Collaborative Documents

What it is:
Activities that encourage students to work together in or out of the classroom by using on-line collaborative tools. Many possibilities – 3 examples are shown here. May be combined with an on-line peer review tool (e.g. iPeer or PRAZE).

Class Review

Implementation:
Provide a review sheet online through Google Docs or a similar tool. Invite students to share the document and study together virtually.

Implementation:
• Give an assignment with specific instructions and grading rubric. Students work in small groups over course of week.
• Students research and create a wiki or web page that describes topic, includes images, and cites sources.
• Evaluate their creations!

The assignment should:
• Allow students to investigate and learn information that is outside the prescribed coursework that interests them.

Wiki Page or Web Page

Implementation:

Presentations

Implementation: Ask students to create a presentation using one of the many on-line presentations apps available. Provide a rubric showing how they will be evaluated. Students work together in small groups to prepare a presentation, and present it to the class.

Pyrope

Mineral formula: MgAl₂Si₃O₁₂
Crystal system: isometric
Crystal Habit: dodecahedral, often found as granular
Hardness on Mohs scale: 7 – 7.5
Specific gravity: 3.56 grains
Color: deep red
Luster: vitreous
Streak: white
Fracture: conchoidal
(Source: 1, 2)

Interesting Fact:
In 1844, geologist Christian Chopin published a paper describing his sampling of metamorphic coesite and pure pyrope in the Western Alps. It seemsingly minor find went on to change the way scientists understood plate tectonics. Previously, diagrams showing the tectonic movement of continental plates had restricted such movement to the normal thickness of the continental crust. Pyrope has a high pressure stability field, and pyrope-rich garnet had previously only been found in rocks with origins in the mantle. Chopin’s findings showed that crustal rocks had generated much deeper into the earth than previously believed, traveling down at least 100km. The discovery of this rare pyrope and its inclusions ultimately brought about a new theory of continental tectonics (Elements, European Journal of Mineralogy).

Chopin’s original article: Coesite and pure pyrope in high-grade blueschists of the Western Alps: a first record and some consequences.

http://serc.carleton.edu/NAGTWorkshops/undergraduate_research/collaborate.html