

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 through 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
 - In-class assignments (group activities; jigsaw classroom)
 - 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.