

Effective feedback

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SPACS

Effective feedback!

<http://trafficlogix.com/products/services/signsoverview>



Feedback

Provide people with information about their actions in real time (or something close to it), then give them an opportunity to change those actions, pushing them toward better behavior.

(Harnessing the power of feedback loops –Wired)

http://www.wired.com/2011/06/ff_feedbackloop/all/

Parts of the loop (Wired article)

- Evidence – Data given to user
- Relevance – why does it matter?
emotional connection
- Consequence – see possible paths ahead
- Action – do something, change
behavior

Think, pair, share as feedback tool
in-person, large, small, hybrid, etc.

- Find question that requires some level of integration, analysis beyond memorization
- Poll class
- Give time for peer discussion if divided results
- Poll again
- Get a few students to report on reasons for their answer

Based on the definition from the Wired article, effective feedback in a classroom would result in

- A. Improved student grades**
- B. Fewer emails complaining about grades**
- C. Better attendance for lecture**
- D. Increase in self-directed learning**
- E. Any of the above**

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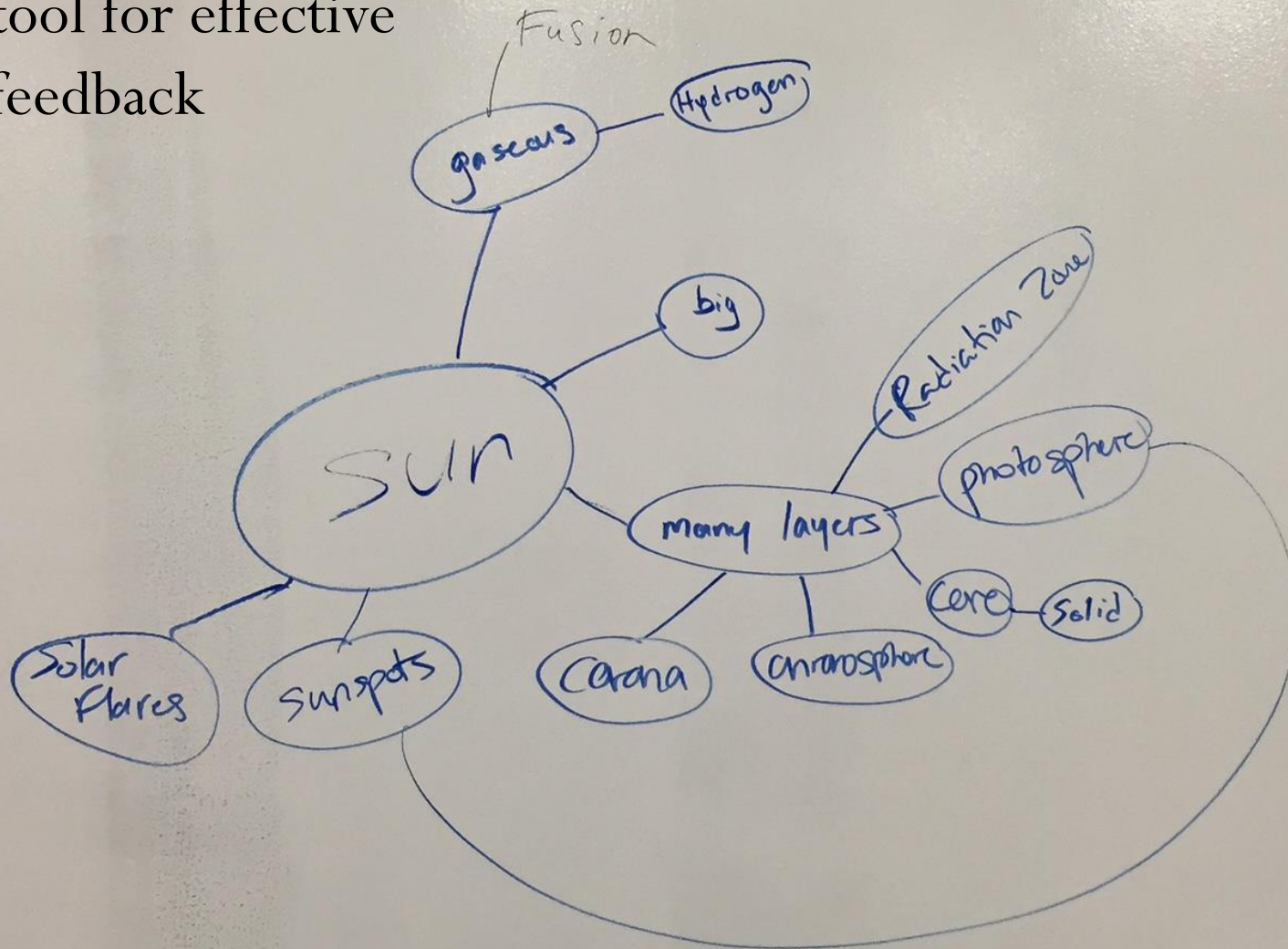
Energy is released from atoms in the form of light when electrons

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- B. Move in their orbit around the nucleus
- C. Move from low energy levels to high energy levels
- D. Are emitted by the atom
- E. Are absorbed by atoms

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Concept maps as
tool for effective
feedback



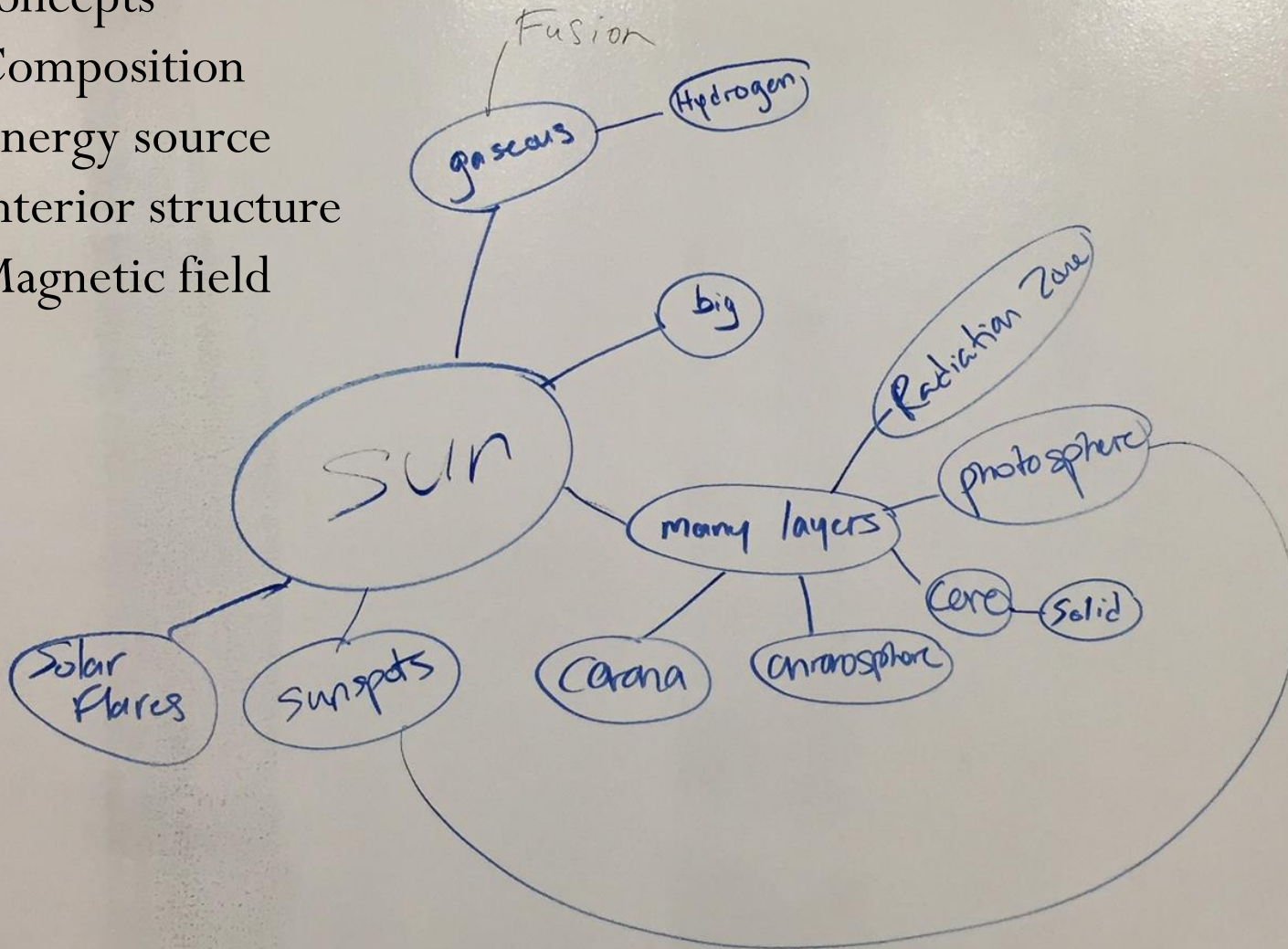
Identify major concepts

Composition

Energy source

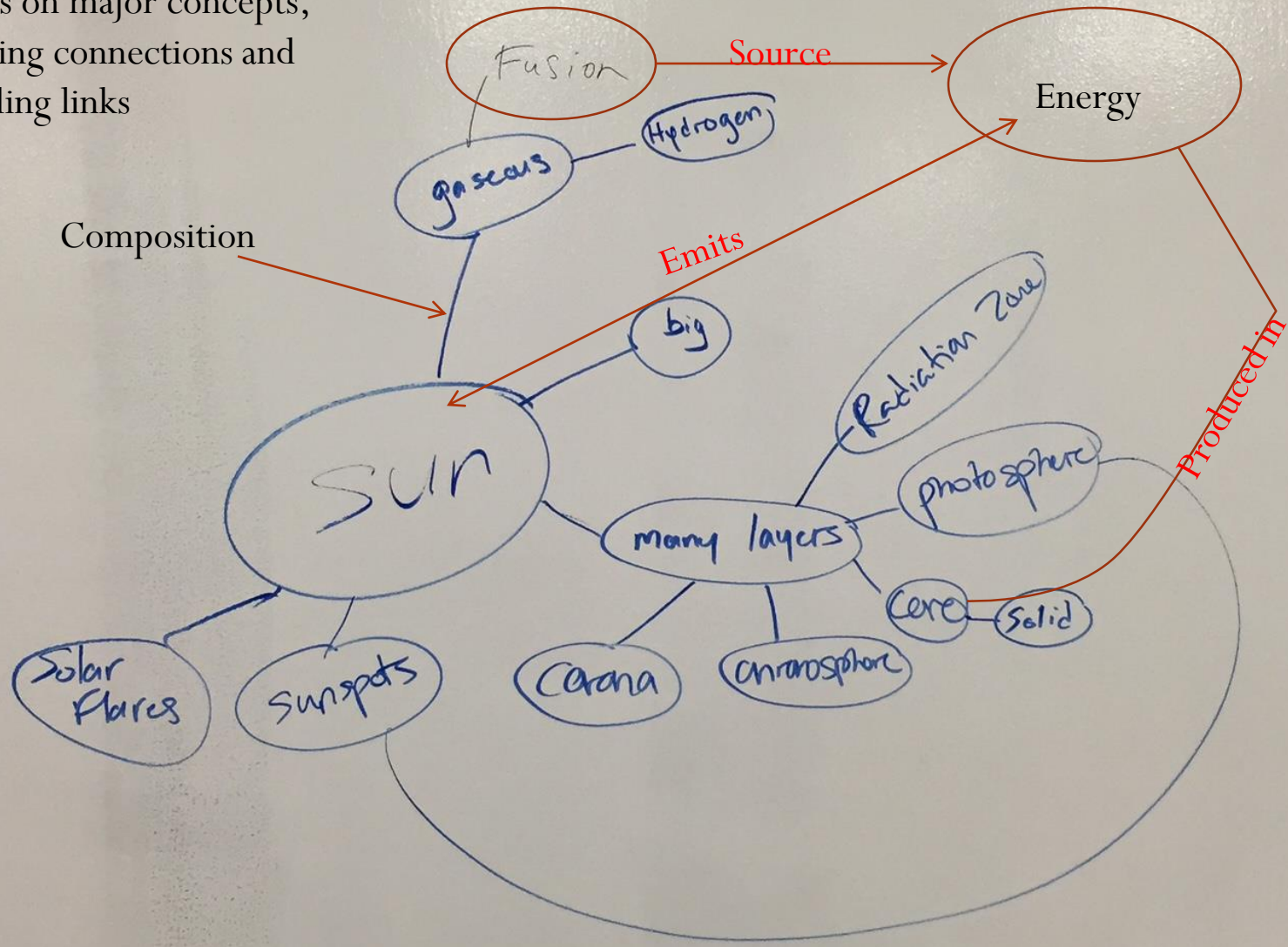
Interior structure

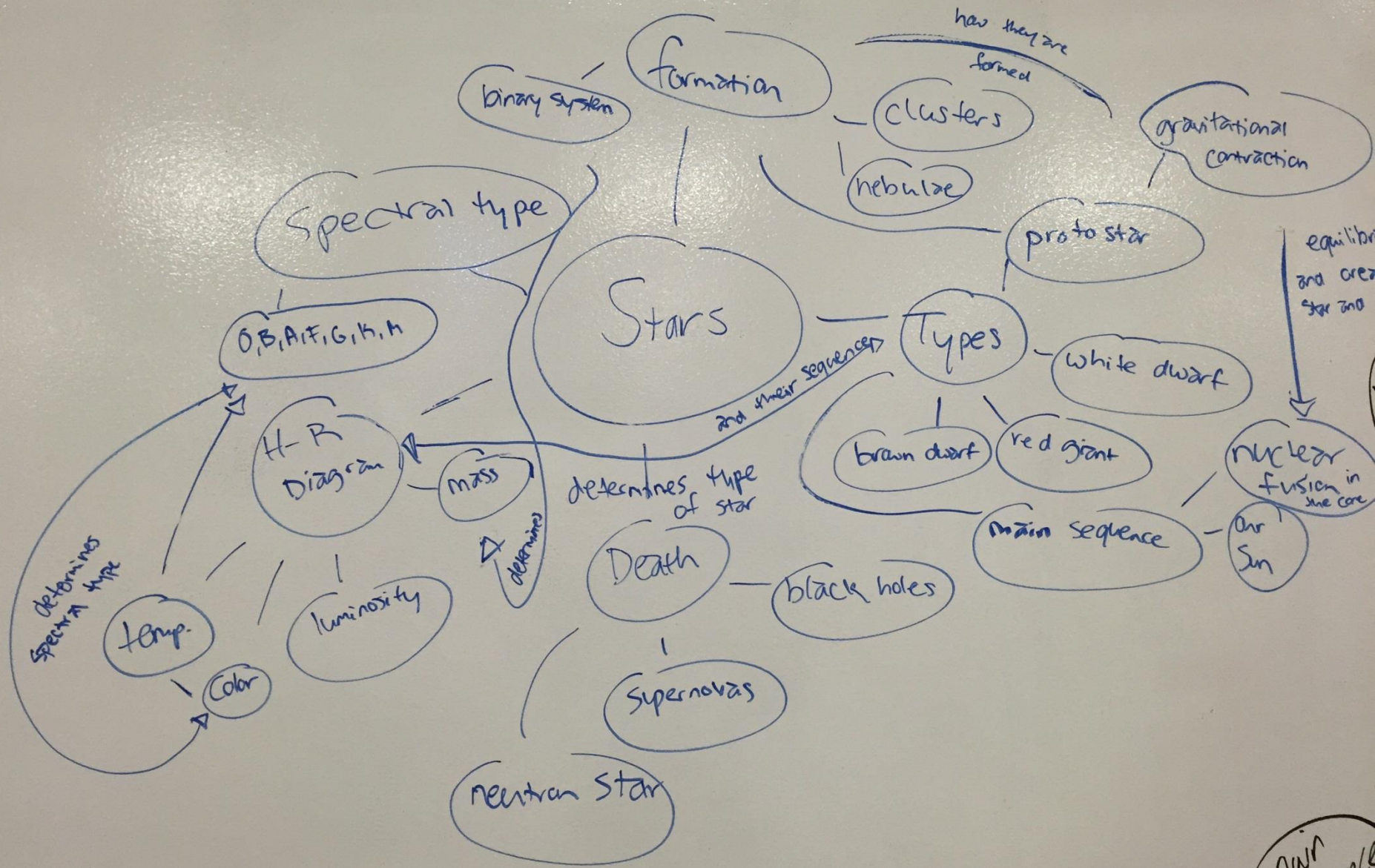
Magnetic field



Feedback from instruction and peers might include focus on major concepts, making connections and labeling links

Show links





main sequence

At- home assignments

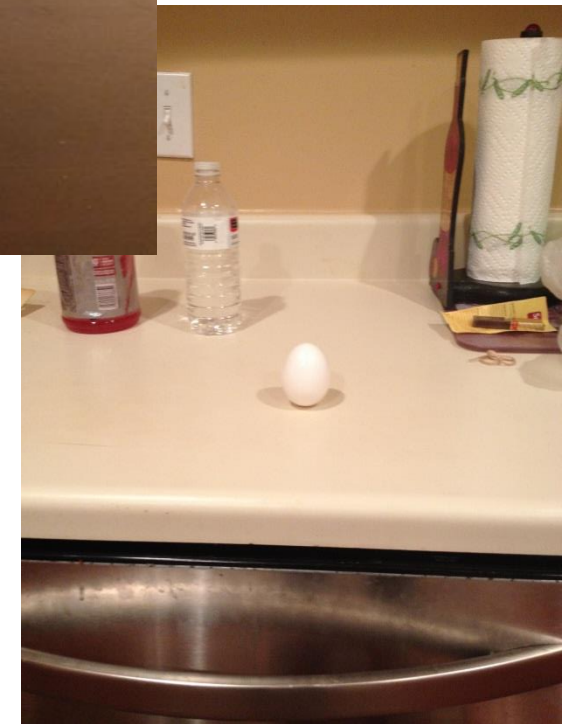
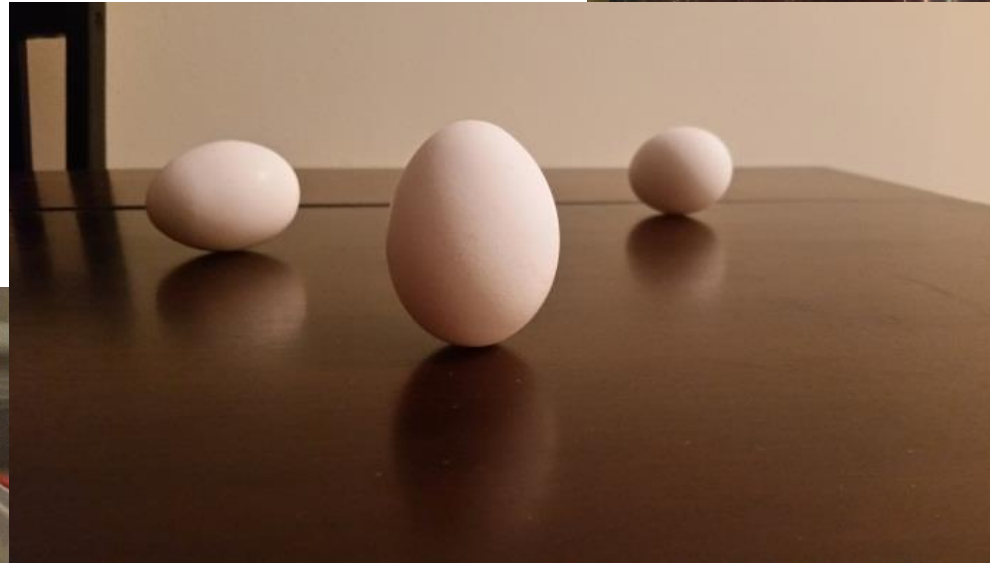
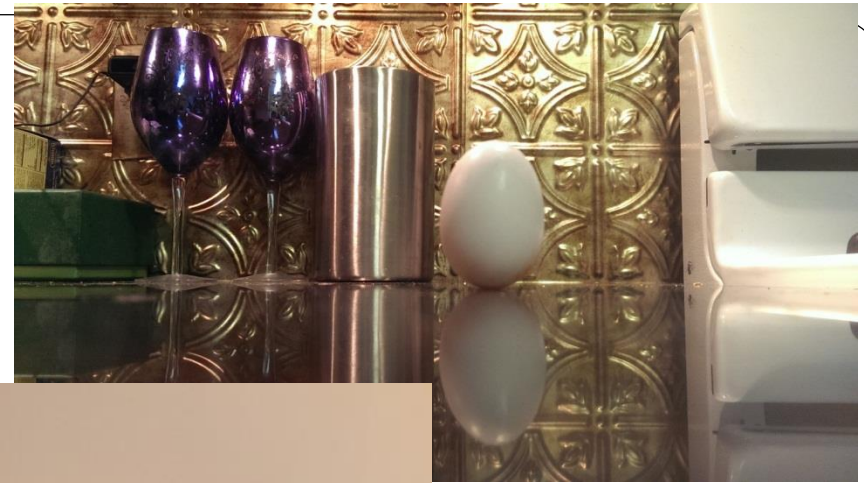
Students given a simple assignment - measure angular resolution of their eyes for example – to do at home

Submit short report when finished

Include visual element when possible

Feedback from instructor, but more important is feedback from the natural world...what did they find and what does it mean in terms of what they are learning?

Attempt to balance eggs
NOT on the equinox



Data from the natural world
– action is writing and
reporting on what they
found.

Feedback to instructor!

Effective feedback – self to self!

- Critical incident reports (I don't do these, but may start!)
- Select lab where they learned the most and explain why they chose the one they did
- Weekly reflections – getting them to think about the subject, then select meaningful reflections to submit for grade

Example from active learning class

I found the reflectance spectroscopy lab to be the most educational of all the labs that I performed in this class. Unlike the other labs, we were not given a set of precise instructions or told to work a computer program. Instead, we were given a clear goal, and were left with the tools we needed to achieve it. Using some lenses, filters, and mirrors, my group had to assemble a strange contraption which would reflect the rays of light into a convergent pattern. It was only after arranging the devices and taking measurements that I realized that what we were building was analogous to a reflecting telescope. The light rays passed through a special lens that would make them parallel to one another, and then struck a convex mirror, which focused all the light onto a single point, just like a telescope would direct all the light onto the eye of the observer. *This seems more like real science than anything else we did in the class: we performed an exercise (experiment), and even though we got the expected result, we learned something that we did not intend*

Wired again!

“...we succeed when we have some sense of where we stand and some evaluation of our progress.”

Concept map for effective feedback – big ideas

PURPOSE

STAGES OF PROCESS

Data collected
Relevance
Consequence
Action

Effective
feedback

TOOLS

Grades
Written comments
Peer review
Think pair share
Concept maps
Visual information

CLASS DELIVERY SYSTEM

On-line
Face-to-face
Hybrid

PARTICIPANTS IN LOOP

Instructor
Students
Text or website or other media
Self and peers