



- The course will be run as a “Laboratory Seminar,” with discussions of primary and secondary materials, and their relationship to a set of hands-on activities.
- A primary goal of this lab seminar is to foster activities through which students can reflect on how learning and knowledge-making takes place through texts and through experience (including hands-on activities). Throughout the course, you are asked to reflect upon your own process of learning.
- Another of the seminar’s goals is to give students the opportunity to engage with the published edition of Fr. 640, [Secrets of Craft and Nature in Renaissance France](#), and to contribute to the Making and Knowing Project’s [Research and Teaching Companion \(Companion\)](#).
- The culmination of the semester is a Final Project of your own devising. These exploratory and experimental projects will make use of the *Companion*’s resources to create a final project that explores and extends on your own (or in groups) one of the hands-on activities we do during the course and describes, reports, and reflects upon it (using the discussions and readings we do in the course) in some type of media (spoken or written word, annotated images, social media posts, blog, powerpoint, or something else). Students in past classes have produced [digital/textual analysis](#) of Ms. Fr. 640, reconstruction insight reports, [videos](#) for the *Companion*, [lesson plans](#), and many other original and creative projects, which are now available on the [Companion](#).
- Throughout the semester, you will work closely with the Making and Knowing team to develop potential areas of exploration for the Final Project. On successful completion, your Final Projects will be published as part of the [Companion](#).

**This year**, we have the extraordinary privilege of hosting dyer and weaver, [Bertha Estrada Huipi](#) and her son Mateo Rodriguez Estrada, from Ahuiran, Michoacan, Mexico, who will be in residence from Sept. 29-October 8. Starting on Monday, October 2, we will be working in the lab to prep, dye textiles, and learn about the materials and techniques that Bertha uses in her work. During this week, as well as the dyeing session in our regular class time, you have the opportunity to sign up for as many of the activities as you can fit into your schedule.

We encourage you to think about a Final Project that focuses on dyeing and the experience of working alongside an expert dyer, like Bertha Estrada Huipi.

## ASSIGNMENTS AND EVALUATION

The following components account for the total grade in the course:

### **15% Participation, Presence, and Discussion**

Any learning experience is about showing up, being present, and attending to your interlocutors and your own process of learning and integrating course materials. Students are expected to come prepared for the discussion sessions and to be truly present in class discussions and activities.

Please email Professor Smith and Caroline if you need to be absent from class.

### **10% Presentation on Historical Culinary Recipe Reconstruction**

Working in groups, prepare and present a powerpoint on your Historical Culinary Recipe Reconstruction in class on Sept. 18. Your powerpoint should be uploaded to Courseworks by Sept. 17.

**25% Hands-on Assignments and Reflections**

Most weeks include a hands-on activity at home or in the lab. Students should plan to spend about 5 hours/week outside of the class meetings on lab and homework, in addition to preparing for class discussion. Each student will reflect on their hands-on activities and documents with words and photos of their hands-on work, their reflections on that work (including in the light of the readings and discussions) and anything else they wish. This will necessitate taking notes and photos during all your hands-on work - you might want to keep daily or weekly journal entries (with photos), but more formal reflections are due as follows (please date all entries):

- Participation and Presence goal(s) - what drew you to this course; what do you hope/expect to learn in this course; how much effort do you expect it will take; what seems challenging? DUE Sept. 20
- Reflection on the dyeing experience with visiting dyers. DUE Oct. 18
- Final Reflection - what did you learn through hands-on work DUE Dec. 12.

**50% Final Project**

The Final Project is scaffolded throughout the semester to help you to successfully complete it:

- Topic submission - a paragraph on what you wish to explore for your final project. DUE Oct. 28
- Topic Exploration - sources, ideas, plans, outline, hypotheses, next steps (lab time, supplies, etc?), anything similar currently in the [Research and Teaching Companion](#)? DUE Nov. 14. 3-5 pages, double-spaced
  - Bibliography with 10 sources, 5 of which are annotated
- Draft share submission. DUE Dec. 1
- Reading of and comments on all student drafts. DUE Dec. 3
- Final Project submission. DUE Dec. 22

Please submit all work in Courseworks. Unless stated otherwise, all assignments are due at 11:59pm ET.

## READINGS

**Required to acquire** (available at Book Culture, or via Abebooks.com, amazon.com, etc.):

- Samuel Quiccheberg, *The First Treatise on Museums. Samuel Quiccheberg's Inscriptiones 1565*, trans. Mark A. Meadow and Bruce Robertson (Getty Research Institute, 2013).

**The following are useful as comparison artist/artisan writings (but not required - available from BookCulture):**

- Cennino Cennini, *The Craftsman's Handbook, 'Il Libro dell'Arte'*, trans. by Daniel Thompson (New York: Dover, 1960).

- Theophilus, *The Various Arts. De Diversis Artibus*, ed. and trans. Hawthorne (Dover, 1980).
- Benvenuto Cellini, *Two Treatises*, trans. C. R. Ashbee (repr. 2006).
- Mary P. Merrifield, *Medieval and Renaissance Treatises on the Arts of Painting: Original Texts with English Translations* (Courier Dover Publications, 2012).
- Giorgio Vasari, *On Technique* (Dover, 1960).
- Karel van Mander, *The Lives of the illustrious Netherlandish and German painters, from the first edition of the Schilder-boeck* (Doornspijk: Davaco, 1994–1999).

## SCHEDULE OVERVIEW (semester at-a-glance)

Week: Theme	Wednesday Date	Notes and Assignments
Week 1: Introduction Get to know <i>Secrets of Craft and Nature</i> and its <i>Companion</i> <b>FW513</b>	Sept. 4: First day of class	Explore the Edition and the RTC
Week 2: Is Handwork Knowledge? <b>FW513</b>	Sept. 11: Discussion	Fri Sept 13 end of course shopping period. HCR assignment DUE Sept 17: HCR ppt
Week 3: Reconstruction of Historical Techniques <b>FW513</b>	Sept. 18: HCR presentations Bring your creations!	Receive sourdough starter Begin baking bread.  DUE Friday, Sept. 20: Participation and Presence Goals
Week 4: Colors & Dyeing I <b>FW513</b>	Sept. 25: Discussion	Bread baking
Week 5: Colors & Dyeing II <b>Chandler 858</b>	<b>Visit of Bertha &amp; Mateo Estrada</b>	Attend as many of the activities during the week as possible - please sign up!
Week 6: Colors & Dyeing III Global Context <b>FW513</b>	Oct. 9: Discussion	Tues Oct 8 withdrawal deadline. Bread baking (bread loaf due Oct. 16)
Week 7: Embodied Knowledge <b>FW513</b>	Oct. 16: Discussion Bring bread to class	DUE Friday, Oct 18: Reflection on Dyeing
Week 8: Nature, Art, & Imitation <b>FW513</b>	Oct. 23: Pigment introduction and discussion	DUE Monday, Oct 28: Project Topics

Week 9: Transforming Materials: Pigments and Paints - Lake Making - GROUP I <b>Chandler 858</b>	Oct. 30: Lake making in the Lab - GROUP I	Group I in the Lab; Group II work on final projects on your own
Week 10: Final Projects research training <b>FW513</b>	Nov. 6: Meeting with librarian to learn library research techniques for your Projects	Discuss: research for your Final Project in class
Week 11: Transforming Materials: Pigments and Paints - Lake Making - GROUP II <b>Chandler 858</b>	Nov. 13 Lake making in the Lab - GROUP II	<i>Thurs Nov 14 last day to pass/fail</i> Group II in the Lab; Group I work on final projects  DUE Thursday, Nov 14: Project Exploration
Week 12: <b>Chandler 858</b>	Nov. 20: Final Project working session (possible individual lab session - optional attendance)	DUE Mon Dec 1: Final Project Draft DUE by Tues Dec 3: Read over and comment on drafts
Week 13: NO CLASS	Nov. 27	
Week 14: Final Project Exchange <b>FW513</b>	Dec 4: Final Project Draft Exchange	Receive in-class feedback on your Final Projects from fellow students and instructors
Week 15: Finals and Final Due Dates	No Class	DUE Fri Dec 12: Final Reflection <i>Fri Dec 13 - Fri Dec 20 - finals</i>
<b>Final Projects due by Sunday, Dec 22, by 11:59PM ET</b>		

## FULL CLASS SCHEDULE

### Week 1: September 4

#### Introduction

#### REQUIRED READING/ACTIVITY

- Explore [\*Secrets of Craft and Nature\*](#) (the digital critical Edition of the 1580s manuscript, BnF Ms. Fr. 640). Watch this [video](#) for tips on navigating through *Secrets of Craft and Nature* and its resources.
  - Make note of two intriguing materials, themes, or techniques you encounter in your exploration.

- Pamela H. Smith, “Making the Edition,” in *Secrets of Craft and Nature in Renaissance France. A Digital Critical Edition and English Translation of BnF Ms. Fr. 640*, edited by Making and Knowing Project et al. (New York: Making and Knowing Project, 2020), [https://edition640.makingandknowing.org/#/essays/ann\\_329\\_ie\\_19](https://edition640.makingandknowing.org/#/essays/ann_329_ie_19).
  - Be sure to watch the M&K lab videos embedded in the essay (ca 40 mins).

## SEPTEMBER 4: IN CLASS

10:10–10:30: Introduction to the class

10:30–11:10: Exploration of *Secrets of Craft and Nature*

- Get into groups of 3 or 4 to explore [Secrets of Craft and Nature](#).
- Introduce yourself to your partners, and discuss briefly what two points intrigued you in your pre-semester reading?
- Spend about 20 minutes on the [scavenger hunt reconnaissance](#) of the Edition with your partners

11–11:30: Report to the class by group

11:30–12: Lab Tour

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## Week 2: September 11

### Is Handwork Knowledge?

#### REQUIRED READING/ACTIVITY

- SIGN UP FOR THE TWO HANDS-ON SESSIONS IN THE LAB. There are 12 slots per session. If a session is full and you wish to switch to that time, it is your responsibility to find another student to switch with you.

#### Required Reading:

- Pamela H. Smith, [From Lived Experience to the Written Word: Reconstructing Practical Knowledge in the Early Modern World](#) (Chicago: Univ. Chicago Pr, 2022), chs. 2-3.
- Tillmann Taape, “The Body and the Senses in Ms. Fr. 640: Towards a ‘Material Sensorium,’” in *Secrets of Craft and Nature in Renaissance France*, [http://edition640.makingandknowing.org/#/essays/ann\\_302\\_ie\\_19](http://edition640.makingandknowing.org/#/essays/ann_302_ie_19).

#### Optional Reading:

- Pamela H. Smith, “An Introduction to Ms. Fr. 640 and its Author-Practitioner.” In *Secrets of Craft and Nature in Renaissance France*, [https://edition640.makingandknowing.org/#/essays/ann\\_300\\_ie\\_19](https://edition640.makingandknowing.org/#/essays/ann_300_ie_19).
- Explore the [Research and Teaching Companion](#).

## SEPTEMBER 11: IN CLASS

10:10–11:40: **Discussion: Is Handwork Knowledge?**

- Get into groups of three. Discuss your responses to the reading. What questions did they raise for you?
- All-group discussion of the readings

- Groups will work together on the Historical Culinary Reconstruction (HCR) assignment for the rest of the week.

11:40-12: Historical Culinary Recipe (HCR) introduction and permission/contribution forms

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## Week 3: September 18

### Reconstruction of Historical Techniques

#### REQUIRED READING/ACTIVITY

- Carry out your culinary reconstruction.
  - You are responsible for sourcing and purchasing your own materials. If this presents any hardship for you, please speak to us about it before you buy anything. We may be able to reimburse you for some of the materials.
- Each group member should upload the same presentation in Courseworks on Sept. 17 at 11:59pm
  - Your group's presentation on Sept. 18 must be 11 minutes max.

#### SEPTEMBER 18: IN CLASS

10:10–11:40: Presentations of HCR process and results

11:40–12pm: Discussion of the results (and consumption, if possible and safe to do)

- **Permission/contribution forms**
- **Hand out sourdough starter**
- **Introduction to Laboratory safety training**

#### FOLLOW UP: Week 3

- **Due Sept 20:** Participation and Presence goal(s) assignment.
  - **Due Tues Sept 24:** **Reconstruction Thoughts - Add at least one comment/thought.**
  - **Bread making (bring bread to class on Oct. 16):**
    - Over the coming weeks, learn to make bread! This activity helps you experience and think about an important theme of the class--Embodied Knowledge.
    - Start early enough that you can bake more than once—you will need to experiment (and you will want to eat some of it!)
    - You will need to research the ingredients and process of making sixteenth-century bread.
    - Remember to document your process: keep notes and reflections and take copious pictures as you learn to make bread.
  - **Laboratory safety training (complete over the coming two weeks)**
    - It is recommended that you take TC7200 (Part 1 of Initial Laboratory Safety Training).
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## Week 4: September 25

### Dyeing & Colors I: Colors and Dyes in Early Modern Europe

#### REQUIRED READING/ACTIVITY

**Watch:** [Cochineal cultivation today](#).

**Read:**

- <https://feriamaestros.com/pages/pprofile-bertha-estrada-huipe>
- <https://oaxacaculture.com/2019/02/feathered-plumage-rebozos-in-ahuiran-michoacan/>
- Elena Phipps, “Cochineal Red: The Art History of a Color,” *Metropolitan Museum of Art*.
- Ulinka Rublack, “Renaissance Dress, Cultures of Making, and the Period Eye,” in *New Directions in Making and Knowing*, a special issue of *West 86th: A Journal of Decorative Arts, Design History, and Material Culture* 23.1 (2016): 6-34.
- Ulinka Rublack, “Befeathering the European: The Matter of Feathers in the Material Renaissance,” *American Historical Review* 126.1 (2021): 19-53.
- Read over the Lesson Plan on Dyeing in the [Research and Teaching Companion](#).

#### Optional Reading

- Miruna Achim, “Cochineal.” In *New World Objects of Knowledge: A Cabinet of Curiosities*, edited by Mark Thurner, Juan Pimentel, and University of London. <https://doi.org/10.14296/2104.9781908857835>.
- Ana Serrano, Cochineal and the Changing Patterns of Consumption of Red Dyes in Early Modern European Textile Industries, in Beatriz Marin-Aguilera and Stefan Hanß, eds., *Subjectivities In-Between Early Modern Global Textiles* (Amsterdam: Amsterdam University Press, 2023), 347-67.
- For more on featherworking, see Alessandra Russo, Gerhard Wolf, Diana Fane (eds.), *Images Take Flight. Feather Art in Mexico and Europe 1300-1700* (Munich, Hirmer/ University of Chicago Press, 2015), and the work of Stefan Hanß.

#### SEPTEMBER 25: IN CLASS

10:10–11:30: Discussion of readings

11:30-12: Intro to Final Projects

- Assignment Sheet: Final Projects
- Explore the [Research and Teaching Companion](#) for previous student projects.

#### FOLLOW UP: Week 4

- Sign up for Dyeing sessions and museum visits
- Browse the Met Museum textile collection, doing searches for [South American textiles](#) or <https://www.metmuseum.org/art/collection/search?material=Textiles&q=textile&geolocation=South+America&era=A.D.+1000-1400> or for Central American textiles: <https://www.metmuseum.org/art/collection/search?material=Textiles&q=textile&geolocation=North+and+Central+America&era=A.D.+1600-1800>.
- **Laboratory safety training (complete before next week’s lab sessions)**
- Read over the Lesson Plan on Dyeing in the [Research and Teaching Companion](#), including

- **Dyeing with Natural Colorants**
- **Cochineal Dye: History, Chemistry, and Preparation**
- **Pictures of Common Natural Dyestuffs**
- Begin contemplating ideas for your Final Project: read over [Assignment Sheet: Final Projects](#) and explore the [Research and Teaching Companion](#) for previous student projects and lesson plans.

## Week 5: October 2

### Dyeing & Colors II: Hands-On Natural Dyeing

This week we will host dyer and weaver, [Bertha Estrada Huipi](#) and her son Mateo Rodriguez Estrada, from Ahuiran, Michoacan, Mexico, who will be in residence from Sept. 29-October 8. Starting on Monday, October 2, we will be working in the lab to prep, dye textiles, and learn about the materials and techniques that Bertha uses in her work. During this week, in addition to the dyeing session in our regular class time, you have the opportunity to sign up for as many of the activities as you can fit into your schedule.

- Monday, Sept. 30: dyebath prep 11-12:30 and 1:30-4.
- Wednesday, Oct 2: Class dyeing sessions, 10:10-12 and 1:30-3:20 (attend one session)
- Wednesday, Oct 2: 4:30-6pm, Visit of Bertha and Mateo to the class, *Theory of Arts in Iberian Worlds*, taught by Prof. Alessandra Russo. Discussion of the language of color and weaving in Purépecha and Spanish (with some thoughts on Náhuatl, based on the Florentine Codex).
- Thursday, Oct. 3: 9-10:30am: visit to [Textile Conservation Department](#), Met Museu
- Friday, Oct. 4:
  - 10am-12pm: [Making and Knowing Dyeing Showcase with Bertha Estrada at the Center for Science and Society](#) with your dyed textiles.
  - 2-4pm: Columbia Latin America History Workshop with Bertha and Mateo, presentation on Purépecha culture. Fayerweather 513. All welcome!
- Monday, Oct. 7: TBD: final lab session (tentative)

### MEET IN CHANDLER 858

#### REQUIRED READING/ACTIVITY:

- **Laboratory safety training (complete before class)**
- Think about how you have been working at home, baking bread. Review your own workflows and safety procedures. How to undertake hands-on work in a thoughtful and safe way?
- M&K has laboratory/studio safety protocols. What are the underlying principles? How do these compare to working at home?
- Lab attire and reminders:
  - Closed-toed shoes and long pants/skirt are required.
  - Hair should be pulled back and any dangly accessories should be removed.
  - There is no eating, drinking, or chewing gum inside the lab.

## **OCTOBER 2: IN CLASS**

10:10-12 and 1:30-3:20: Dyeing sessions

## **FOLLOW UP: Week 5**

- Plan to attend Dyeing Residency events:
  - Continue developing ideas for your Final Project
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## **Week 6: October 9**

### **Dyeing & Colors III: Textiles and Color in a Global Context**

#### **REQUIRED READING/ACTIVITY**

##### **Readings:**

- Beatriz Marín-Aguilera and Stefan Hanß, eds., Subjectivities In-Between Early Modern Global Textiles. Amsterdam: Amsterdam University Press, 2023
- Beverly Lemire, Textiles, Fashion, and Questions of Whiteness. Amsterdam: Amsterdam University Press, 2023
- Research & Teaching Companion: Presentation: The Future of Textile Industry: Bacterial Colorants in Fashion, Part I.
- Yardley, Jim. “Bangladesh Pollution, Told in Colors and Smells.” The New York Times, The New York Times, 15 July 2013, [www.nytimes.com/2013/07/15/world/asia/bangladesh-pollution-told-in-colors-and-smells.html](http://www.nytimes.com/2013/07/15/world/asia/bangladesh-pollution-told-in-colors-and-smells.html).
- “A Monstrous Mess: Toxic Water Pollution in China.” Greenpeace International, [www.greenpeace.org/international/story/6846/a-monstrous-mess-toxic-water-pollution-in-china/](http://www.greenpeace.org/international/story/6846/a-monstrous-mess-toxic-water-pollution-in-china/)
- “Dye Industry.” WorstPolluted.org : Reports, [www.worstpolluted.org/projects\\_reports/display/105](http://www.worstpolluted.org/projects_reports/display/105)

##### **Optional:**

- Todd, Elliot. “Reflections on the Journey of Fashion and Sustainability.” Centre for Sustainable Fashion, 22 May 2018, <http://sustainable-fashion.com/blog/reflections-on-the-journey-of-fashion-and-sustainability/>

## **OCTOBER 9: IN CLASS**

10:10-10:30: Knowledge exchange on bread baking

10:30-12: Discussion of readings

## **FOLLOW UP: Week 6**

- Continue developing ideas for your Final Project
  - Bring your bread to class next week
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## Week 7: October 16

### Embodied Knowledge

#### REQUIRED READING/ACTIVITY

- Ann-Sophie Lehmann, “Wedging, Throwing, Dipping and Dragging – How Motions, Tools and Materials Make Art,” *Folded Stones*, eds. Barbara Baert and Trees de Mits (Institute for Practice-based Research in the Arts: Ghent 2009), pp. 41-60.
- Raymond Tallis, “Grasping the Hand,” in *The Hand: A Philosophical Inquiry into Human Being* (Edinburgh: Edinburgh University Press, 2003), 21–43
- Tillmann Taape, “‘Experience Will Teach You’: Recording, Testing, Knowing, and the Language of Experience in Ms. Fr. 640,” *Secrets of Craft and Nature*, DOI: <https://www.doi.org/10.7916/njnjq-6q58>.

#### Optional reading:

- Erin O’Connor, “Embodied knowledge in glassblowing: the experience of meaning and the struggle towards proficiency,” *Sociological Review* (2007): 126-141.
- Tim Ingold, *The Perception of the Environment: Essays in Livelihood, Dwelling and Skill* (London and New York: Routledge, 2000), chs. 18-19 (pp. 339-361).

#### OCTOBER 16: IN CLASS

10:10–10:30: In groups: Share your bread. Discuss your experiences.

10:30–12:00: Whole class discussion of the readings.

- How did the readings help you to think about the experience of kneading, rising, and baking bread? Or vice versa?
- Be ready to talk about your failures and any interesting insights from your failures, as well as any other observations about the experiences.

#### FOLLOW UP: Week 7

- **Due Oct 18:** Reflection on dyeing experience
- **Due Oct. 28: Project Topics.** Write a short description of your idea(s)/thoughts for your final project. This can be 5-10 sentences, a paragraph, or bullet points.
- Rosetti, *Plictho* (Venice, 1548), excerpts and Table of Contents, English trans.
- Sophie Pitman, “A dyeing art: Reconstructing Rosetti’s Plictho,” in Giorgio Riello, Maria Hayward, and Ulinka Rublack, eds. *A Revolution in Colour: Natural Dyes and Dress in Europe, C. 1400-1800*. London: Bloomsbury Publishing, 2024.

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## Week 8: October 23

### Collecting and Imitating Nature and Art

#### REQUIRED READING/ACTIVITY

- Samuel Quiccheberg, *The First Treatise on Museums. Samuel Quiccheberg’s Inscriptiones 1565*, trans. Mark A. Meadow and Bruce Robertson (Getty Research Institute, 2013).

- Required looking: [Kunsthistorisches Museum: Selected masterpieces](#)
- Smith, Pamela H. and Isabella Lores-Chavez. “Counterfeiting Materials, Imitating Nature,” in Marjolijn Bol and Emma Spary, eds.. *The Matter of Mimesis: Studies of Mimesis and Materials in Nature, Art and Science*. Leiden: Brill, 2023, pp. 27-53.

### Optional reading

- **PLEASE NOTE:** this essay contains images and descriptions of preparing dead animals for taxidermy - it may be disturbing to some:
  - Divya Anantharaman and Pamela H. Smith. “[Animals Dried in an Oven](#).” In *Secrets of Craft and Nature in Renaissance France. A Digital Critical Edition and English Translation of BnF Ms. Fr. 640*, edited by Making and Knowing Project, et al. 2020.
- Pamela H. Smith, “Collecting Nature and Art: Artisans and Knowledge in the *Kunstammer*,” in *Engaging With Nature: Essays on the Natural World in Medieval and Early Modern Europe*, ed. Barbara Hannawalt and Lisa Kiser (University of Notre Dame Press, 2008), 115-136.
- Martin Kemp, “‘Wrought by No Artist’s Hand’: The Natural, the Artificial, the Exotic, and the Scientific in Some Artifacts from the Renaissance,” *Reframing the Renaissance: Visual Culture in Europe and Latin America 1450–1650*, ed. Claire Farago (New Haven and London: Yale University Press, 1995), 177–96.
- See the entire book, [The Matter of Mimesis](#)

## OCTOBER 23: IN CLASS

10:10–11:30: discussion of readings

11:30-12: Sign up for Lab time for pigment-making, Oct. 30 or Nov. 13. The other half of the class will have extra time for Final Project work on their own.

## FOLLOW UP: Week 8

- **Due Oct. 28: Project Topics**

## Week 9: October 30

### Transforming Materials: Pigments from Dyes

#### GROUP I MEET IN CHANDLER 858

### REQUIRED READING/ACTIVITY (for Group I)

- [Presentation: Cochineal Lake: History, Chemistry, and Preparation](#)
- [Presentation: Introduction to Pigments & Paints](#)
- Erma Hermens and Arie Wallert, “The Pekstok Papers, Lake Pigments, Prisons and Paint-Mills,” in *Looking through Paintings: The Study of Painting Techniques and Materials in Support of Art Historical Research (Leids Kunsthistorisch Jaarboek XI)*, ed. Erma Hermens (Baarn, The Netherlands: Uitgeverij de Prom, 1998), pp. **269-280 and 287-291**.
- Search the English translation of *Secrets of Craft and Nature* for “lake,” “brazilwood,” “cochineal,” “platte,” “ronde” in Fr. 640

- **Review these** to prepare for the week’s activities:
- etymology of cochineal (OED):
  - **Forms:** 1500s–1700s **cochenille, cochinnelle**, 1600s–1700s **cochineel, cochinele, cocheneal, cochenile**, 1600s– **cochineal**; also 1600s **cochenel(le, cochanele, cochoneel, cochinnella, cochonillio**; 1500s **cuchinilla**, 1600s **cuchineel, cuchinile, cuchenealee, cuchanel, coucheneele, couchenille**; 1500s–1600s **cutchenele**, 1600s **cutcheneale, cutchineale, cutchyneale, cutchaneale, cutchanel(e, cutchoneal(e**; (1600s **quitchineel, chochineel, scutchenel**, etc.).
  - Etymology:** < French *cochenille*, < Spanish *cochinilla* or Italian *cocciniglia*. The latter is evidently a derivative of Italian *coccino*, Latin *coccinum* scarlet robe or vesture, Italian *coccineo*, Latin *coccineus* scarlet-coloured, < *coccum* scarlet, ‘grain’, originally ‘berry’, in Italian *cocco* ‘graine to dye scarlet with’ (Florio). Spanish has also *cochinilla* ‘woodlouse’, diminutive of *cochina* ‘sow’, and it has been said that *cochinilla* ‘cochineal’ is the same word, from the resemblance of the dried cochineal insects to woodlice in the same state; but this is apparently a secondary association arising out of the fortuitous identity of the words.
- Look up “kermes” and “vermillion” in the OED and see the interrelated histories of these terms as well.

### Optional Reading

- Jo Kirby et al, “Chapter 5 - Recipes,” in *Natural Colorants for Dyeing and Lake Pigments: Practical Recipes and their Historical Sources* (Archetype Publications, London, 2014).
  - *Natural Colorants* Chapter 3 - Chemistry (chemistry of the lake process)
- Miruna Achim, “Cochineal.” In *New World Objects of Knowledge: A Cabinet of Curiosities*, edited by Mark Thurner, Juan Pimentel, and University of London. <https://doi.org/10.14296/2104.9781908857835>.

## OCTOBER 30: IN CLASS

### GROUP 1 MEET IN CHANDLER 858

10:10–10:30: Go over process

10:30-11:40: Make cochineal lake pigment. Filter and wash pigment, then leave to dry.

11:40–12pm: Discussion of what you found in your etymology search for vermillion, kermes, and cochineal. Discussion of what you found in Fr. 640 for “lake,” “brazilwood,” “cochineal,” “platte,” “ronde.”

### FOLLOW UP: Week 10

- **Due Nov 14: Topic Exploration.** Should be 3-5 pages, double-spaced and includes a bibliography with 10 sources, 5 of which are annotated.
- **Optional lab session on Nov 20 from 10:10am-12pm.** Please sign up and indicate what lab activity you plan to work on.

## Week 10: November 6

### Final Project Research Training

#### NOVEMBER 6: IN CLASS

10:10–12: Research methods with Librarian

#### FOLLOW UP: Week 10

- Continue research for your Final Project. Research resources:
    - <https://guides.library.columbia.edu/HIST-GU4962>
    - [Science and pseudoscience guide](#)
    - Online [workshops](#)
    - Ask a Librarian: <https://library.columbia.edu/services/askalibrarian.html>
    - Subject specialists:  
<https://library.columbia.edu/about/staff/subject-specialists-by-subject.html>
    - Take advantage of self-paced instruction modules, "[From Books to Bytes: Navigating the Research Ecosystem](#)," created by the Libraries in partnership with the Center for Teaching and Learning. The online modules define the research cycle, provide students with practical strategies, and guide them through the vast resources available to them at Columbia.
  - **Optional lab session on Nov 20 from 10:10am-12pm.**
  - Topic exploration is due November 14
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## Week 11: November 13

### Transforming Materials: Pigments and Paints

#### GROUP II MEET IN CHANDLER 858

#### REQUIRED READING/ACTIVITY (for Group II)

- Erma Hermens and Arie Wallert, “The Pekstok Papers, Lake Pigments, Prisons and Paint-Mills,” in *Looking through Paintings: The Study of Painting Techniques and Materials in Support of Art Historical Research (Leids Kunsthistorisch Jaarboek XI)*, ed. Erma Hermens (Baarn, The Netherlands: Uitgeverij de Prom, 1998), pp. **269-280 and 287-291**.
- Search the English translation of *Secrets of Craft and Nature* for “lake,” “brazilwood,” “cochineal,” “platte,” “ronde” in Fr. 640
- **Review these** to prepare for the week’s activities:
- etymology of cochineal (OED):
  - **Forms:** 1500s–1700s **cochenille**, **cochinele**, 1600s–1700s **cochineel**, **cochinele**, **cocheneal**, **cochenile**, 1600s– **cochineal**; also 1600s **cochenel(le)**, **cochanele**, **cochoneel**, **cochinella**, **cochonillio**; 1500s **cuchinilla**, 1600s **cuchineel**, **cuchinile**, **cuchenealee**, **cuchanel**, **coucheneele**, **couchenille**; 1500s–1600s **cutchenele**, 1600s **cutcheneale**, **cutchineale**, **cutchyneale**, **cutchaneale**, **cutchanel(e)**, **cutchoneal(e)**; (1600s **quitchineel**, **chochineel**, **scutchenel**, etc.).

**Etymology:** < French *cochenille*, < Spanish *cochinilla* or Italian *cocciniglia*. The latter is evidently a derivative of Italian *coccino*, Latin *coccinum* scarlet robe or vesture, Italian *coccineo*, Latin *coccineus* scarlet-coloured, < *coccum* scarlet, ‘grain’, originally ‘berry’, in Italian *cocco* ‘graine to dye scarlet with’ (Florio). Spanish has also *cochinilla* ‘woodlouse’, diminutive of *cochina* ‘sow’, and it has been said that *cochinilla* ‘cochineal’ is the same word, from the resemblance of the dried cochineal insects to woodlice in the same state; but this is apparently a secondary association arising out of the fortuitous identity of the words.

- Look up “kermes” and “vermillion” in the OED and see the interrelated histories of these terms as well.

### Optional Reading

- Jo Kirby et al, “Chapter 5 - Recipes,” in *Natural Colorants for Dyeing and Lake Pigments: Practical Recipes and their Historical Sources* (Archetype Publications, London, 2014).
  - *Natural Colorants* Chapter 3 - Chemistry (chemistry of the lake process)

## NOVEMBER 13: IN CLASS

### GROUP II MEET IN CHANDLER 858

10:10–10:30: Go over process

10:30-11:40: Make cochineal lake pigment. Filter and wash pigment, then leave to dry

11:40-12pm: Discussion of what you found in your etymology search for vermillion, kermes, and cochineal. Discussion of what you found in Fr. 640 for “lake,” “brazilwood,” “cochineal,” “platte,” “ronde.”

### FOLLOW UP: Week 11

- **Due Dec. 1:** Final Project draft
- **Optional lab session on Nov 20 from 10:10am-12pm.** Please sign up and indicate what lab activity you plan to work on. To prepare, please create an experiment protocol. This should include your planned materials, exactly what you are planning to do with them, and any hazards associated with them. Hazards can be found via Material Safety Data Sheets. Protocols should be emailed to Professor Smith and Caroline by Saturday, November 16 at 5PM.

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## Week 12: November 20 Final Project Working Session

### OPTIONAL CLASS: MEET IN CHANDLER 858

## NOVEMBER 20: IN CLASS

10:10–12: Open lab time for those working on their final projects.

**Take home** lake pigments and painting kit - try painting out your pigments at home (optional)

## **FOLLOW UP: Week 12**

- **Due Dec. 1:** Final Project draft
  - **Due Dec 3:** Comment on classmates' drafts
  - **Nov 21-Dec 4:** if you are interested, please pick up a pigment painting kit from 511 Fayerweather so you can experiment at home. Bring in any results to class on Dec 4.
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## **Week 13: November 27**

No Class (Thanksgiving Break)

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## **Week 14: December 4** **Final Project Draft Exchange**

### **DECEMBER 3: IN CLASS**

10:10–12: Final Project Draft Share

If you have painted with your pigment, please bring in your results!

## **FOLLOW UP: Week 14**

- **Due Dec. 12:** Final reflection assignment.
  - **Due Dec 22: Final Project**
    - Incorporate feedback from final project exchange.
    - Review the **Assignment Sheet: Final Projects** for media information, permissions, and formatting.
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## **Statement on Academic Integrity**

The intellectual venture in which we are all engaged requires of faculty and students alike the highest level of personal and academic integrity. As members of an academic community, each one of us bears the responsibility to participate in scholarly discourse and research in a manner characterized by intellectual honesty and scholarly integrity.

Scholarship, by its very nature, is an iterative process, with ideas and insights building one upon the other. Collaborative scholarship requires the study of other scholars' work, the free discussion of such work, and the explicit acknowledgement of those ideas in any work that inform our own. This exchange of ideas relies upon a mutual trust that sources, opinions, facts, and insights will be properly noted and carefully credited.

In practical terms, this means that, as students, you must be responsible for the full citations of others' ideas in all of your research papers and projects; you must be scrupulously honest when taking your examinations; you must always submit your own work and not that of another student, scholar, or internet agent.

Any breach of this intellectual responsibility is a breach of faith with the rest of our academic community. It undermines our shared intellectual culture, and it cannot be tolerated. Students failing to meet these responsibilities should anticipate being asked to leave Columbia.

## **Disability-Related Accommodations**

In order to receive disability-related academic accommodations, students must first be registered with Disability Services (DS). More information on the DS registration process is available online at [www.health.columbia.edu/ods](http://www.health.columbia.edu/ods). Faculty must be notified of registered students' accommodations before exam or other accommodations will be provided. Students who have (or think they may have) a disability are invited to contact Disability Services for a confidential discussion at (212) 854-2388 (Voice/TTY) or by email at [disability@columbia.edu](mailto:disability@columbia.edu).

## **Statement on COVID-19**

We are all required to uphold the [Columbia Community Health Compact](#). Currently, that recommends that all students, staff, and faculty wear a suitable facemask inside. University policies and requirements may change during the semester.