## Final Projects

One 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*](https://edition640.makingandknowing.org/#/), and to contribute to the Making and Knowing Project’s [*Research and Teaching Companion*](https://teaching640.makingandknowing.org/) (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](https://cu-mkp.github.io/sandbox/) of Ms. Fr. 640, reconstruction insight reports, [videos](https://vimeo.com/710444936) for the Companion, [lesson plans](https://teaching640.makingandknowing.org/resources/student-projects/sp22_arocho_alejandra_herodotus-workshop/), and many other original and creative projects, which are now available on the [*Companion*](https://teaching640.makingandknowing.org/).

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*](https://teaching640.makingandknowing.org/).

Final Projects can come in many forms: blog posts, videos, tutorials, curated image galleries, illustrated guides, and more! Topics can include historical reconstruction, digital/textual analysis of Ms. Fr. 640, material culture, methods for engaging with how-to texts (books of secrets, technical manuals, etc.), ways to teach (and learn about) the history of science and/or art, responses to Edition Research Essays; reconstruction insight reports, videos for the Companion, or a combination.

Your Final Projects will be published as part of the [*Research and Teaching Companion*](https://teaching640.makingandknowing.org/)or the [Sandbox](https://cu-mkp.github.io/sandbox/) (depending on content and long-term maintenance considerations) that will form a component of the digital critical edition of Ms. Fr. 640, [*Secrets of Craft and Nature*](https://edition640.makingandknowing.org).

Look at some of the examples that have already been published in the [Sandbox](https://cu-mkp.github.io/sandbox/), review the ideas below, and do not hesitate to propose something completely different!

We will meet with each student/group to craft a Final Project in accord with these principles and the student’s interests.

### Possible Final Project Ideas

* Report: choose a set of intriguing manuscript entries (recipes) and read them iteratively throughout the semester, considering them through the lens of each weekly theme (i.e., Embodied Cognition, Transforming Materials, etc.). Think and report about the various contexts in which the set of entries can be studied (consider the meaning of “reading” a practical text).
* Experimental protocol: choose an entry from the manuscript which has been reconstructed to consider what further research in contemporary digitized practical texts could be carried out (historical research and the process of cumulative collaborative research).
* General audience blog post: choose a [research essay](https://edition640.makingandknowing.org/#/essays) from the Edition and turn it into a blog post that targets a general audience (communication of scholarly work).
* Reflection: using the Edition’s [List of Entries](https://edition640.makingandknowing.org/#/entries), identify a tag on which you write a one-page reflection, using evidence from the Edition and other contemporaneous practical texts. (Textual analysis and/or visualization; see the [Sandbox](https://cu-mkp.github.io/sandbox/)).
  + All of M&K’s raw data is found in <https://github.com/cu-mkp/m-k-manuscript-data>.
* Reflection: explore the [Figures in Ms. Fr. 640](https://edition640.makingandknowing.org/#/content/resources/figure-index). Focus on one image or a series of images (related or unrelated) and discuss their place in the manuscript. Draw connections to other places in Fr. 640 or to other texts, objects, etc.
* Online exhibition: for a series of entries in the manuscript, identify the potential intended final object and find examples of existing cultural heritage objects in museums or other collections. Or, for a single entry, identify all individual “ingredients” and tools, and explore what these materials might have been in the sixteenth century. Curate an online exhibition with these images.
* Material blog: pick an obscure material from Fr. 640 and look for information about it, including its various occurrences in the manuscript as well as its larger historical context, use, sourcing, trade, and value. Find examples of its use in cultural heritage objects.
* Activity sheets: create activity sheets for students at different levels of education (K-12, University, other) based upon a skillbuilding activity undertaken during the semester or for an entry in Ms. Fr. 640.
* Video: create a short video that instructs a novice in carrying out one of the hands-on activities undertaken in the class.
* Extended reflection on an entry: focusing on a particular note of an Fr. 640 entry, explore the author-practitioner’s commentary in the note. Perhaps even undertake the reconstruction.
  + For example, in the essay by Kirby and Spring, [Ms. Fr. 640 in the World of Pigments in Sixteenth-Century Europe](https://edition640.makingandknowing.org/#/essays/ann_321_ie_19), they bring attention to a note on 10r about alum/purple.
  + *“On the other hand, a more purple shade was an advantage if the lake was to be used to make purple by glazing over a layer of blue paint: mixing alum with it to make it more violet in color is suggested (fol. 10r). The addition of too much alum while the lake was being made also resulted in a more purple or violet color (fol. 58r). Both comments suggest that the author-practitioner knew, or had been talking to, someone with experience of making the pigment, or had tried it in person; the effect on the color of adding too much (or additional) alum is rarely mentioned at this date. The tendency to become more purple can be observed in the case of lakes containing cochineal dye, which would probably have become common by the 1570s or 1580s.”*
  + Info from CAMEO (<http://cameo.mfa.org/wiki/Carminic_acid>) on the colorant of cochineal: *Carminic acid changes colors with acidity. It is a bright red in neutral solutions, below pH 4.8, it is yellow and above 6.2, it is a deep violet color. Carminic acid is used as a lake pigment for oil colors, as a red dye for photography and as a textile colorant.*
  + There are many intriguing entries in the manuscript, the meaning of which could be explored and the process possibly reconstructed, such as [fol. 52v: *Colors*](https://edition640.makingandknowing.org/#/folios/52v/f/52v/tl)
    - *If you want to keep them beautiful in gum and such that they do not lose any of their true color, put white wine, the whitest and clearest you can, in a bottle with a little tragacanth gum. And having stoppered the bottle, scramble & shake it very strongly together, & let it rest until the tragacanth is dissolved. Also put in a little fine-grained white salt to brighten the whole. Some mix clear water with white wine, and with this mixture they temper the colors without grinding. And these show very beautifully in illumination work.*
* Create a visual version of one of the Research Essays
  + An excellent candidate: [*Working (with) the Corps: The Body of Sands, Colors, and Varnishes in Ms. Fr. 640*](https://edition640.makingandknowing.org/#/essays/ann_307_ie_19)
* Compare Fr. 640 to other how-to texts (or sections of each text), such as:
  + 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).
* Explore the use of “you” or “one” in the manuscript
  + Create a visualization of these occurrences.
  + Are there any patterns or correlations? For example, are there certain categories where “you” appears more frequently than others? Are there ones where it does not appear at all? (An interesting category for this is “painting”)
* If we were to start again with encoding the manuscript, what other semantic tags might the manuscript be encoded with?
  + e.g., “color,” “comparison,” “activity”
    - Some examples to explore are found in the menu of the minimal edition prototype created by Spring 2017 students: [GR8975 prototype](https://cu-mkp.github.io/GR8975-edition/) (note that they only re-categorized some of the entries and not the entire manuscript in full)
  + e.g., “waste” or “economy” (Inspiration from [Thrifty Science: Making The Most Of Materials In The History Of Experiment](https://press.uchicago.edu/ucp/books/book/chicago/T/bo35612006.html))
    - (1) waste or ways to be economical (e.g., used molds, wash water) and
    - (2) references to economy in the modern sense (e.g., costs, values) - relation to trade
* Sequence of the manuscript’s composition: review all places where the author-practitioner or the manuscript construction itself hint at either sequential or non-sequential composition. For more, see <https://github.com/cu-mkp/sandbox/issues/19>.
  + Look at editorial comments on notes like “see the second folio” etc.
* Visual analysis of the manuscript’s facsimile: compare each folio page of the manuscript, grouping similar ones together (e.g., lots of margins, empty space, bunched-together text blocks, additions + deletions, etc.)

### Writing & Formatting

* Identify your audience and ways in which you can use your writing style to match your intended readers or users.
* If possible, compose your final project as a file uploadable to Courseworks (such as Word doc, powerpoint, etc)
  + If that is not possible (e.g., you are using an external tool, producing a video, etc.), please consult your instructors about the best way to hand in your project. See also the links below about formats and digital standard
* Please the [Chicago Manual of Style](http://www.chicagomanualofstyle.org/tools_citationguide.htm), the standard used by historians, for your bibliography, footnotes, citations
  + Full access to the style guide is available through CLIO
* Finally, please watch this [video about zombie nominalizations](https://youtu.be/dNlkHtMgcPQ), and follow its precepts!

### Use of Media

Adding images, videos, music, or other types of media to your projects is highly encouraged. It is important, however, that you have permission to use any outside media (anything that you do not create/produce yourself).

There are numerous resources online for finding free and publicly available images and other types of media (see below in Research Resources). These also detail how to properly credit external media (including ownership, captioning, permissions, copyright, and licensing).

* [Free Academic Images](https://academicimages.wordpress.com/) (check each collection’s policy and make sure you cite as they request)
* [Research Guides: Finding Public Domain & Creative Commons Media: Images](https://guides.library.harvard.edu/law/pd-cc)
* [Library Guides: Images: A Guide to Visual Resources: Public Domain Images](https://guides.lib.uchicago.edu/c.php?g=297369&p=6873995)
* [The Essential Guide to Using Images Legally Online](https://www.searchenginejournal.com/using-images-legally-online-guide/319403/#close)
* [GUIDE – Finding Images & Other Media You Can Use in Public Projects](http://digitalwriting101.net/content/guide-finding-images-you-can-use-in-your-digital-composition-projects/)

Crediting images with the right permission is very important.

The ***format*** of the media you use and create is another important aspect. To ensure wide accessibility and long-term sustainability of your digital creations, the format of digital objects should strive to be open format, open-access, transferable, and exportable. This includes file formats (e.g., .png, .jpg, .docx, .pdf, .mp4, etc) and properties of the files.

* [Introduction to Digital Formats for Library of Congress Collections](https://www.loc.gov/preservation/digital/formats/intro/intro.shtml)
* [Standards | Librarians and Archivists](https://www.loc.gov/librarians/standards)
* [Library of Congress: Recommended Formats Statement](https://www.loc.gov/preservation/resources/rfs/)

Please consult with Professor Smith and Caroline about the specific details of your projects. Some things to consider:

* Avoiding proprietary and operating-system-specific file formats (i.e., formats that only work with Mac OSX or Windows)
* Preserving the separate elements of a file, such as videos with unflattened audio or compressed PDFs

## Final Project Research Resources

### Miscellaneous

* Early Modern/Digital Humanities Resources (Collection made by M&K Project)
* Randle Cotgrave, Dictionarie of the French and English Tongues (London, 1611).

### Ms. Fr. 640 “internal” research

If you are focusing on sections or recipes from Ms. Fr. 640, or the materiality of the manuscript, don’t neglect this “internal” research

* Be sure to examine and describe the folio(s) on which your recipes appear:
  + How does the folio look? Clean/crowded? One or more hands?
  + Marginal notes? (How) many/few? Where? Same/different hand?
  + Strikethroughs?
  + Drawings or symbols?
  + Continuing page?
  + How many recipes appear on your folio?
  + Describe the context of your recipe(s): what kind of recipes precede and follow your recipe on the folio and the immediately preceding and following folios?
* Understand your recipe in the context of the manuscript as a whole:
  + Search for related recipes.
  + Search for the same and similar terms, materials, techniques, or instruments.
  + How do the other recipes contribute to a better understanding of your chosen recipe(s)?
  + Are there many or few related recipes? What can this tell you about the recipe and about the manuscript as a whole?
  + How does this recipe differ from the related recipes?
  + Are the related recipes abbreviated or detailed?
  + Anything conspicuous in comparison to other recipes in the manuscript?
  + What can you infer from these observations?
  + Does your recipe contain clues that suggest that our author-practitioner based the recipe on his own experimentation/observation?

### Materials Research

* M&K’s Student Files (Google Drive) Materials info/research
* Bernard Guineau - *Glossaire des Materiaux de la Couleurs* (French historical dictionary of pigments and colors)
* *Artists’ Pigments: A Handbook of their History and Characteristics* vols. 1-4
* Art and Science of Illuminated Manuscripts (2016 exhibition at the Fitzwilliam Museum, Cambridge), with much information on color making

<https://colour-illuminated.fitzmuseum.cam.ac.uk/>

<http://www.fitzmuseum.cam.ac.uk/illuminated/>

* [Grove Encyclopedia of Decorative Arts](https://clio.columbia.edu/catalog/7918285?counter=1) (available through CLIO, signin required)
* Gettens and Stout - *Painting Materials: A Short Encyclopedia*
* [CAMEO](http://cameo.mfa.org/wiki/Category:Materials_database) Materials Database
  + This is a useful and pretty reliable resource for understanding materials. Most pages contain a brief overview, historical context, synonymous names for the material, names in other languages, geographical information, citations, and chemical/biological information.
* Bibliographic Database of the Conservation Information Network ([BCIN](https://bcin.info/vufind/)) for conservation articles on materials and technical studies
* [Smithsonian Museum Conservation Institute](https://www.si.edu/mci/english/research/technical_studies/index.html)
* The National Gallery (London) [Technical Bulletins](https://www.nationalgallery.org.uk/technical-bulletin)
* The National Gallery of Art (Washington DC) [publications and research](http://www.nga.gov/content/ngaweb/research/publications.html)
* Kremer Pigments Details and MSDS product pages
* Primary Source collections for materials and objects research - general:
  + Arie Wallert et al., “Still-Life Sources,” ch. 2.
  + Ad Stijnman, “Style and technique are inseparable: art technological sources and reconstructions,” *Art of the Past. Sources and Reconstructions. The proceedings of the First Symposium of the Art Technological Source Research Study Group*, ed. by Mark Clarke, Joyce H. Townsend, and Ad Stijnman (Amsterdam: Archetype, 2005): 1-8. (Chapter 1-2)
  + [Hermens, Erma, ed. *Looking Through Paintings: The Study of Painting Techniques and Materials in support of Art Historical Research.* London: Archetype, 1998.](https://clio.columbia.edu/catalog/2139563)
  + History of "technical art history" in Burlington Magazine, starting October 2015: <http://www.burlington.org.uk/archive/editorial/a-new-history-of-conservation-and-technical-studies>

### Comparative artisanal writings (most in English translation)

* Theophilus - *On Divers Arts*
* Cennini - The Craftsman's Handbook: "Il Libro dell' Arte” [USE the new edition by Lara Broecke for your research and for citing - it is more accurate]
* Leon Battista Alberti, and Rocco Sinisgalli, *Leon Battista Alberti: On Painting: a New Translation and Critical Edition.* Cambridge: Cambridge University Press, 2011*.*
* Benvenuto Cellini, *Two Treatises*, trans. C. R. Ashbee (repr. 2006)
* Vasari’s *Lives*
* [*Vasari on technique; being the introduction to the three arts of design, architecture, sculpture and painting, prefixed to the lives of the most excellent painters, sculptors and architects. Translated into English by Louisa S. Macelhose. New York: Dover Publications, 1960.*](https://clio.columbia.edu/catalog/739090)
* [Giovanni P. Lomazzo, *Trattato Dell'arte De La Pittura: Diuiso in Sette Libri, Ne' Quali Si Contiene Tutta La Theorica, & La Prattica D'essa Pittura.* In Milano: Appresso Paolo Gottardo Pontio, 1584](https://clio.columbia.edu/catalog/2027201)
* [Armenini, De’ veri precetti della pittura, 1568](https://clio.columbia.edu/catalog/1919546)
* [Karel van Mander, *The Lives of the illustirous Netherlandish and German painters, from the first edition of the Schilder-boeck (1603-1604)*. Doornspijk: Davaco, 1994-1999.](https://clio.columbia.edu/catalog/1499205)
* [Leonardo Da Vinci, *Treatise on Painting*, trans. A. Philip McMahon, Vols. 1-2, Princeton: Princeton University Press, 1956](https://clio.columbia.edu/catalog/1100911)
* [Leonardo Da Vinci, Martin Kemp, and Margaret Walker, *Leonardo on Painting: An Anthology of Writings*. New Haven: Yale University Press, 1989](https://clio.columbia.edu/catalog/3301485)
* [Antonio Doni, Disegno del Doni, partito in più agionamenti, ne quali si tratte della scoltura et pittura, de colori, de gutti ..., Venice 1549](https://archive.org/details/disegnodeldonip00donigoog)
* de Piles, Roger. *Cours de peinture par principes*, many editions, early 1600s
* Bernard Palissy, *Recette veritable* (recent French edition) and *The Admirable Discourses* (Engl. edition)
* Jean Cousin (see [Louvre exhib. cat.](https://clio.columbia.edu/catalog/10517422))
* Ulrich Pfisterer Project on drawing manuals - google for this
* Antonio Neri - *The art of glass…* (1662) ([EEBO](http://eebo.chadwyck.com/search/full_rec?SOURCE=pgthumbs.cfg&ACTION=ByID&ID=12085791&FILE=../session/1472663890_6750&SEARCHSCREEN=CITATIONS&SEARCHCONFIG=var_spell.cfg&DISPLAY=AUTHOR))
* Hilliard, Nicholas. *Nicholas Hilliard’s Art of Limning*. Edited by Arthur F. Kinney and Linda Bradley Salamon. Boston: Northeastern University Press, 1983.
* Norgate, Edward. *Miniatura, or, The Art of Limning: New Critical Edition*. Edited by Jeffrey M. Muller and Jim Murrell. New Haven: Yale University Press, 1997.
* [Veliz, Zahira. *Artists’ Techniques in Golden Age Spain: six treatises in translation*. Cambridge: Cambridge University Press, 1986.](https://clio.columbia.edu/catalog/566187)

### Other recipe collections

* Merrifield - *Medieval and Renaissance Treatises in the Arts of Painting*
* Sir Theodore de Mayerne, *Pictoria, sculptoria et quae subalternarum artium* (the 'Mayerne manuscript') Fels, Donald C., ed. *Lost Secrets of Flemish Painting: Including the First Complete English Translation of the De Mayerne Manuscript, B.M. Sloane 2052*. Hillsville, VA: Alchemist, 2001.
* The *Plictho* of Gioanventura Rosetti [dyes]
* Nuremberg Kunstbuch (see E.E. Ploss, *Ein Buch von alten Farben: Technologie der Textilfarben im Mittelalter mit einem Ausblick auf die festen Farben*. Heidelberg and Berlin: Impuls Verlag Heinz Moos, 1962 [dyes]
* Marciana ms.
* Alessio Piemontese/Girolamo Ruscelli
* Hugh Platt
* Arie Wallert, “Libro Secondo de Diversi Colori e Sise da Mettere a Oro: A Fifteenth-Century Technical Treatise on Manuscript Illumination,” *Historical Painting Techniques, Materials, and Studio Practice* (Getty pre-print, 1995), in GD.
* The COLOUR ConTEXT database
* Cologne database of recipes (often inaccessible)
  + [General landing page](https://www.th-koeln.de/kulturwissenschaften/kunsttechnologische-rezeptsammlung_25065.php)
  + Also see instructions here (in GD): Doris Oltrogge, “The Cologne database for painting materials and reconstructions,” *Art of the Past. Sources and Reconstructions. The proceedings of the First Symposium of the Art Technological Source Research Study Group*, ed. by Mark Clarke, Joyce H. Townsend, and Ad Stijnman (Amsterdam: Archetype, 2005): 9-15.
* Ursula Haller, ‘ “Administrator of Painting”: The purchase and distribution book of Wolf Pronner (1586 – 1590) as a source for the history of painting materials,’ in [*Trade in Artists’ Materials: Markets and Commerce in Europe to 1700*](https://clio.columbia.edu/catalog/8212152), edited by Jo Kirby, Susie Nash and Joanna Cannon, London, Archetype Publications, 2010

### Object Research

Some online sources to begin your search for art works and everyday objects:

* [Metropolitan Museum of Art](http://metmuseum.org/art/collection) online catalogue
  + Can filter by date, region, culture, artist, materials, etc
  + Also see the Met’s [Timeline of Art History](http://metmuseum.org/toah/), [Met Publications](http://metmuseum.org/art/metpublications), and [Libraries and Research Centers](http://metmuseum.org/art/libraries-and-research-centers)
* [Victoria and Albert Museum](https://www.vam.ac.uk/collections) collection
  + [Search](https://collections.vam.ac.uk/) the collection
  + See also the [National Art Library](http://www.vam.ac.uk/page/n/national-art-library/), [Archive](http://www.vam.ac.uk/page/a/archives/), [Research](https://www.vam.ac.uk/info/research/)
* [The National Gallery, London](https://www.nationalgallery.org.uk/paintings) - search the collection
  + [For Researchers](https://www.nationalgallery.org.uk/learning/for-researchers)
  + [The Meaning of Making](https://www.nationalgallery.org.uk/research/about-research/the-meaning-of-making)
* [Rijksmuseum](https://www.rijksmuseum.nl/en) - search the collection
* [French museums union](http://www.photo.rmn.fr/C.aspx?VP3=CMS3&VF=Home&LANGSWI=1&LANG=English) - search the collection
* [Joconde database](https://www.culture.gouv.fr/en/Thematic/Museums/Les-musees-en-France/Collections-of-museums-in-France/Joconde-collective-catalogue-of-the-collections-of-the-museums-of-France) of works in French museums (Ministry of Culture)  
  [Les œuvres d'art des musées français](https://art.rmngp.fr/fr)
* [Cleveland Museum of Art](https://www.clevelandart.org/art/collection/search) collections
* [Germanisches](http://objektkatalog.gnm.de/) & [Bayerisches](http://www.bayerisches-nationalmuseum.de/index.php?id=547) object databases
* [Belgian Art Links and Tools (BALaT)](http://balat.kikirpa.be/) database
* [Architetura](http://architectura.cesr.univ-tours.fr/) - books, texts, and images on French architecture and Gallo-Roman antiquities
* [Real Virtual](https://learn.columbia.edu/custom/warning.html?q&ha/) - Columbia’s interactive online tool to explore major monuments of architectural history
* [Wellcome Library images](https://wellcomeimages.org/works)
* Queen’s University, Department of Art History and Art Conservation, database of images, including of early modern polychrome sculpture: <https://qspace.library.queensu.ca/handle/1974/120>.