

## Synthesis

**Background:** The ability to synthesize information from multiple sources and convey main ideas has been identified by EEB faculty as a key writing skill in need of improvement. This tool has been developed to aid faculty in guiding students towards development of this skill. It builds upon assignments presented in the Interrogating Sources tool and assumes students are able to extract key results and conclusions from scientific papers.

### Activities Overview:

**1. *Finding your sources – the literature search***

This guided literature search worksheet can be done in class or given to students to do at home. It may be helpful to invite library staff (currently Julie Kelly, jkelly@umn.edu) to lead this activity. *After this activity students will be familiar with library resources and be able to conduct a literature search on a specific topic.*

**2. *Identifying key conclusions***

See Interrogating Sources materials

**3. *Keeping track of key results and conclusions***

This short slideshow introduces students to simple methods for keeping track of key conclusions from scientific papers to aid them in synthesis. *After this activity students will be able to organize information from papers in a searchable / retrievable form.*

**4. *Combining sources to form an argument***

This two-part activity includes an overview PowerPoint presentation explaining a simple map and a take-home assignment asking students to draw a concept map from a list of study results and conclusions. *After this activity students will be able to represent the relationships between different study conclusions using a concept map and explain what is, and what isn't, known about a topic from the map.*

**5. *Making sense – context and translation***

**a) *Synthesis workshop***

This in-class activity introduces students to the concept of synthesis and illustrates how to synthesize information in a paragraph through use of student writing. It provides students with an annotated model paragraph from a published paper that they can refer to while writing independently. *After this activity students will be comfortable with the concept of synthesis and be able to recognize synthesis in their own writing and the writing of others.*

**b) *Including conclusions from additional studies***

In this assignment students read a completed paragraph and a list of

conclusions from additional studies. The students choose which additional conclusion to include in the paragraph and discuss how it can be used to strengthen the main argument. *After completing this activity students will have practiced synthesizing information from different studies to build an argument.*

**c) *Choosing relevant citations***

In this activity for mid-level students, each student reads a different paper on the same topic. In a group they discuss the strengths and weaknesses of the papers. The groups are given a description of a particular topic and instructed to choose which of the papers presented they would cite when writing a paper on this topic. *After this activity students will be able to both critically read and evaluate the relative importance of papers to predetermined topics.* [Note: this is a dual-purpose assignment and is also listed as 3c in Interrogating Sources]