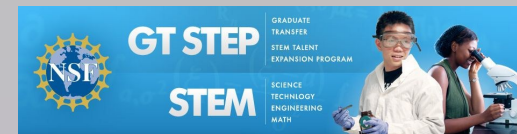




# STUDENT ENGAGEMENT TIPS OF THE MONTH



Brought to you by TIDES and PALS

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The Faculty Program for Active Learning in STEM (GTSTEP/PALS) ([www.montgomerycollege.edu/gtstep](http://www.montgomerycollege.edu/gtstep)), the Teaching to Increase Diversity and Equity in STEM (TIDES - <http://cms.montgomerycollege.edu/TIDES/>) grant project, and ELITE (<http://cms.montgomerycollege.edu/elite/>) are happy to bring you the "Student Engagement Tips of the Month". Both PALS (with its focus on active learning in STEM) and TIDES (with its focus on active learning and culturally sensitive pedagogy) seek to incorporate highly engaging learning activities for diverse student populations into STEM courses. However, as you will see, many of these activities are not STEM-specific and can be applied to any course. We also welcome your general feedback about this publication, which you can send to [tides@montgomerycollege.edu](mailto:tides@montgomerycollege.edu).

## Tip 1: "Emergency Meeting"

**Goals:** (1) motivate students to read their textbooks (2) check student comprehension of assigned readings (3) have students work in teams

**Description:** This activity is ideal when you are assigning a chapter, chapter section or other longer reading that is divided into several sections with headings. Groups of students are assigned a particular section of the chapter or reading as they will play the role of "experts" on this information at an "emergency meeting" during the next class. If possible, try to create a "scenario" that makes the content of the reading critical to dealing with a particular "emergency" or other urgent situation. The idea here is to give the assignment an added purpose, which will hopefully give students more motivation to read.



At the start of the next class, the group members compare their notes for their reading sections before the "meeting" begins. You, the professor, assume the role of the "leader" who needs the information to deal with the "emergency". You conduct the meeting by asking questions related to the reading's content, making sure that each pair/group answers at least a few questions. Ideally, your questions will not be of the simple "What is X, Y, Z?"-type, but rather of the indirect type that makes students think about whether their information is relevant to answering your questions.

**Example:** "Emergency Ebola Crisis Meeting." As we are reading "The Hot Zone" (a novel by Richard Preston) about early Ebola outbreaks in our course, I had my students read a long article about the recent Ebola crisis. The article focused on various aspects of the recent outbreak in West Africa; the reading included sections titled "Border/Travel Issues", "Financing", and "International Responses". I assigned each group 1-2 sections to read for HW. My role was to be the "President" of an unnamed country in the region, who has called an emergency meeting to learn more about the disease and the outbreak from the "team of experts".

(For more information about this activity, contact: [Professor Ray Gonzales](#))

## Tip 2: "Role-Playing a Process"

**Goals:** (1) demonstrate understanding of a process (2) check on student understanding of a process (3) have students work in teams

**Description:** Students play the role(s) of some moving aspect of a process. Different parts of the classroom can be key stations/stops to represent parts of a process.

**Example:** "Simple DC Circuits" After discussing simple circuits in lecture, completing conceptual questions about current, resistance, and voltage, and working with simple circuits in lab, it was time for students to demonstrate these concepts. 10-12 students were given the role of charge carriers in a simple circuit, and different parts of the classroom were designated "battery" and "resistor" with given voltage and resistance values, respectively. Pennies were used to represent voltage: charge carriers were instructed to pick up an appropriate number of pennies (1 penny = 1 volt) and deposit an appropriate amount at the resistor. The rest of the class were observers, checking and helping at the battery for penny-pickup, checking that the correct number of pennies were deposited at the resistor, and that charge carriers were moving at an even pace and evenly distributed; adjustments were made by observers to improve the overall model of the circuit. Follow-up activities expanded to a series resistor circuit, and a parallel-resistor circuit. Students gained a better understanding of how current actually moves in a circuit, and the role-play was useful in a future problem-solving class, where students were able to use their experiences in the role play to inform how current and voltage are determined for resistor circuits.



Total time: 45min for introduction of activity, role descriptions, discussions of circuits and correcting misconceptions about circuits, and follow-up with series and parallel circuits.

(For more information about this activity, contact: [Professor Kris Lui](#))