Using CREATE for Assignments

Class Activities

- Go through the CREATE steps
  - Using one article:
    - Go through the steps as a group
    - Divide students into small groups and ask them to each do one piece of CREATE; Use a jigsaw classroom to have students teach each other what they did.
  - Using several articles:
    - Assign individual students to work on different articles, based on their specific interests.
    - Assign groups of students to work on different articles; Use a jigsaw classroom to have students teach each other what they did.
- Focus on the introduction
  - Ask students to read the introduction to a paper
  - Based on that, create a concept map of how the key ideas presented are related to each other
  - Can be done alone or in small groups of students working together
- Read methods and results sections
  - Draw a cartoon explaining the methods used in the study
  - Have students use the ANALYSIS WORKSHEET to relabel figures and tables (easy to understand, avoids jargon)
  - Can be done alone or in small groups of students working together
  - TF may choose to assign only the most important figure

Assignments (outside of class time)

- Ask students to do one piece of CREATE as homework
  - Concept map
  - Cartoon of methods
  - Analysis of important tables and/or figures
- After explaining it or doing it in class, assign students to go through the entire process on their own as homework
  - Ask them to hand in associated written work (concept maps, drawings, annotated tables/figures, or list of questions for the authors) or
  - Ask them to present their work to the class, walking their classmates through the CREATE steps
- After going though several steps in class (Consider, Read, Elucidate the hypotheses, and Analyze and interpret the data) as students to Think of the next Experiment on their own.
  - Students can think creatively and critically about the study and next steps
  - Generate a list of questions for the author (consider using an article from a faculty member in your own department and invite them to a Q & A session about the paper).
  - Ask students to pretend they are on a grant panel and either need to decide to fund this study or to deny funding.
Outline for “Journal Article Discussion Made Easy and Effective” Workshop

I. Introduction and Greeting (5-10 minutes)
   • Welcome students: Remind them about the topic; Introduce the presenters; Make sure that everyone gets all necessary handouts (Slides, Worksheet).
   • Ask students to go around the room and introduce themselves or raise their hands to indicate their department affiliation.
   • Sign-in sheet

II. Review of the CREATE method (20-25 minutes)
   • Review the key ideas in CREATE using a Powerpoint slide presentation; Rationale for designing the method is reviewed; Each of the five steps (Consider, Read, Elucidate the hypotheses, Analyze and Interpret the data, Think of the next Experiment) are described in detail.

III. Application of CREATE to Class Activities and Assignments (10 minutes)
   • Discuss the way CREATE was intended to be used by the authors (in-class assignments, discussing a series of articles over several meetings)
   • Other ways to use CREATE
     o In-class assignments (group activities; jigsaw classroom)
     o Outside-class assignments (completing the CREATE method for a journal article as homework, completing only one part of CREATE, such as the concept map, at home).

IV. Group Activity Using CREATE (15-20 minutes)
   • A one-page Science article is passed out and everyone is given 5 minutes to read it;
   • Participants are divided into groups of 3-5; Each group is assigned to a different topic: one group created a concept map, one group drew the methods, three groups annotated the graphs and figures.
   • Each group met for 10 minutes and then presented their work to the entire workshop.

V. Wrap-up and Questions (5-10 minutes)
   • Quick recap of CREATE;
   • Questions from participants are answered;
   • Participants are asked to complete a feedback form.