Facilitators from Minerva Schools at KGI

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“Learning is active to the extent that it engages the cognitive processes associated with comprehension, reasoning, memory, and pattern perception… fully active learning requires all students to be engaged at least 75 percent of the time while in class.”

Interested/Involved with the teaching of Social Sciences and/or Business?
  ○ Find the tables with the topic of “Debate.”
  ○ You will be working in groups to design a debate that requires fully active learning.

Interested/Involved with the teaching of Arts and Humanities?
  ○ Find the tables with the topic of “Relay with focus questions.”
  ○ You will be working in groups to design a fast-paced relay discussion that requires fully active learning.

Interested/Involved with the teaching of STEM?
  ○ Find the tables with the topic of “Problem solving circuit.”
  ○ You will be working in groups to design a problem-solving activity that requires fully active learning.
TABLES 1 AND 2 (Social Sciences and/or Business, “Debate”)

Breakout Group Directions:

1. Choose a group leader to report on the group’s findings. All group members should be available to speak/add to the discussion after the breakout group ends. (2 minutes)
2. Agree upon a debate topic in the field of social science/business (examples: schools should require free reading material or require the purchase of textbooks; patents for pharmaceutical drugs should be extended or be shortened; is email a good marketing tactic?) (3 minutes)
3. Decide upon a learning goal for the debate activity that you come up with (example: “Assess the effectiveness of email as a marketing tool”) (5 minutes)
4. Write out how you would go about leading an active learning ‘debate’ in your classroom (10 minutes)
   ○ Make sure to think about effective ways for all students to be both engaged and active in the debate.
   ○ Make sure that the learning goal is the focus of the debate.
   ○ Make sure that ‘challenges’ and the consideration of ‘secondary effects’ are brought into the debate. For example, if the debate topic is “patents for pharmaceutical drugs should be extended or be shortened” what ‘challenges’ are associated with the implementation of patents being extended or shortened? In terms of ‘secondary effects’: who/what will likely be impacted by implementation of patents being extended or shortened, and in what way might they be impacted?
TABLES 3 AND 4 (Arts and Humanities, “Relay with focus questions”)

Breakout Group Directions:

1. Choose a group leader to report on the group’s findings. All group members should be available to speak/add to the discussion after the breakout group ends. (2 minutes)
2. Agree upon a ‘relay with focus questions’ topic in the field of arts and humanities. (3 minutes)
   ○ A “relay” is a fast-paced discussion technique in which students are called on to answer a question. They must give a concise response, and several other students are called on to build on the initial student response.
   ○ The first “focus question” is asked to initiate the relay, and after a few students respond to the first question, additional questions are asked to extend the conversation and dig deeper into a topic.
   ○ Focus questions with relays work well for close reading of written, visual, or musical texts, when students must look for numerous details to support their interpretations. These relays also work well for peer-review writing exercises (e.g., “How might we revise the use of passive voice in this sentence;” followed by, “Sarah, John has given us one option for revision. Can you think of another one?).
3. Decide upon a learning goal for the ‘relay with focus questions’ activity that you come up with. Learning goals should use action words (e.g., “Practice revising sentences to improve the clarity of written work.”) (5 minutes)
4. Write out how you would go about leading an active learning ‘relay with focus questions’ activity in your classroom (10 minutes)
   ○ Make sure to think about effective ways for all students to be both engaged and active in the relay.
   ○ Make sure that the learning goal is the focus of the relay.
   ○ Consider how you might challenge students to think more deeply in the relay; how might they work together as a group move beyond their initial responses and learn together?
TABLES 5 AND 6 (STEM, “Problem solving circuit”)

Breakout Group Directions:

1. Choose a group leader, but all group members should be available to speak/add to the discussion after the breakout group ends. (2 minutes)
2. Agree upon a problem type for the circuit from a STEM field (3 minutes)
   - A problem-solving circuit is a collective problem solving activity during which students are called on sequentially to solve a problem by building on the previous step or suggesting an alternate approach. This method is often used to debrief after students have been working on problems in small breakout groups.
   - Example problems:
     - Find the correlation between X and Y. What does this tell you about the relationship between the two variables?
     - Find the rate of change of the temperature of one mole of an ideal gas in terms of pressure. What happens to temperature when pressure increases?
     - Compute the run-time of bubble sort.
3. Decide upon a learning goal for the circuit activity that you come up with. Learning goals should use action words (e.g., “Apply and interpret measures of correlation; distinguish between correlation and causation.”) (5 minutes)
4. Write out how you would go about leading an active learning ‘problem solving sprint’ activity in your classroom (10 minutes)
   a. Make sure to think about effective ways for all students to be both engaged and active during the circuit.
   b. Make sure that the learning goal is the focus of the activity.