q = r and p(x + q) = r, students solve the equations fluently. This will require fluency with rational number arithmetic (7.NS.1.1–1.3), as well as fluency to some extent with applying properties operations to rewrite linear expressions with rational coefficients (7.EE.1.1).<br><br>**Examples of Opportunities for In-Depth Focus**<br><br>Work toward meeting this standard builds on the work that led to meeting 6.EE.2.7 and prepares students for the work that will lead to meeting 8.EE.3.7. |
| **Particular alignment to:** | |
| **MAFS.7.EE.2.4a:** | a. Solve word problems leading to equations of the form px + q = r and p(x + q) = r, where p, q, and r are specific rational numbers. Solve equations of these forms fluently. Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach. For example, the perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width? |
| **MAFS.7.EE.2.4b:** | b. Solve word problems leading to inequalities of the form px + q > r or px + q < r, where p, q, and r are specific rational numbers. Graph the solution set of the inequality and interpret it in the context of the problem. For example: As a salesperson, you are paid $50 per week plus $3 per sale. This week you want your pay to be at least $100. Write an inequality for the number of sales you need to make, and describe the solutions. |