

PCPPIRETEACH

Scientific Illustration Lessons: Teachers Notes

These lessons can be completed as a small continuous unit or you can take more time and spread it out amongst other units/lessons.

Scientific illustration Handout – Helpful tips

- This is given to students at the beginning as a resource they will use throughout the lessons.

A. Minds Eye (20 min)

- Students are drawing from their memories
- into science notebooks

B. Scientific Illustrators Webquest (50 min)

- Computer Lab time needed (or can be done as a homework assignment)
- to introduce students to the profession, the CSUMB program, see that both men and women are illustrators.
- into science notebooks
- Students hopefully will notice some of the following:
Variety of drawing styles + mediums, patterns, habitats, behavior, detail, body plans (form/function), lifecycles, etc.

C. What is scientific illustration? (Total: 45 min)

- into science notebooks

Appetizer (10-15 min):

Give students a picture of a photo and a drawing (or show one image to the whole class – slide #13) – take something out of the drawings, let them observe and comment – on the next page in their notebooks, then share (in small teams or as whole class).

*Notes on how the drawing is different are found in the notes section of the slide.

Main Course (30 min):

- Students work in small groups for the drawing portion (3)
- Students will need to use their *Scientific Illustration Handout* (will hopefully be glued in their notebooks)
- tell students once they have had a chance to handle the specimen, it goes on the specimen tray (aka a piece of paper) and are not allowed to move it or pick it up unless they ask the other members in their group – must put it back exactly has they found it.

D. Treasure Hunt/Find Yours (20 min)

- Students get a chance to see how their drawing matches up with finding a specimen, if they have a hard time (not enough detail or labels), hopefully they come to the conclusion they need to add more details for next time.
- Cardboard box lids are filled with LOTS of shells including what they drew (make it challenging).

PCPPIRETEACH

E. Published Scientific Illustration

- Students get a chance to build on all the previous skills and make a really nice detailed scientific illustration – bringing it home!
- Students will make this on nice paper (computer paper) and it will be turned in for 50 pts.

Appetizer (15 min):

- Use the powerpoint to discuss proportion and form/function
- Students working in small groups or pairs look at a image that has part of an animal – they answer the “key questions” in their science notebook.

Main Course (45 min):

- Bring in a variety of live plants (each group/table gets live plants in a vase/container)

F. Lifecycle Final Project (one week)

- This project can include any of the following – class time, HW, Computer Research
- Refer to the “Suggested First Steps to Illustrations” portion of the powerpoint to start.
- This serves as the final project students will turn in, incorporates research and all of the skills learned in the previous lessons – 100 pts

Lifecycle Grading Rubric

- Students need to highlight the evidence they believe they have earned – if students highlight in 2 different sections within one row they average out their score (ex: 2 bullet points under illustration detail in category (A) are highlighted and one bullet is highlighted in category (B) – students can average it out to an A- or B+).
- Students average out their score and record at the top (you have the ultimate say in what they earned)

G. Peer Review Scientific Illustration Process Reflection (35 min):

- Students use their “Writing Reflections and Peer Review” handout, this can be given out at the same time as the Scientific Illustration Handout and glued into notebook to use as a resource for multiple units.
- After science notebooks have been reviewed by a peer, the student brings up their personal notebook to you and gets it stamped for completion.
 - This is a good time to give quick feedback (you mainly can just read the peer review comments – that gives you a good idea of what the original student wrote), students may need to hand back their notebook to the person who peer reviewed for more in-depth commentary.
 - Students will finish at different times – those finishing early can work on an extra credit sponge activity (reading article/write, word search, etc. (EC can be turned in at any time in the year)