# Creating an *Object in focus* Online Exhibition for the British Museum's International Training Programme

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Abstract

This project created an online exhibition to house *Object in focus* exhibits created by fellows of the British Museum's International Training Programme (ITP). We constructed a prototype using design elements from exemplary online exhibitions and feedback from a survey sent to ITP fellows. We improved this prototype using an iterative design process and made a handbook guide for ITP staff and fellows to update the online exhibition. Our final product is an engaging, professional, and updatable online exhibition that permanently showcases the curation skills of ITP fellows.

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Introduction

Museums communicate the physical history of mankind. Their collections tell historical narratives richer than the sum of their parts that stimulate the minds of visiting students and resident archaeologists alike. A single collection, however, can be difficult for some to view, particularly those living far away from the physical museum. Developing new ways to improve accessibility is therefore a perpetual goal of internationally minded museums. This is especially true in the wake of COVID-19, which halted in-person exhibitions, thereby severing the main tie between museums and the public. As a proven venue used since the 1990s (Katz & Halpern, 2015), websites are the most popular substitute for the traditional museum visitor experience. As a result, even with the COVID-19 pandemic, museums are still accessible because of their online forms.

This pivot towards digital operations is part of a larger trend towards improved museum accessibility. This trend extends beyond the public museum experience, as many institutions have also worked to cultivate new generations of museum professionals. For example, the British Museum created the International Training Programme (ITP). The ITP is an annual summer program during which the museum gives on-site training in industry best practices to museum professionals from around the world, called fellows. Throughout the program, fellows build relationships with each other and staff from the British Museum and its partner institutions. Their experience concludes with the *Object in focus* project, in which groups of fellows curate an exhibition for a single object chosen from the museum's collection. The six-week program gives fellows hands-on experience and lasting personal connections. In return, the British Museum grows as an industry leader with a thriving international network.

299 fellows have participated in the ITP since its inception in 2006; however, it seeks to maintain the professional bonds between them long after they finish the program. Nevertheless, communication between the ITP and their geographically disparate alumni has remained limited, and much of the work done by fellows during the ITP lacks a platform to be shared on (G. Peckham, personal communication, April 16, 2021). In particular, *Object in focus* exhibitions are archived internally by the ITP, meaning fellows cannot view their own or others' work after the program ends. The ITP therefore wants a website to house archived *Object in focus* exhibition material that is open for public viewing. This website will complement the British Museum's

maturing online presence. Furthermore, it will enable current and future alumni of the ITP to share and view the work of their peers, strengthening the ITP's global network.

In early 2020, a group of WPI students created a preliminary, unpublished version of the *Object in focus* website. Unfortunately, the COVID-19 pandemic disrupted communication between the students and the ITP, preventing the students from completing the website (Moore et al., 2020). The goal of our project was to build on the work of these predecessors. Specifically, we took their draft online exhibition and created an engaging and professional *Object in focus* online exhibition that meets the needs of the ITP and its fellows and can be easily updated to house future *Object in focus* projects. To accomplish this, we:

1. Reviewed online exhibits to create a list of potential design elements to include in the *Object in focus* online exhibition.
2. Gained feedback from fellows to understand the usefulness of the current *Object in focus* online exhibition and their opinions on specific design elements.
3. Created an *Object in focus* online exhibition using an iterative design process.
4. Created the *Object in focus* web design handbook so the ITP or fellows can easily upload new exhibits regardless of their technological background.

In this paper, we begin by presenting a three leveled hierarchy that museums follow during their maturation. We use the British Museum as a case study for each hierarchical level, contextualizing the ITP and *Object in focus* project within the third level. We then detail our methods for reviewing other online exhibits, understanding the needs of the ITP fellows and staff, and developing an *Object in focus* online exhibition and accompanying handbook. We conclude with a discussion of our findings throughout the online exhibition construction process and their implications for the ITP.

Background

Museums serve society by preserving and educating the public on the world's natural and cultural property. Objects in museum collections are tangible pieces of Earth's natural and cultural heritage, and their study brings together a variety of natural and human scientific disciplines, from archaeology to sociology. Collections of reproduced educational transcripts found in Mesopotamia dating back to the second millennium BCE indicate that the concept of museums is almost as old as human history itself (Lewis, 2004).

The modern "encyclopedic museum," which chronicles human history through a comprehensive collection, originated in the late 17th century (Lewis, 2004). These institutions have since grown and matured from their humble origins. In what follows, we demonstrate that in order to serve their purpose to the people of the world and retell their cultural history, museums move through a three-tiered hierarchy of maturation (Figure 1). At the lowest level, a museum requires a large and diverse collection of objects spanning its area of expertise (Comprehensive Collection). From there, an adequate and accessible platform must exist to display said collection (Accessible Platform). Finally, a museum works to ensure objects are enduringly maintained and faithfully presented (Industry Guardian).
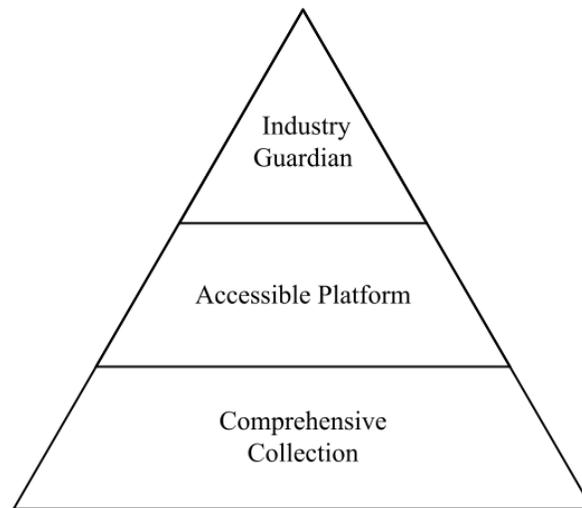

Figure 1: Hierarchy of encyclopedic museum maturation.

In this section, we discuss the major developments that drove modern encyclopedic museums through each hierarchical level. We present the British Museum as a case study throughout because its rise to preeminence exemplifies this hierarchy. Finally, we discuss the

British Museum's International Training Programme and *Object in focus* project, ongoing manifestations of the museum's evolving industry guardianship.

Comprehensive Collection

By their definition, encyclopedic museums require breadth and depth to their collections. A collection needs breadth to capture the diversity of humanity's cultural heritage, and depth to capture its nuance. Many major encyclopedic museums humbly began with the support of a few patrons and sections of personal collections (Thomas, 2016). Given time and sufficient funding, these collections have naturally grown through donations and acquisitions.

Such is the case of the British Museum, which originated in the personal collection of Sir Hans Sloane, former president of the Royal Society. Sloane's lifetime collection included some 80,000 natural and artificial rarities, 40,000 books and manuscripts, and 32,000 coins and medals (British Museum, n.d.). Upon his death, a group of Sloane's personally appointed trustees petitioned Parliament to purchase his collection with national funds. Parliament subsequently passed the British Museum Act of 1753, in which it bought the collections of Sloane and a few others "for the general use and benefit of the public" (Goldgar, 2000). This established the British Museum and provided government support to sustain its future.

From these beginnings, the British Museum's collection grew substantially. The modern collection was mostly accumulated during the 19th and 20th centuries from patrons donating their collections, much like Sloane. These donations varied in size, some containing several hundred objects. For example, the Waddesdon Bequest, a collection of medieval and renaissance artifacts donated in 1898 by Baron Ferdinand Rothschild, totaled nearly 300 objects (Neal, 2021). Many objects were accumulated through British imperialism, as the museum received countless objects from British officers returning from military expeditions (British Museum, n.d.). While this allowed the museum to amass one of the most comprehensive physical archives in the world, imperialist acquisitions often came at a significant human cost and cast a shadow over the museum's legacy (Dan, 2020). In other words, the British Museum achieved the first level of the maturation hierarchy at the expense of the third level. This demonstrates that the first level is easier to achieve than the latter two. While museums can passively amass collections through external donors, they can only foster platforms and guardianship through conscious, direct effort on their part.

Accessible Platform

After a museum obtains a collection, it needs to build an accessible platform where visitors can observe their artifacts. Museums have traditionally relied on physical platforms where visitors can walk around to explore exhibitions, like buildings and gallery rooms. Over time, physical spaces have grown to accommodate expanding museum collections, with new museum wings and even whole buildings. Evolutions in technology have somewhat compensated for space limitations and therefore made collections more accessible to a broader audience. Virtual platforms in particular are gaining popularity as technologies evolve to make web design easier and versatile. While acclimating to the digital age has been difficult at times, museums have nevertheless recognized its benefits since the early days of computing.

The growth of the British Museum's physical location illustrates how a typical museum campus may expand and become more accessible. Its original home was the Montagu House, a refurbished 17th-century manor where the British Museum first opened its doors in 1759. Here, the museum's growing collections lived until 1823 when it finally outgrew the Montagu House. The building was promptly demolished and replaced by the Greek Revival Style building that remains in its stead to this day (see Figure 2) (British Museum, n.d.). The museum also began gradually opening to the public at this time. For instance, in 1830 the British Museum relaxed entrance fees, stopped requiring personal tours, and expanded their hours of operation, improving access for the less wealthy or connected (Goldgar, 2000). Today, the British Museum is freely accessible to everyone (British Museum, n.d.). However, like all physical locations, the British Museum is difficult to access for visitors outside of Europe, especially in the Global South. Furthermore, over ninety-nine percent of the British Museum's collection is archived due to space limitations and therefore inaccessible to in-person visitors (BBC, 2010). As a result, the British Museum and others in a similar situation have sought virtual platforms to supplement their physical locations.

Figure 2: Left: 1728 print of the Montagu House (British Museum, 2017)

Right: 19th-century print of the current Greek Revival style building (British Museum, n.d.)

Computers were first used by museums in the early 1960s to preserve their archived records. The introduction of mainframes was a breakthrough that transformed museum records from stacks of paper to easily filterable digital files. This saved time and enabled museums to better understand the contents of their collections, thereby improving their ability to share information both internally and externally (Marty et al., 2003). Computer archives were nevertheless constrained to physical locations, meaning they made museums no more accessible for distant visitors. The internet changed this. When museum websites first appeared in the 1990s, they were simplistic (Katz & Halpern, 2015), often including little more than an address, the hours of operation, and a brief collection description (Marty et al., 2003). At the time, creating digital media required specialized, expensive equipment and extensive training (Manovich, 2013). Today, however, digital media can be easily created with user-friendly software that runs on the average personal computer. In fact, the technical barriers to entry have lowered enough that by the early 2010s, industry researchers found most museum workers felt they could easily pick up the skills necessary to use digital media tools and software packages (Pavement, 2014). As a result, any museum with the motivation to create a website can at the very least produce a basic one without much external assistance. New web design methods have also made museum websites more immersive and interactive (Katz & Halpern, 2015). Today, online museums are numerous and diverse.

Most online museums are either digital archives, digital exhibits, or a combination of the two. Digital archives are detailed online records of everything in a museum's collection, from objects themselves to metadata about the objects, like pictures (Niu, 2018). Digital archives

enable museums to make more of their collection accessible because few museums have the resources to physically display more than a fraction of their artifacts. Digital exhibits represent curated solutions to limited space as they show off a small portion of the complete collection. The *Manual of Museum Exhibitions* explains that exhibits both satisfy visitor experience expectations and allow curators to tell a story larger than the individual objects (Lord & Piacente, 2014). Despite these advantages, a 2018 study of 100 American museum's websites found that 75% of museums sampled made limited to no use of both digital archives and exhibits. Nevertheless, the remaining 25% applied advanced online exhibition techniques, such as integrating most of their physical collections online and allowing visitors to browse by themes (Niu, 2018). The techniques necessary to adapt archives and exhibits to online formats are therefore developed but underutilized.

This underutilization can somewhat be attributed to the perception that online exhibits might result in fewer in-person visitors; however, studies of early museum websites have shown the opposite may be true (Marty et al, 2003). For instance, participants in a series of online workshops put on by the Metropolitan Museum in 2015 found themselves excited to later visit and meet museum staff in person (Katz & Halpern, 2015). The rising popularity of online exhibits has therefore helped physical museums become more popular as well.

The space and travel limitations that make the physical British Museum difficult to access have been somewhat addressed by their website. In its short existence, the website has grown as remarkably as the museum itself. The first official museum website at its current address was created sometime in 2007.[1] Since then, the website has been expanded and reworked numerous times. For instance, on January 15, 2017, the museum relaunched their blog to commemorate the anniversary of the first time they opened their physical doors in 1759 (British Museum, 2017). Today, the website sees heavy traffic. A 2019 report found that it attracted between 32.5 to 34.7 million viewers annually from 2014 to 2019. This dwarfed the British Museum's annual in-person visitor count, which ranged between 5.8 and 6.9 million visitors over this same period (British Museum, 2019). Visitors to the British Museum website have access to a wealth of online exhibits, blogs, and articles on the museum's history. Perhaps the most

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[1] The earliest official version of the British Museum's website at its current address, britishmuseum.org, was created sometime between April and October of 2007 based off of captures on archive.org. The earliest capture was created October 11, 2007, and is viewable at http://web.archive.org/web/20071011021051/http://www.britishmuseum.org/

impressive feature is their digital collection, which contains almost 4.5 million objects and more than two million records (British Museum, n.d.). At this size, it is one of the largest digital collections available to the public, providing global audiences access to a collection telling the story of man the world over.

Industry Guardian

The final and most advanced level of the maturation hierarchy requires a museum to dedicate itself to the perpetual protection and proper presentation of its collection. Preserving objects is no small task for their designated curator, however industry best practices provide objective solutions. Accurately displaying objects from other cultures often has no such clean answer. Cultures themselves are fluid, after all, meaning the context an object is presented in must be continuously updated even if the object itself remains static. As will be shown, this task is further complicated as museums address imperialist acquisition methods, which have become integral to the context of objects themselves.

As aforementioned, many western encyclopedic museums obtained their collections at the height of colonialism, when military power facilitated forceful acquisitions. As a result, objects entering collections throughout the 18th and 19th century were either plundered during wartime or stolen during peacetime (Boyd, 1999). International conferences in the latter half of the 20th century have since made forceful acquisition illegal (Merryman, 1986). Today, new objects are owned by the governments where they were found, meaning museums rely on loans for new foreign objects (Boyd, 1999).

Nevertheless, museums have resisted returning colonial acquisitions, with many unwilling to sacrifice the comprehensiveness of their collections for cultural restitution (Archambault, 1993). Critics argue these museums are "depriving" certain groups of their heritage by holding onto forcefully acquired artifacts (Boyd, 1999), creating mounting pressure to return them to their ancestral owners. This call has not been fully answered, but museums still housing controversial objects attempt to address the issue by improving artifact presentation. The challenge these museums wrestle with is how to avoid bias by accommodating different interpretations within their collections. Afterall, while the large collections of "universal museums" may span geographic and cultural borders (Mathur, 2005), even a global collection can be presented through a regional lens. Solutions have focused on overcoming an apparent

power imbalance between elite western museums and the marginalized groups their artifacts were taken from. For instance, since at least the 1960s many American museums have sought input from tribes on how to present Native American artifacts (Archambault, 1993). Another common approach is inter-museum loans, which allow a museum possessing an object to give others access to it without forfeiting ownership.

Inter-museum loans took off in the 1970s, with an unprecedented circulation of cultural patrimony over the following three decades as museums collaborated to bring great civilizations and artists to new places. For example, the British Museum extended the reach of its loans in the 1990s by lending exhibitions on the human form in world art to museums in New Delhi and Bombay for the 50th anniversary of India's independence. Loans bring British Museum objects to new audiences. For instance, in 2004, the British Museum's exhibition on memory in world culture was seen by over 1.3 million Japanese and a selection from the Egyptian collection was seen by over 1.5 million North Americans. These loans help the British Museum build relationships with partner institutions and gain input from local curators around the world, allowing the Museum to better tell its collection's story (MacGregor & Williams, 2005).

Museums can also develop guardianship by sharing curation best practices. Curators serve a dual role as both presenters and preservers of objects, bringing to their exhibits different points of view based on professional and personal experiences. Visitors are often unaware of the influence curators have because exhibits appear to be presented by a museum, not an individual. As a result, curators are both privileged and obliged to responsibly present exhibits for their audience and host institution (Boyd, 1999). As part of this, curators follow the International Council of Museums' (ICOM) object and information presentation standards. One important ICOM standard is that museum displays and exhibits must present accurate information about their objects. This ensures visitors are truthfully educated on the history of artifacts. ICOM standards also require museums to properly care for and conserve the objects in collections, ensuring their physical condition is never compromised (Lewis, 2004). Meeting these standards requires considerable training and poses a significant challenge for curators working on exhibits outside of their typical expertise. Providing this training can be difficult for museums with limited resources and collections with diverse needs. More established museums can bridge this knowledge gap by sharing their expertise through consultant services, such as training or staff exchange programs. These services expand professional and public knowledge on curation best

practices (Boyd, 1999) and encourage peer evaluation, guidance, and innovation amongst museum professionals. Furthermore, they empower museum personnel to share their experience and knowledge with colleagues, students, and scholars back home. In return, consulting allows host institutions to establish themselves as guardians by giving an opportunity to train future generations of museum professionals.

To ascend to this final hierarchical level and overcome its colonial past, the British Museum has created programs to foster guardianship. These efforts have partially focused on establishing the groundbreaking collaborative loan program. Beyond loans, the British Museum seeks to build relationships through training programs to provide guidance to burgeoning curators. Chief among these is the British Museum's International Training Programme.

The International Training Programme

The British Museum established the International Training Programme (ITP) to instruct museum professionals on museum best practices. Now in its 15th year, the ITP is an annual summer training program for museum and heritage professionals worldwide, called fellows. The ITP's two main objectives are to connect fellows across geographic and cultural boundaries and support them as future leaders in the industry (International Training Program, 2021). These objectives are accomplished over a six-week course in the UK, during which fellows exchange knowledge and skills, and professionals in the British Museum's network teach them curation best practices (British Museum, n.d.). As part of the summer program, fellows also spend 10 days at one of the British Museum's partner museums around the UK. This exposes fellows to the best practices of other museums and helps grow the international relationships of the British Museum's partners (G. Peckham, personal communication, April 16, 2021).

Most fellows are in the early or middle stages of their careers, often coming from institutions throughout the Global South. They fill a wide range of roles in their home institutions, including curators, conservators, managers, and educators (International Training Programme, n.d.). Since the ITP's inception, 299 fellows from 48 countries (see Figure 3) have participated in the summer program (G. Peckham, personal communication, April 16, 2021). Typically, around 26 fellows participate per year from almost as many countries. For instance, 23 fellows from 17 countries came to participate in the 2019 summer program (British Museum, n.d.).
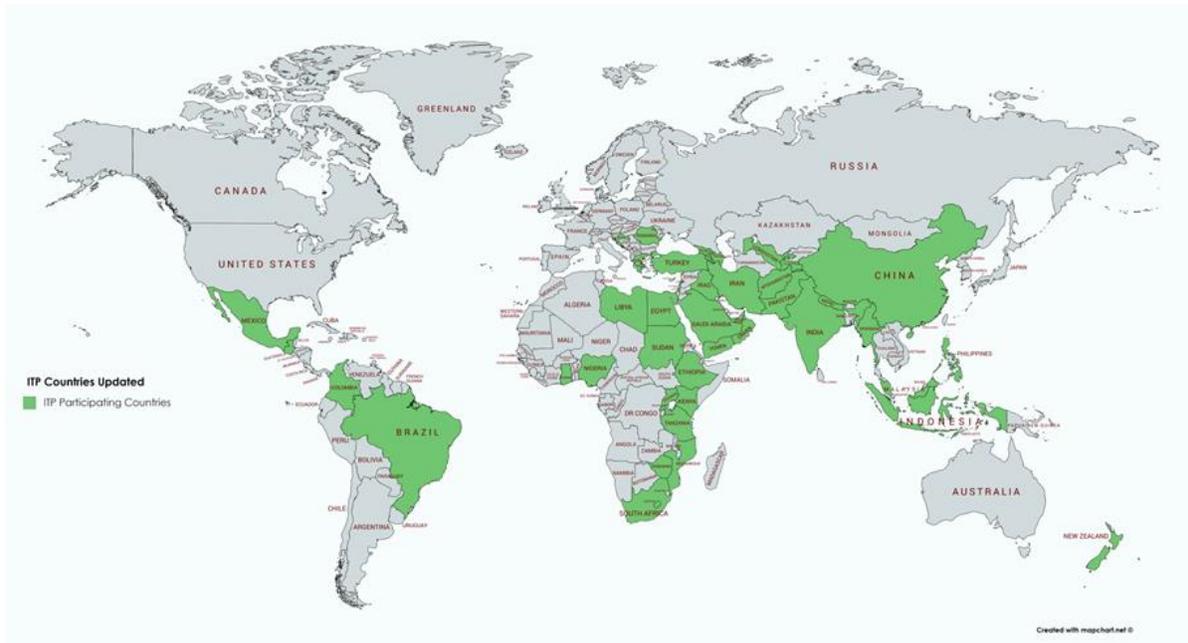
Figure 3: Map showing the 48 countries participating in the ITP (International Training Programme, 2021)

Object in focus Project and Online Exhibition

The capstone experience of the ITP summer program is the *Object in focus* exhibition. For this exhibition, fellows team up in small groups to create one-object exhibits using objects from the British Museum's collection. This includes creating an exhibit poster, label, panel text, and any other accompanying supplemental materials (see Figure 4). The project concludes with a reception in which fellows show off their exhibits at the end of the summer program (G. Peckham, personal communication, April 16, 2021). The purpose of *Object in focus* is twofold. First, it provides an opportunity for fellows to combine their prior curation knowledge with what they learned during the ITP, and then apply it. Second, it is designed to strengthen the working relationships and global network of fellows and the ITP. The ITP encourages the latter by having fellows collaborate instead of working alone and advising fellows to select objects from areas outside of their expertise (ITP, 2021).
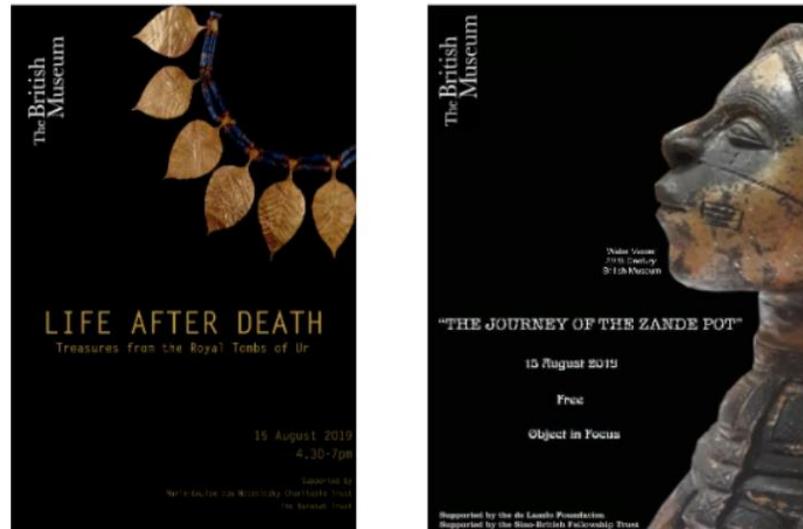
Figure 4: An example of two posters created for *Object in focus* in 2019 (International Training Programme, 2021)

Despite the immediate educational value fellows receive from making *Object in focus* projects, their posters and other exhibit materials are, unfortunately, "put in a drawer and never seen again" after the program ends (G. Peckham, personal communication, April 16, 2021). The ITP team is working to change this by creating a publicly viewable online collection to house former *Object in focus* exhibitions to "demonstrate the hard work, enthusiasm and imagination of [the] ITP global network" (International Training Programme, 2021). This first involved digitally archiving the materials from over a hundred past *Object in focus* exhibits. Once this was completed, the ITP commissioned a group of students from Worcester Polytechnic Institute (WPI) to create the *Object in focus* exhibition website in 2020. Due to COVID-19 resulting in the furloughing of museum professionals, the WPI team had difficulty communicating with the ITP as often as they needed (G. Peckham, personal communication, April 16, 2021). However, the WPI team was able to make a draft *Object in focus* online exhibition (see Figure 5).

Figure 5: Sample of one of the content pages on the *Object in focus* exhibition made by the 2020 WPI team (Moore et al., 2020)

While the pandemic delayed the creation of the final exhibition and the 2020 ITP summer program, it nevertheless reinforced to the ITP the value of having a strong online presence. The COVID-19 pandemic forced countries into lockdown, which stress-tested the capacity of the ITP's main website and social media presence to connect their network of fellows. The pandemic also spurred the ITP to begin conducting online workshops and seminars with their fellows. An *Object in focus* online exhibition complements both because it allows alumni fellows to show their projects to acquaintances back home and gives future groups of fellows a wealth of model exhibitions to draw from.

Methods

Our primary goal was to create an engaging and professional *Object in focus* online online exhibition that met the needs of the ITP and its fellows and can be easily updated to house future *Object in focus* projects. To accomplish this goal, we developed the following objectives:

1. Reviewed online exhibits to create a list of potential design elements to include in the *Object in focus* online exhibition.
2. Gained feedback from fellows to understand the usefulness of the current *Object in focus* online exhibition and their opinions on specific design elements.
3. Created an *Object in focus* online exhibition using an iterative design process.
4. Created the *Object in focus* web design handbook so the ITP or fellows can easily upload new exhibits regardless of their technological background.

Objective 1: Review Existing Online Exhibitions

We conducted a review of 31 existing online exhibitions to create a list of potential design elements for the *Object in focus* online exhibition. These exhibitions were recommended to us by the ITP, and were either made by the British Museum, the nine ITP partner institutions, or fellows' home institutions (see Appendix A for the complete list).

Our team created a checklist to systematically review each online exhibition (see Appendix B). This checklist was modeled after the one used by Niu (2018), in its assessment of the digital archival and curation capabilities of 100 randomly selected American museums. We modified the Niu (2018) checklist to focus on individual design elements instead of the holistic capability of each exhibition. This checklist organizes elements into four main factors that, when combined, create a refined online exhibit: functionality, navigability, content, and aesthetics (see Figure 6 for our definitions and examples of each). In addition, the checklist includes space for any notable features that fell outside of these four categories. To record our observations, we wrote notes and took screenshots of the exhibits based on each category within our checklist template.

Factors of Refined Web-Design

Functionality	Navigability	Content	Aesthetics
What the features of a website do	*How a website can be traversed*	*The information on each webpage and its organization*	*How a website visually looks*
Examples: - Clickable buttons - Translation tools - Pop-ups	Examples: - Menus - Search tools - Inter-page links	Examples: - Images - Text - Audio	Examples: - Color palette - Negative space - Font type/size

Figure 6: The four main factors contributing to refined web-design, with our definitions and examples for each

After conducting the review, we extracted a list of features and layouts used by exhibitions from our pooled results. We used this list as a source of inspiration when creating the *Object in focus* online exhibition. We also selected two object archive pages that we evaluated positively from among the reviewed exhibitions. Screenshots of these pages were included in our web design survey for fellows to comment on to see if their evaluations aligned with ours.

Objective 2: Understand Design Preferences by Surveying the Fellows

Consumer input is vital to the product design process. The earlier a designer receives it, the less effort is required to develop the same quality of product. This principle of incorporating customer input into early product development is known as "Quality by design." Quality by design was first brought to western audiences in the twentieth century by Joseph Juran, who primarily developed it with an industrial engineering and manufacturing focus (Juran, 1992). Though not initially created with software in mind, quality by design applies to web design as well. After all, websites are typically commissioned for specific organizations and sets of users. In other words, the main components of a website tie directly to customer needs.

Before creating the *Object in focus* online exhibition, we surveyed the exhibition's primary users. George Peckham, an ITP staff member, identified ITP staff and the network of fellows as these users (G. Peckham, personal communication, April 16, 2021). Staff are the primary users of the website's backend, as they are responsible for uploading future exhibits and

routine site maintenance. To facilitate this, we consulted ITP staff throughout this project to tailor the backend to their technical knowledge. To accommodate the different schedules and time zones of fellows, we solicited their feedback through a digital survey created in Qualtrics (Appendix C). This survey asked fellows questions on their browsing needs and design preferences and identified design elements to incorporate in the online exhibition. The survey's first section consisted of multiple-choice questions on fellows' browsing habits and needs. For instance, we asked fellows why they would visit the online exhibition and on what type of device (mobile or desktop). We also asked what types of metadata (i.e., year, type of object, etc.) they would like to see exhibits sortable by on the final online exhibition. The second section asked fellows to evaluate three example exhibit layouts: the layout created by Moore et al. (2020) and two chosen from among the 31 reviewed online exhibitions. Fellows assessed the layout, content, and aesthetics of each, then ranked the three in order of preference. The survey was distributed to fellows through a post on the ITP blog, a platform the ITP regularly uses to send announcements throughout the network. We received 21 complete responses, which we determined was sufficient feedback to guide our designs until the think-aloud phase (Objective 3).

Objective 3: Improve and Test the Object in focus online exhibition

The iterative design process is used in software development to refine a product over the minimum number of iterations. This process involves repeatedly prototyping, sharing, gaining feedback, and refining a product until it reaches a sufficient quality (Figure 7). We developed the *Object in focus* online exhibition using the iterative design process because its velocity was suited for our limited time frame and close contact with the ITP. We began the process with a prototype developed using the exhibition review and survey data. From there, we cycled between having fellows test our site and updating it to incorporate new feedback.
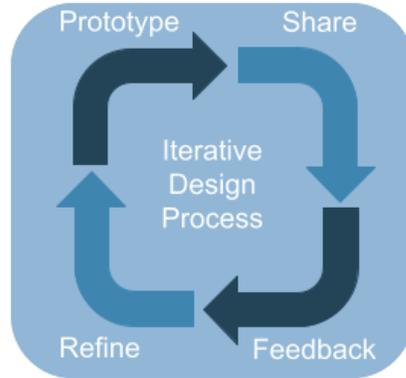
Figure 7: Diagram showing the typical iterative design process

Data from the online exhibition review and survey guided our initial design for the *Object in focus* online exhibition. We began this design phase with rough mockups of potential layouts that included elements identified in the previous two methods. These mockups enabled us to visualize the potential organization of the online exhibition's main page and individual object pages. These mockups guided us as we constructed a prototype online exhibition. This prototype incorporated all navigational features, page layouts, and other elements we intend to include in the final site. While the ITP had at this time provided us with access to all archived *Object in focus* material, the prototype was created to test our design's usability, not its content. The prototype was therefore only partially populated, housing complete material for just twelve archived *Object in focus* exhibits.

Our prototype was built using WordPress and hosted using Amazon Web Services' (AWS) staging servers. This was a departure from Moore et al. (2020), who built their online exhibition using JSON, a programming language that our team and the ITP staff had little to no experience with. Though switching to WordPress meant rebuilding the site from the ground up, it also meant using a flexible, easier to learn platform already in use by the ITP. This made the construction, documentation, and hand-off of the site easier. We initially attempted to host our online exhibition on the WordPress multisite created by Lynch-Collier et al. (2019), however backend hosting issues prevented us from modifying the multisite. We worked to fix this and consulted Matt Puentes of the 2019 WPI team for further insight. This delayed our prototype and eventually led us to abandon the multisite and create our prototype on a separate domain.

To test and get direct user feedback on our prototypes, we conducted think-alouds with ITP fellows. Think-alouds are a type of live interview where a facilitator gives tasks for an

interviewee to perform on a prototype website or other software. Throughout think-alouds, the facilitator encourages the interviewee to describe what they are doing and indicate any aspects of the program they find intuitive, confusing, or otherwise notable (Lewis & Rieman, 1993). We conducted six total think-alouds, three with fellows and three with ITP staff, using Zoom to observe interviewees and their screens. Before each think-aloud, we emailed interviewees a written preamble explaining how their think-alouds would work (Appendix D). During each think-aloud, we gave interviewees tasks that tested our navigation systems by sending them to different exhibits and asked questions to solicit feedback on specific design elements. Each think-aloud lasted between 30 and 60 minutes, with tasks standardized across the six interviews (see end of Appendix D). Two members of our team were present during each interview: one acting as a facilitator and the other as a notetaker. The facilitator delivered the tasks and encouraged the interviewees to speak throughout their interviews. The notetaker transcribed the interviewees' live commentary and how they completed each task. We recorded think-alouds with the interviewees' permission to ensure the notetaker transcribed all comments, and then deleted the recordings afterwards. Additionally, an ITP staff member was present at each think-aloud as an observer and familiar face for the interviewees.

The facilitator's job presented a significant challenge because interviewees had to continuously express their thoughts throughout the whole interview for think-alouds to succeed. Furthermore, we sought honest feedback on our prototype, so the facilitator refrained from asking leading questions or otherwise inserting bias into the responses. We therefore made it clear to interviewees that think-alouds were a test of the online exhibition, not them. Furthermore, the facilitator refrained from guiding the interviewee through the task and instead asked them for their opinions as they figured it out on their own. Facilitators only intervened if the prototype malfunctioned and left the interviewee unable to navigate further, in which case the facilitator directed them to the next task.

Following each interview, we categorized observations into "good," "bad," and "ugly." "Good" included features that interviewees praised or that we observed functioned properly. "Bad" included features that interviewees criticized, or we observed malfunctioning. "Ugly" was an extension of "bad" for features that were criticized across multiple interviews or that malfunctioned to the point of derailing an entire interview. These categories guided our revision process. "Good" was what we could leave unchanged in our prototype. "Ugly" was what we

needed to fix immediately before the next think-aloud. "Bad" was also what we needed to fix, though these issues were less urgent or easily fixable. We therefore left the "good" alone, focused our revisions on the "ugly," then fixed the "bad." This entailed making new mockups, adding new elements to the online exhibition, and debugging its code. After roughly a day of revising our prototype, we conducted another think-aloud, which was followed by further revisions.

Objective 4: Update the Object in focus Online Exhibition Handbook and Documentation

Moore et al. (2020) made a handbook detailing how to create new exhibits on their version of the *Object in focus* online exhibition. These instructions became obsolete when we rebuilt the site in WordPress. We created an updated handbook throughout this project to reflect our changes and to guide the ITP through updating the online exhibition after our hand-off (Appendix E).

We included four sections in the handbook. First is a reference table that documents how to change the site's color palette by modifying CSS code. The next two sections give step-by-step instructions and screenshots for creating new galleries and exhibit pages. The last section is a quality control checklist for standardizing new exhibit pages. We also made two videos showing how to create new galleries and exhibit pages to accompany the handbook. This provides a concrete example of how an individual page is created on the online exhibition, making it easy for ITP staff or fellows to update it with future exhibits.

In the last week of our project, we shared a draft of the written handbook with George Peckham of the ITP to ensure he could create a new exhibit with it. We revised the handbook using his feedback before sending him the final version and accompanying videos.

Results and Discussion

This section describes the outcome of our iterative design process to create an *Object in focus* online exhibition. We begin by sharing the results of the review of existing online exhibitions that enabled us to identify an overall layout. We then share the survey results that summarized the priorities of fellows and allowed us to refine our layout. We discuss our initial mockups, the design weaknesses revealed by think-alouds, and our subsequent revisions to address them. We found the iterative design process to be robust, producing a final online exhibition that meets the expectations of both our team and the ITP. Finally, we discuss our online exhibition handbook, which enables the ITP to continue updating the site beyond our IQP.

Objective 1: Review Existing Online Exhibitions

The 31 sites reviewed varied in purpose, from galleries to archives and beyond. We nevertheless found several design elements and approaches throughout the review that could be translated to our online exhibition.

Our biggest takeaway from the review was that effective online exhibits require functionality and navigability to be intertwined. Though we initially considered these to be two distinct characteristics, we found ourselves primarily interfacing with larger online exhibitions through their navigational tools. In fact, effective online exhibits had most of their functionality dedicated to navigation. For instance, we identified the National Museums Northern Ireland collection website as a key source of inspiration because its pages had well developed navigational tools. This site had a branching layout, with objects categorized into a hierarchical taxonomy of categories, subcategories, and collections (see Figure 8). Links at the top of each page allowed movement back up the current branch, while "See also" links allowed for movement across branches to different collections or objects. Meanwhile, our main criticisms for negatively viewed exhibits overwhelmingly dealt with limited and unintuitive navigational tools. In fact, we found that the absence of simple navigational tools like a back button detracted from our experience far more than poor aesthetics or limited content.
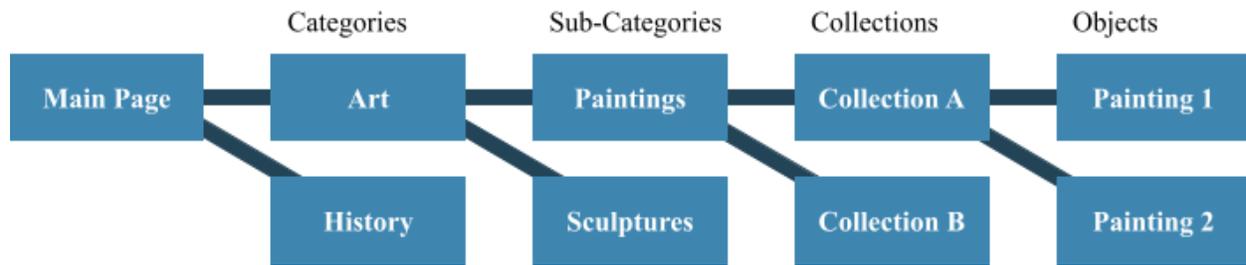
Figure 8: Diagram showing the hierarchical taxonomy of object pages used by the National Museums Northern Ireland, later emulated in our online exhibition

We therefore decided to eliminate "dead ends" from our initial design so that the user could easily explore related exhibits without repeatedly returning to the home page. Part of this involved organizing the *Object in focus* projects in a taxonomy like that of the National Museums Northern Ireland. Additionally, we also incorporated buttons to navigate backwards through the taxonomy in our initial mockups. Some mockups also displayed the taxonomy in the top left, like how folders are displayed in a file explorer, allowing movement back up to the parent gallery. To encourage exploration across branches, exhibits also had a "related exhibits" section at the bottom of the page.

We also observed that the landing page layout had a significant impact on the navigability of an online exhibition, so additional consideration went into designing an effective landing page. Some exhibition landing pages showed featured exhibits to explore, some of which were randomly chosen whenever the page was refreshed. Landing pages also facilitated navigation by acting as the root of exhibit taxonomies and housing search tools. For instance, the National Museums Northern Ireland had a filterable search engine we considered adapting for the online exhibition. This search engine was filterable by taxonomic branches and object characteristics, like artist and medium. Other exhibitions with similar search tools, like the Acropolis Museum, allowed the user to limit the number of search results per page to avoid an overwhelming number of exhibits per page.

The second major takeaway from our review was that effective exhibition layouts fully utilized both vertical and horizontal space. We found that online exhibitions demonstrating extremes in either direction were difficult to navigate. Overly horizontal sites, such as the British Museum's Google Arts and Culture partnership site, were tedious to scroll through with a trackpad or mobile device. Overly vertical layouts, such as the Bengal on Frame site, made

returning to prior sections and viewing pictures side by side difficult. A balance between the two avoided these weaknesses. For instance, limited side scrolling allowed one page to hold several images while still displaying a few at a time in a mobile-friendly manner. For example, side scrolling on the British Museum Prints and Drawings exhibition allowed two to three abreast object images to fit on one screen, while the whole page remained around nine screen heights tall. Following this example, we incorporated horizontal carousels of exhibits on gallery pages in our initial designs. This allowed the roughly ten exhibits we estimated would be held in each gallery to be browsable on one screen without taking up too much room. Individual exhibit pages and the site landing page were left mostly vertical as they both had only a few major elements.

A third major observation was that good online exhibitions made text digestible for the user. Exhibit pages contained varying amounts of text across online exhibitions, from several large paragraphs to a few short blurbs. Text-heavy pages typically gave information less strictly related to their objects themselves, like artist biographies, whereas text-light pages outsourced this to a separate page. For users interested only in the objects themselves, the latter was a more appealing alternative. We therefore limited text on exhibit pages to archived *Object in focus* materials. We then linked to the British Museum digital archive and the ITP fellow directory so that object statistics and fellow bios did not crowd this material. We also noted that the relative location of text differed between online exhibitions. Some sites had text below images while others placed them side-by-side. The effectiveness of either depended on the orientation and size of the corresponding images. We considered standardizing the placement of text relative to images on our online exhibition, but ultimately placed text on a case-by-case basis because *Object in focus* project materials varied greatly in size and shape. Our remaining findings from the review were specific design elements included in our initial *Object in focus* online exhibition mockups. These elements were generally based on one observation that stood out as effective on its own, as opposed to overarching trends between sites. Some were functional choices, such as a text-to-speech narration tool on each exhibit page. For the *Object in focus* exhibits, this could take the form of voice overs recorded by fellows for their own exhibit pages, adding a human element to exhibit pages. We also considered including content translation tools observed in a few exhibitions, however we decided this feature was beyond our capabilities. Others were aesthetic choices, such as including a static background picture on each object page that other content covers as the viewer scrolls down. This feature was utilized by the British Museum

"Prints and drawings virtual gallery" to produce an appealing visual effect. We also noted several aesthetic choices that, while appealing, we could not implement without violating British Museum style guides provided by the ITP.

We also uncovered bad design elements in our online exhibition review. We wanted our designs to have longevity, so we avoided emulating outdated exhibitions, like one that had not been updated since its creation in the early 2000s. Other sites were poorly optimized for different browsers and languages. For instance, the navigation buttons on one exhibition overlapped when viewing the site in English, making it difficult to read, click, and understand which pages they went to. A third feature we observed was that some exhibitions were embedded pdfs or slideshows. While simple to create, these formats were not interactive and had limited functionality.

Objective 2: Understand Design Preferences by Surveying the Fellows

The first section of our survey (Appendix C) presented fellows with multiple-choice questions on general preferences for the online exhibition. From responses to the first question (Figure 9), we observed the primary reasons fellows would visit the online exhibition was to view their own and past exhibits, mentioned in 16 of 21 responses. To address this, we decided to conspicuously place a search bar on the online exhibition homepage for fellows to quickly lookup their own *Object in focus* exhibits. We also created galleries for browsing exhibits by year to allow fellows to easily view past projects. We also observed that all six potential reasons to visit the site were included by at least eleven fellows, indicating that fellows would have numerous secondary reasons to view the site. To accommodate this, we designed the initial homepage mockups to hold multiple navigational paths that each addressed one of these reasons. Each path routed back to the home page to enable users to explore multiple areas.

Why Fellows Would Visit the Object in Focus Online Exhibition
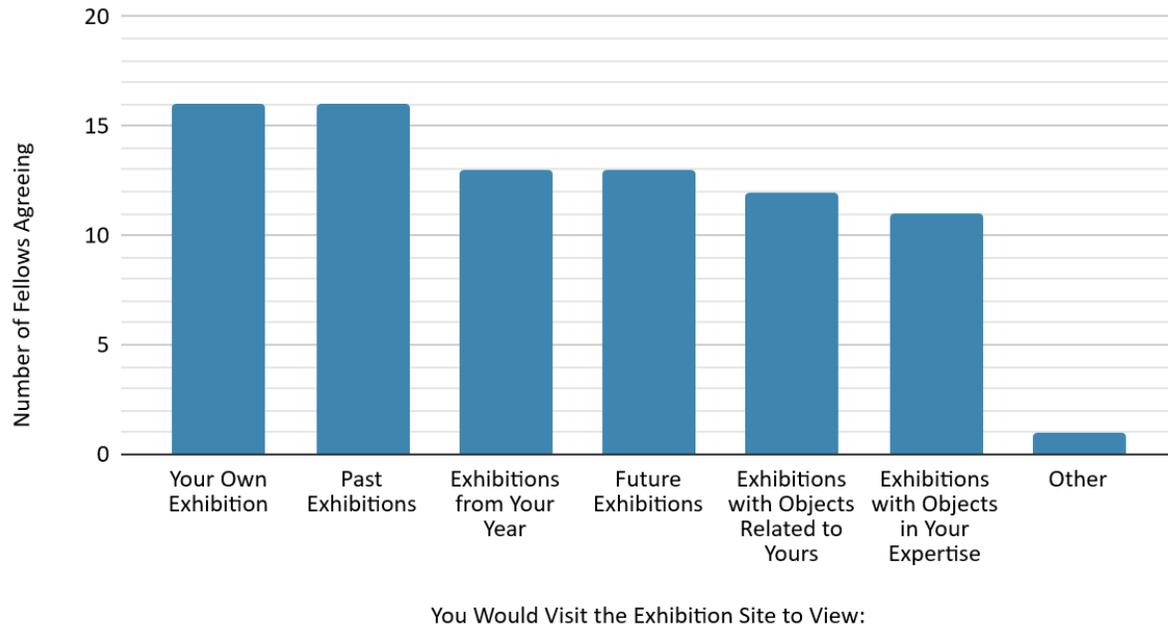
Figure 9: Chart showing the number of responses including each reason for visiting the *Object in focus* online exhibition

The second question asked fellows what type of device they would primarily browse the online exhibition on. From the responses (Figure 10), twelve respondents said they would primarily use a personal computer, four a mobile device, and five either a personal computer or mobile device. This spread indicated that we had to optimize the final online exhibition to work on both platforms. We accomplished this using WordPress's built-in mobile site design tools and by periodically testing the site on our mobile devices.

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Devices Fellows Would Use to Browse Exhibits

Either
23.8%

Personal Computer
57.1%

Moibile Device
19.0%
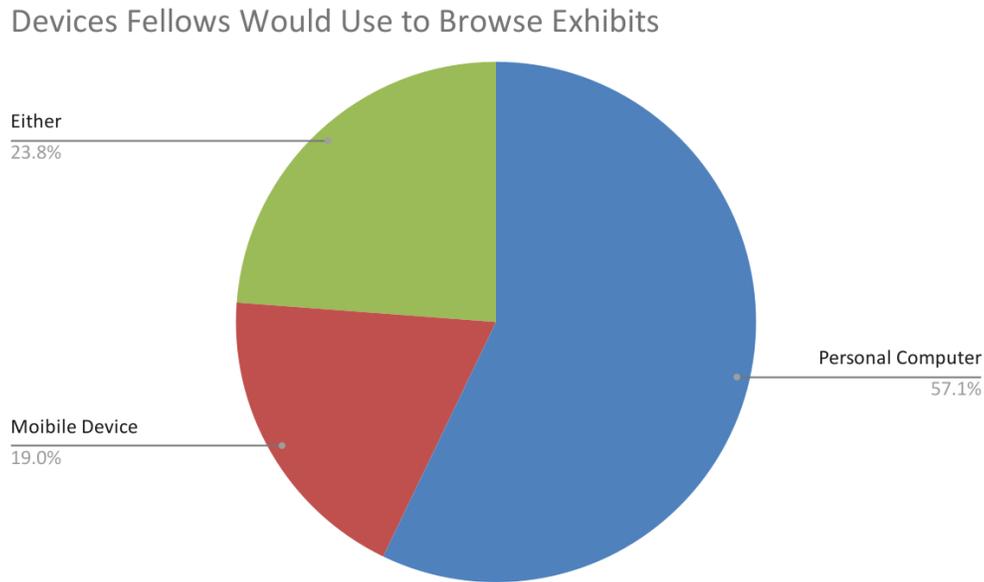
Figure 10: Chart showing fellow responses for which platform they would browse the online exhibition on.

The third question asked fellows to select metadata categories they wanted *Object in focus* exhibits to be sortable by (responses in Figure 11). At least eleven or more fellows selected all four metadata types, indicating most fellows wanted each to be included in the final layout. We decided to list metadata categories on our mockups by the frequency they were mentioned, in descending order. For instance, we listed filters for geographic origin first because this was mentioned by the most fellows; followed by filters for type and year, which tied for second; and finally, age, which fellows mentioned least. Three fellows also selected "Other" as an additional category to sort objects by, however due to an error on our team's part, no field was provided to describe what "Other" meant. Instances of "Other," while included in the final counts, were therefore excluded from further analysis. Due to time constraints, we were ultimately unable to include filters for type and age on the final online exhibition. We included geographic origin (equivalent to British Museum curatorial department) and ITP year, though, as the two main navigational categories.

Metadata Sorting Preference Responses
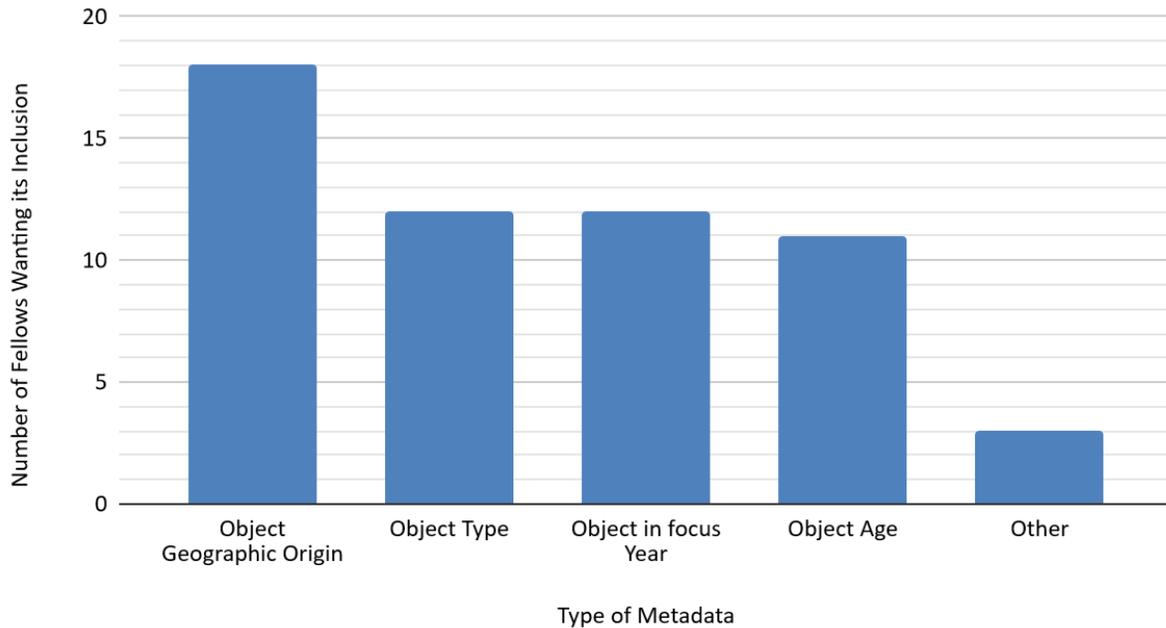
Figure 11: Chart showing the number of responses including each metadata type

The final question in the first section of the survey asked fellows to sort categories of information related to each *Object in focus* exhibit by their order of interest in each (responses in Figure 12). We included this question to help us design the layout for exhibit pages. The fellows' highest priority was posters, with thirteen and seven including posters as their most or second most important type of information, respectively. Meanwhile, fellow biographies were their lowest priority, with ten and four fellows ranking them as their least or second least important type, respectively. Text summaries and pictures of the exhibit object then fell about equally in the middle, with most fellows listing either as their second most or least important types. We also gave fellows the option to include a fifth "Other" information type in their ranking, however this option was unused by seventeen respondents. The four responses that used "Other" listed information already included in object text summaries, such as the exhibit theme or reason for the object's selection. Based on these responses, we decided to make the poster the focal point of our mockup exhibit pages. We then placed text summaries and photographs of the object after the poster, giving both roughly equal space. We included condensed fellow biographies with a

headshot and demographic information at the end. We ultimately revised this order later on in the iterative design process.

Exhibition Information Preferences
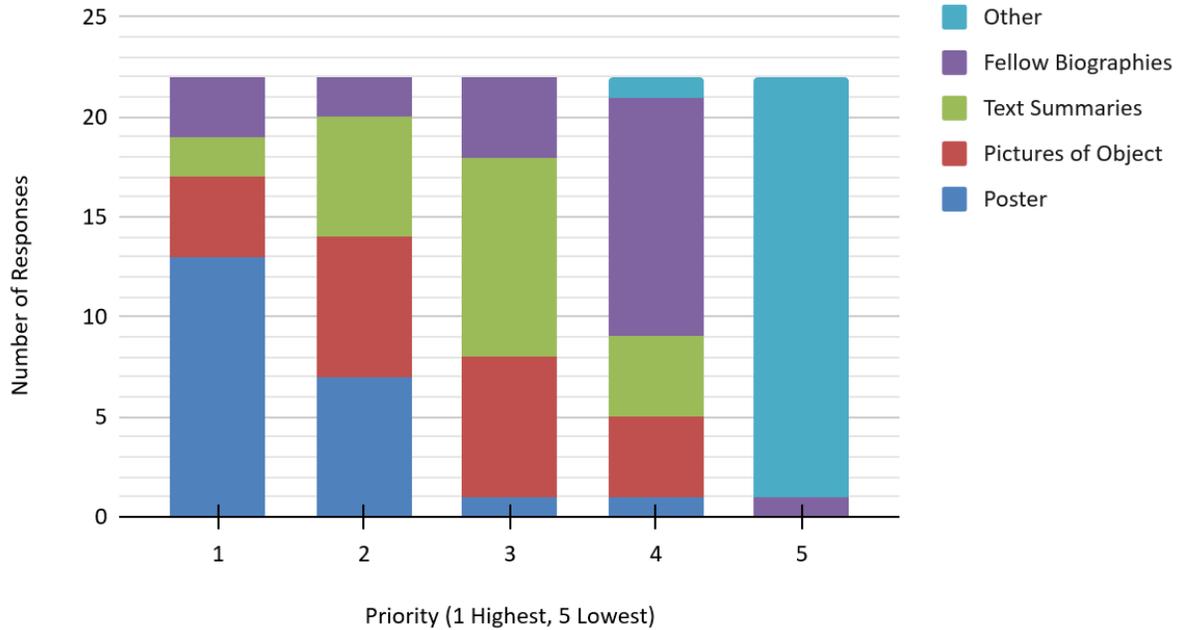
Figure 12: Chart showing the number of responses listing each information type at each priority ranking

After the multiple-choice section, we asked fellows open-ended questions to assess three screenshots of possible exhibit page layouts. One screenshot was of the *Object in focus* online exhibit made by Lynch-Collier et al. (2020). The other two were of the Whitworth Art Gallery and the Manchester Museum, two exhibitions we found during the exhibition review. The feedback on the screenshots provided us with a general idea for how we should design the *Object in focus* online exhibit. After they provided us with their opinions on the screenshots, we asked them to rank the screenshots in the order of preference. We found that most fellows preferred the *Object in focus* online exhibit made by the 2020 WPI team (Figure 13). We used an inductive approach when analyzing the data and found their comments covered six main topics: style/color palette, organization, pictures, text, accessibility, and interactive elements.
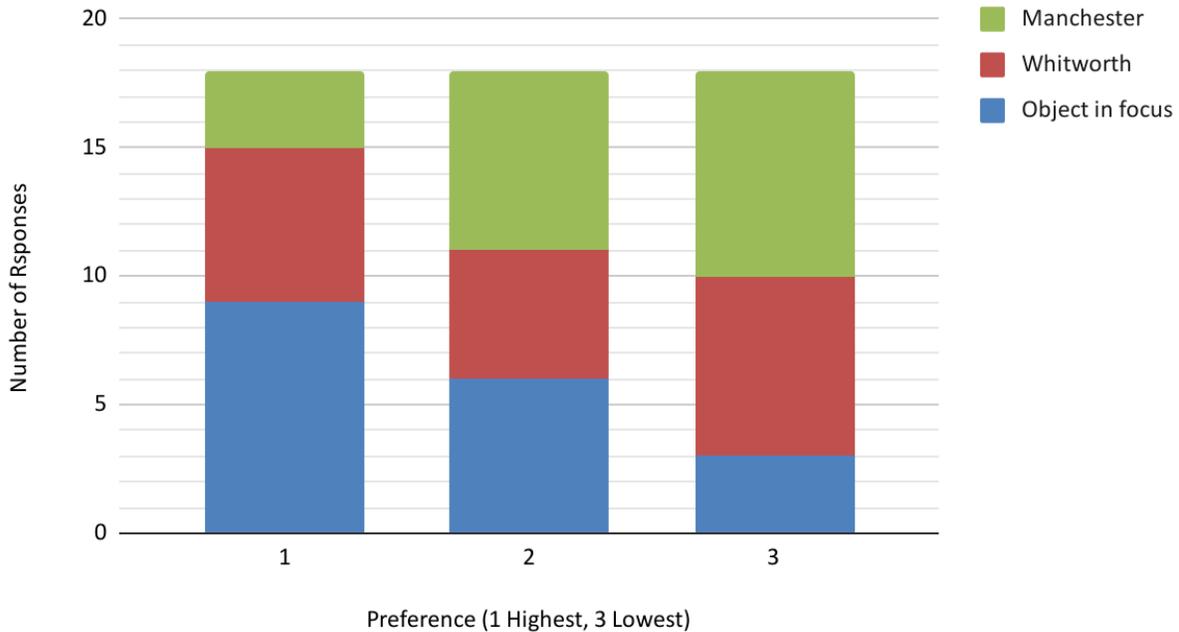
Figure 13: Bar chart showing how fellows ranked the 3 example exhibit pages

For style, fellows commented that the screenshots looked old fashioned and that they preferred a modern look for the online exhibition. They also commented that the designs were too static and looked like a blog post or database. They instead wanted the pages to look more like curated exhibits with eye-catching visuals and color schemes. Some fellows thought the page background color should match the poster to add some color, while others believed a neutral background led the eye towards the visuals. Overall, the fellows thought there should be more color incorporated in the design and a better organization of the page. We ultimately incorporated this feedback into our designs with a neutral background color and a unique highlight color on each exhibit page to match the poster.

Fellows preferred the organization and overall design of the *Object in focus* online exhibition from Lynch-Collier et al. (2020) over the other two (see Figure 13). However, fellows still thought this page should be better balanced, with text and visuals aligned but not clustered to make the page easy to understand. Some fellows thought that a better balance involved visuals dominating text and catching the viewer's attention, saying visuals were the main attraction of these exhibits. Fellows also found some text was small and hard to read and they suggested

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making it bigger to be more readable. Some fellows also recommended limiting text to short blurbs that were not too technical. We could not entirely implement this on the *Object in focus* online exhibition because we wanted to keep text written by fellows in its original form. However, fellows also recommended limiting the amount of text by offloading technical information about objects and curator biographies to separate pages. We incorporated this into our design with links to the British Museum archive and ITP fellow directory.

One fellow brought up concerns over the accessibility of the exhibitions. They believed our online exhibition would benefit from text to speech and translation tools for those who do not speak English. Multiple other fellows expressed interest in incorporating advanced interactive elements. For instance, fellows mentioned adding 3D views of objects so viewers could see them from all sides. Some fellows also suggested including story-telling features such as curator's notes, video presentations, or narrations to add a virtual interactive element. We reviewed these suggestions with a member of ITP staff and agreed that the online exhibition would benefit from these accessibility and interactivity elements. However, due to time constraints and limited *Object in focus* project materials, we were unable to include them in our final design. We therefore recommend adding them to the online exhibition in future work.

Objective 3: Improve and Test the Object in focus online exhibition

We began our design process by creating mockups for the online exhibition's initial layout. These mockups allowed us to establish a consistent vision that incorporated design elements from our exhibition review and survey. We then constructed a prototype online exhibition in WordPress using the mockups as a guide. This prototype opened on a homepage. From there, it split into two main branches: browse by year and browse by region. These branches split further into individual year or region galleries, which connected to their respective individual *Object in focus* exhibit pages. Buttons for moving backwards up these branches were placed on pages throughout the prototype, and a dropdown menu at the top of all pages allowed easy movement across branches (see Figure 14). We populated the prototype site with 8 *Object in focus* exhibits, each containing all their archived project material. The navigational layout and content of this prototype were left largely unaltered in the final site. Content remained the same because we uploaded all available project material to each exhibit page. The navigational layout

remained the same because it proved robustly designed. These serve as examples of how the initial website review directly contributed good design elements.
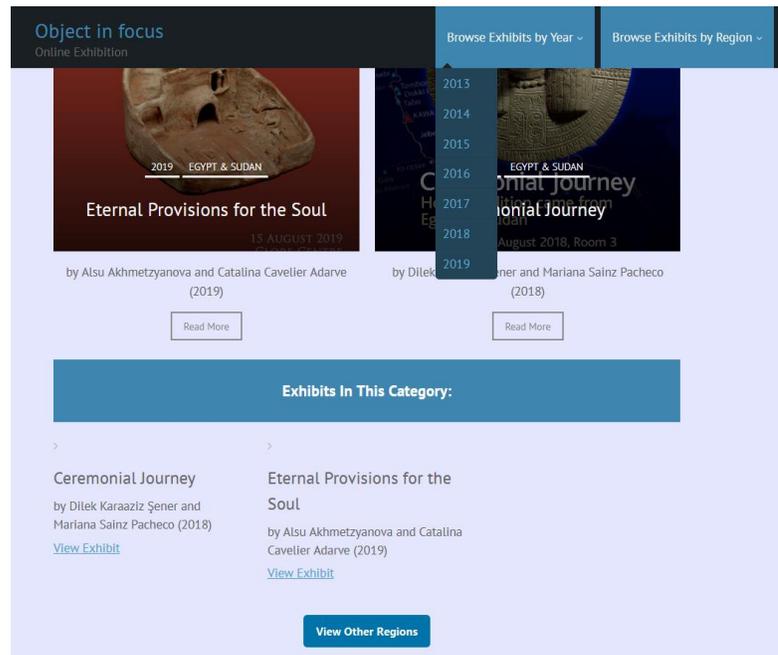
Figure 14: Screenshot of the "Egypt and Sudan" gallery page showing the top dropdown menu and "View Other Regions" button.

We nevertheless heavily modified this layout throughout the iterative design process. All six think-alouds caught design problems we overlooked because of our concurrent design approach. In fact, though we fixed design problems between each interview, subsequent think-alouds consistently delivered a similar quality and quantity of feedback. In the end, while the final online exhibition shares many similarities to earlier iterations, it is therefore a better product for ITP fellows. This feedback, though from six interviewees with different backgrounds viewing different iterations of the site, fell into three categories: content rendering issues, labeling issues, and aesthetic issues.

Content rendering issues were by far the most prevalent of the three throughout the review process. These were issues resulting from the adaptation of *Object in focus* materials to a digital format. Rendering issues were numerous because curators did not originally create *Object in focus* exhibitions to go online. Posters, for example, were designed for vertical viewing on a wall, not horizontal viewing on a computer screen. However, we initially did not consider how this would impact the viewing experience, instead simply leaving posters, photos, and panel text

as static images. As a result, interviewees commented across multiple think-alouds that panel text and image detail were hard to see. This took several iterations of improvements to fix, until we found lightboxes as a solution, which create an enlarged pop-up of an image when clicked. Another major rendering issue was that each *Object in focus* project had different types and amounts of material. We found in our exhibition review that effective online archives typically have the same amount and layout of material for each object, creating a consistent look across pages. We had difficulty emulating this because *Object in focus* projects were not made to look consistent. For instance, we found two 2017 projects that varied widely, with one having just a post, object picture, and panel text, and the other having four additional slides. Our initial solution was to order material based on what the survey showed fellows were most interested in viewing. We then shifted content up to fill in blank spaces on pages with less material. This left interviewees distracted by the resulting layout inconsistencies and confused over what they were viewing. Our final design clustered material found in all exhibits at the top, placing all other material below. These two sections allowed us to maintain a common visual theme across exhibits while giving us the flexibility needed to display miscellaneous content.

Labeling issues, the second most prevalent problem, were anything that made it unclear to the viewer what they were looking at or clicking on. If an interviewee was surprised by something during a think-aloud, this was typically due to a labeling issue. Though less prevalent than rendering issues, labeling issues were harder for us to identify given our familiarity with the site and its content. Some labeling issues were content-related, such as gallery thumbnails initially not showing their authors and years. These were easily solved by showing more page metadata at each navigational level. More often, issues were functionality-related, such as hyperlinks working differently than expected. For instance, interviewees shown later versions of the online exhibition were surprised that clicking on most images created a lightbox, but clicking on curator headshots instead opened the ITP fellow directory in a new tab. In other words, different functionalities required distinct visual cues. In this case, the visual cue was an obvious text hyperlink placed next to each headshot. The biggest labeling issue we found was that the online exhibition lacked an "about" page for context. As a result, even some of the fellows interviewed during think-alouds were confused over the purpose of the website. This demonstrates that fixing labeling issues not only made the online exhibition more accessible to the ITP network, but broadened its accessibility beyond just this target audience.

The last type of problem revealed by think-alouds were aesthetic issues. These dealt with our color palette and use of negative space. We detected many aesthetic issues outside of think-alouds; however, like labeling issues, we overlooked certain aesthetic issues because we were accustomed to how the online exhibition looked. The most egregious example of this was the site's default white background. One interviewee voiced strong disdain for the white background, saying it was "distracting" and occupied too much of each exhibit page. Using this feedback, we made the background a light, muted purple and shrunk the sidebars to reduce the amount of negative space. We also cropped white borders from several images that subsequent interviewees found distracting with the new background. These fixes, and similar fixes for other aesthetic issues, were simple to implement but nevertheless made the online exhibition visually appealing. In fact, after a few iterations of fixes, think-aloud comments on aesthetics shifted from critiques to compliments.

Overall, the iterative design framework we used to develop the online exhibition proved effective. Cycling between revising the site and soliciting feedback through think-alouds improved our workflow and the final product. Our workflow was improved because, as the examples show, think-aloud feedback identified concrete problems for which we could develop concrete solutions. This broke down the overarching task of revising the online exhibition into a checklist of small, incremental fixes. Each fix in turn made browsing the final product a slightly better experience. Directly incorporating fellow feedback also furthered the purpose of the online exhibition. Afterall, the site was commissioned for the fellows to view their work. It is only fitting that the website was designed in part by them as well. In addition to highlighting issues, think-alouds consistently demonstrated that fellows were both enthusiastic to participate in the revision process and thankful their voices were being heard.

Objective 4: Update the Object in focus Online Exhibition Handbook and Documentation

Throughout the design process, we found building in WordPress had a learning curve. Nevertheless, with the right theme, a few plugins, and the proper settings, we consistently found the necessary tools to create the online exhibition as envisioned. We recognize that our version of the online exhibition will not be the final version, considering the last several weeks of development alone saw frequent, small revisions to all exhibit pages. Also, we only partially populated the site with 12 out of the over 100 *Object in focus* projects. The ITP will hereafter

update the site and upload the remaining past and all future projects. The handbook ([Appendix E](#)) will guide the ITP through this process after the hand-off.

The handbook is not a comprehensive guide to using WordPress; instead, it documents the tools we used and how to repeat our specific design choices. Our handbook contains four sections: (1) a table of CSS file references, (2) how to make a gallery page, (3) how to make an exhibit page, and (4) a quality control checklist. The table of CSS file references documents how to modify the site' HTML code to change its color palette and sidebar widths. This makes aesthetic changes quicker for anyone updating the site who is unfamiliar with HTML coding, like we initially were. We experimented with several colors and ITP staff indicated they will likely experiment with others in the future as they rebrand. The next two sections of the handbook outline the necessary steps to create the two major building blocks of the online exhibition: gallery pages and exhibit pages. Both sections contain step-by-step written instructions accompanied by screenshots of WordPress' user interface. We also created two videos showing how to create gallery and exhibit pages which we linked to in this section as additional references. Beyond these instructions, the handbook also concludes with a quality control checklist to aid in standardizing exhibit pages.

Recommendations

While the exhibition site could prove beneficial to the ITP, it will not do so passively. Our work has laid a foundation for a platform to bring ITP fellows together. Nevertheless, the online exhibition can be further leveraged to increase its impact and strengthen the ITP network. We recommend that the ITP continuously update this online exhibition, integrate it into the ITP curriculum, and use it as a model for potential companion sites.

Updating the online exhibition involves fully populating it with archived exhibits and adding new features we were unable to implement. We populated the site with 13 exhibits and gave the ITP all necessary tools within the handbook to add the rest. The ITP can also add new features to exhibits to make them more interactive and inclusive. In our survey responses, fellows mentioned several accessibility and interactive features that they wanted to see added, like text-to-speech or translation tools. We were unable to incorporate these features in our time frame, however the ITP could investigate WordPress plugins to add them. They could test them using their own iterative design process, systematically improving the online exhibition. As a

result, the fully populated *Object in focus* online exhibition would continually bring fellows and their exhibits together year after year.

We also recommend the ITP integrate the exhibition site into future summer sessions. Part of this integration could involve curators from upcoming years posting their own exhibits. This would expose them to digital curation, a valuable skill as museums become more digitized. This would also mitigate future rendering issues because materials would be made for a digital format to begin with. Beyond uploading exhibits, the ITP would encourage fellows to create additional content for their online exhibits. For instance, they could create video presentations and curator's notes to add more immersive and personal touches to their exhibits. These additional features would provide the extra material, interactivity, and story-telling elements that fellows expressed interest in seeing.

Our final recommendation is to create a companion site for fellows to share their work from outside the ITP with colleagues in the network. The *Object in focus* online exhibition could serve as a model for this new site, with exhibits made by fellows at their home institutions. This new site would be less of an archive of exhibits but more of a dialogue between fellows as they can comment and interact with each others' work. Using WordPress, we believe that making more online exhibitions, apart from *Object in focus*, will expand the ITP's network even more. Future work could integrate both the *Object in focus* exhibition and this additional site into the WordPress multisite established by Lynch-Collier et al. (2019).

Conclusion

The digital age presents museums with an opportunity to make their current and past exhibitions more accessible. This is especially true for *Object in focus* projects, which were exclusively viewable during a day-long physical reception at the end of each ITP year. These projects were underutilized considering the amount of work that ITP fellows put into them. Recognizing this, the ITP sought a digital platform to revitalize formerly inaccessible *Object in focus* projects. Our project addressed this need by creating an *Object in focus* online exhibition using an iterative design method. The final product was shaped by input from ITP fellows throughout its creation. This iterative flow of feedback not only allowed us to rapidly progress through several prototypes, but ensured the site was designed for the fellows, by the fellows. We delivered to the ITP an online exhibition that is engaging, professional, and updateable for years to come.

Our online exhibition is more than just an archive for past and future *Object in focus* materials. Rather, it is an accessible platform that connects the ITP network together for the shared purpose of appreciating each other's work. The online exhibit can reach more fellows than any geographically constrained display could. Furthermore, the navigational tools we implemented in the exhibition encourage visitors to explore beyond their own projects, years, and regions. As the site is updated to house future projects, fellows can easily revisit to see new objects and soon-to-be familiar faces. This will keep fellows invested in the program and strengthen the ITP network. Many museums put their exhibits online to bring their collections to a wider audience. Our online exhibition not only does this but also reinforces the bonds between a burgeoning community of museum professionals. This is a central objective of the ITP. It is also a welcome step forward for the British Museum as it aspires to set an example as a museum industry guardian. We therefore hope the *Object in focus* online exhibition will not only help bridge the gap between newer and older fellows, but also between the British Museum and developing museums the world over.

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Appendix A: List of Online Exhibitions Reviewed

Below is a list of the 31 online exhibitions the team reviewed for objective 1. The first 9 were the museums partnered with the British Museum and the ITP. The next 22 online exhibitions were recommended by our sponsor.

1. The Collection, Lincoln
2. Glasgow Museums
3. Manchester Art Gallery
4. Manchester Museum
5. National Museums Northern Ireland
6. Norfolk Museums Service
7. The University of Nottingham Museum
8. Tyne & Wear Archives and Museums
9. Whitworth Art Gallery
10. BM - African Rock Art
11. BM - Oceania
12. BM - Prints & Drawings
13. BM - Google Arts & Culture Partnership
14. BM - Rosetta Stone
15. ITP net - The Global Nepali Museum
16. ITP net - National Museum New Delhi
17. ITP net - Bengal on Frame
18. ITP net - Shanghai Museum
19. ITP net - Iziko Museums of South Africa
20. ITP net - Enduring COVID-19
21. ITP net - The World of Wasps
22. Acropolis Museum, Greece
23. National Museum of Egyptian Civilization (NMEC)
24. Manchester Museum (Again)
25. A Ming Emperor's Seat
26. Nature Through Roman Eyes

27. [Natl. Museum of Northern Ireland](#)

28. [Ulster Museum - Florence Nightingale Virtual Exhibition](#)

29. [Where Land and Water Meet](#)

30. [Norfolk Museums Service](#)

31. [Bristol Museums - Death: The Human Experience](#)

Appendix B: Checklist for Viewing Other Online Exhibitions

       Add a row to the following table for each online exhibition reviewed. For each, look at the home page and select an item from its online collection. In the table, write a brief description and include relevant screenshots when applicable to describe the online exhibition in each of the following categories:

- Museum Name
- Description
    - Is the link to an online exhibition or the museum's main website?
- Functionality
    - Are the buttons and links on each page clearly defined?
    - Are there any features on the page that are interesting to note?
- Navigability
    - How do you navigate through the different exhibits on the website?
    - Are there huge blocks of text of information?
    - Is the recommended content in an organized column?
- Content:
    - What is on each object's page?
    - How are the objects presented (i.e., pictures, multiple angles, videos, etc.)?
    - Are there any interesting features on the page?
    - Is the informational text relevant?
    - Is the information easy to digest?
- Aesthetics:
    - What type of font is used?
    - Is the font readable?
    - What is the color palette used (on the website, not the object itself)?
- Miscellaneous/Other Notes

Museum Name (Hyperlink)	Description (Online exhibit/ other)	Functionality	Navigability	Content	Aesthetic	Miscellaneous notes

Appendix C: *Object in focus* Online Exhibition Development Survey

Preamble: Object in focus **Online Exhibition Development Survey**

We are students from Worcester Polytechnic Institute working with the International Training Programme to create an online exhibition to house *Object in focus* projects. We would appreciate it if you complete this survey to help us better understand what you hope to see with the *Object in focus* online exhibit. Your feedback will directly impact how we design the *Object in focus* online exhibition and improve the visitor experience.

This survey will take around 5-10 minutes. Your participation in this survey is completely voluntary and you may withdraw at any time. Please remember that your answers will remain anonymous. No names or identifying information will appear on the questionnaires or in any of the project reports or publications.

If interested, a copy of our results can be provided through an internet link at the conclusion of the study. Your participation is greatly appreciated.

If you have any questions about the survey or our research, you can contact the team at gr-OIF_E21@wpi.edu. Additionally, you can contact the team's supervisor, John-Michael Davis, at jdavis4@wpi.edu, or the WPI Institutional Review Board at irb@wpi.edu.

Q1: Which of the following reasons would you visit the *Object in focus* online exhibition? (Pick all that apply)

☐ To view your own *Object in focus* exhibition (1)
☐ To view exhibitions from others in your same ITP year group (2)
☐ To view exhibitions from past ITP year groups (3)
☐ To view exhibitions from future ITP year groups (4)
☐ To view exhibitions containing objects related to your exhibition's object (similar type of artifact, similar geographic origin, etc.) (5)
☐ To view exhibitions containing objects related to your expertise (6)
☐ Other (Please explain) (7) _____

Q2: If you were to visit the *Object in focus* exhibition website, would you likely view it on a personal computer (desktop/laptop) or a mobile device (smartphone/tablet)?

○ Personal Computer (1)

○ Mobile Device (2)

○ Either (3)

○ Other (Please explain) (4) _____

○ None of the above (5)

Q3: In which ways would you like to see *Object in focus* exhibits organized in the online exhibit? (Choose all that apply)

☐ Geographic origin of object (1)

☐ Age of object (2)

☐ Type of object (jewelry, pottery, etc.) (3)

☐ Year the *Object in focus* exhibit was created (4)

☐ Other (Please explain) (5)

Q4: Below is a list of information that the online exhibition will house for each *Object in focus* project. Please rank them by your order of interest in them (i.e., 1 = Information I am most interested in, 5 = Information I am least interested in).

_____ Exhibit poster (1)

_____ Pictures of the object (2)

_____ Text containing summary information about the object (3)

_____ Biographies of fellows that made the exhibit (4)

_____ Other (Please explain, if empty rank as 5) (5)

Q5: In the following section, we will show you screenshots from a preliminary mock-up of the *Object in focus* online exhibit and two other published online exhibits. We will ask a few questions for each example to solicit your feedback on their designs.

Below are screenshots of an *Object in focus* project displayed on a development build of the online exhibition.

Eternal Provisions for the Soul
Celebrating life in Ancient Egypt — ITP 2019 summer conference

The British Museum

ETERNAL PROVISION FOR THE SOUL
CELEBRATING LIFE IN ANCIENT EGYPT

15 AUGUST 2019
CLORE CENTRE

SUPORTED BY:
SANTO DOMINGO FAMILY
MARIE-LOUISE VON MOTESICZKY CHARITABLE TRUST

Soul House

Middle Kingdom (ca. 2055 to 1650 BC), Egypt Soul Houses are pottery models of houses often showing food offerings. They were placed in ancient Egyptian tombs to supply provisions and housing for the soul of the deceased in the afterlife. Food offerings, such as bread, fruits, vegetables and meat are represented in the courtyard of this model. These objects are a good source of information about the diet of ancient Egyptian people and their beliefs about life and death.

EA32610, purchased from James Burton

45

In Ancient Egypt, the dead had the possibility of returning to the world of the living. Their soul had two main parts: the Ka resided in the tomb of the deceased surviving on the spiritual essence of the daily food offerings while the Ba would leave the body and travel from the underworld with the sun god Re to visit the earth during the day and return back to the tomb at night. During the Middle Kingdom (ca 2055-1650 BC), ceramic offering plates with food offerings evolved into houses, commonly known as Soul Houses. These were left outside some tombs so the deceased would find a place to rest and eat during the visit.

The dead could then feast on fresh figs and dates, baked bread, pieces of fine meat, vegtables and refreshing water or barley beer. Even though family and priests would regularly bring food offerings to the tombs, Soul Houses were conceived as an emergency supply. By leaving these objects, the living were making sure their relatives could sustain their souls throughout eternity.

Funerary offerings such as Soul Houses account for the importance of death for ancient Egyptians, but they also reveal their fondness of life. As part of their spiritual journey, the dead could come back from the afterlife to enjoy the simple pleasures of life.

Catalina Cavelier Adarve
Cultural Heritage Institute of Bogota
Head of Intangible Heritage Section
Colombia

Catalina has BAs in Anthropology and History from Los Andes University, and an MA in Cultural Heritage Studies from University College London. She is in charge of the section of Intangible Heritage at the Cultural Heritage Institute of Bogota and her responsibilities include devising and leading strategies for safeguarding intangible heritage in the city of Bogota. These include structuring and implementing projects and programmes and advising on heritage listing procedures. Her day-to-day responsibilities also include recruiting and leading a team of four professionals, managing the section's budget and liaising with other areas and institutions. Previous to this experience, she has been engaged in curating archaeological collections and weaving them with local perspectives in Colombian museums.

Catalina is currently involved in projects and programmes aiming to safeguard urban intangible heritage through community involvement and empowerment. She recently curated an exhibition about family photo albums, aimed at creating a dialogue between private and collective memories and connecting audiences through such dialogue. Her work experience has been dedicated to exploring heritage and museums' possibilities for generating social value and cultural sustainability today.

At the British Museum

During her time on the International Training Programme in 2019, Catalina was based in the Department of Africa, Oceania and the Americas, and spent her partner placement at National Museums Northern Ireland.

Catalina worked with Alsu Akhmetzyanova (Uzbekistan) on her Object in focus project. Their exhibition proposal was titled Eternal Provision for the Soul: celebrating life in ancient Egypt.

Catalina's place on the International Training Programme was generously supported by the Santo Domingo Family.

Alsu Akhmetzyanova
Arts and Culture Development Foundation
Project Manager
Uzbekistan

With a passion for arts and culture and a desire to contribute her knowledge into the development of society, Alsu is currently working at the Arts and Culture Development Foundation under the Ministry of Culture of the Republic of Uzbekistan as a project manager in the Education Development Department. Alsu's role primarily involves the planning and establishment of different project goals and objectives and monitoring the achievement of these objectives over the project life.

Currently, one of Alsu's main projects is opening the first centre of contemporary arts in Uzbekistan and the programme of the museum's renovation based on the principles of self-sufficiency. As well as working on a long-term collaboration with the Smithsonian Institution, Alsu is also working on a two-year project with Goldsmiths University to extend and increase the qualifications of museum workers.

At the British Museum

During her time on the International Training Programme Alsu was based in the Middle East Department and her partner placement was spent at Glasgow Museums.

Alsu worked with Catalina Cavelier Adarve (Colombia) on her Object in focus project. Their exhibition proposal was titled Eternal Provision for the Soul: celebrating life in ancient Egypt.

Alsu's place on the International Training Programme was generously supported by the Marie-Louise von Motesiczky Charitable Trust.

This is a draft version

What are your thoughts on the overall organizational layout of this exhibition? (i.e., the size of elements on the page, their placement, etc.)

_____

Q6: What are your thoughts on the amount and type of content included in this exhibition?

_____

Q7: What are your thoughts on the aesthetics of this exhibition? (i.e., color pallet, font, etc.)

_____

Q8: The following sections include screenshots from other online galleries that we are considering emulating.

Below are screenshots showing the layout of an exhibit on the Whitworth Art Gallery's website.

What are your thoughts on the overall organizational layout of this exhibit? (i.e., the size of elements on the page and their placement)

_____

Q9: What are your thoughts on the amount and type of content included in this exhibition?

_____

Q10: What are your thoughts on the aesthetics of this exhibition? (i.e., color pallet, font, etc.)

_____

Q11: Below is a screenshot showing the layout of an exhibit page from the Manchester Gallery's website.

Pliny's Life and Times

(choose another language)

Pliny the Elder was born in Comum (Como) in northern Italy about AD 23.

His family wealth enabled him to join the equestrians, the lesser aristocracy of Roman society.

Pliny served in the Roman army with a fellow officer called Titus. Titus' father, Vespasian, later became emperor and Pliny joined the inner circle of the new regime.

He met regularly with Vespasian and held important administrative posts.

Pliny became commander of the Roman fleet at Misenum on the Bay of Naples.

He died in August AD 79 trying to rescue people caught up in the eruption of Mount Vesuvius.

▶ | Pliny's Life and Times | 00:48 ◀ ▮▮▮
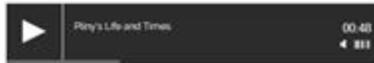
Portrait of Pliny the Elder from a 17th century edition of the *Natural History*. Image (c) The Tabley House Collection

What are your thoughts on the overall organizational layout of this exhibit? (i.e., the size of elements on the page and their placement)

_____

Q12: What are your thoughts on the amount and type of content included in this exhibition?

_____

Q13: What are your thoughts on the aesthetics of this exhibition? (i.e., color pallet, font, etc.)

_____

Q14: Please rank the above three layouts by order of preference (1 = Highest, 3 = Lowest)

_____ *Object in focus* development build (1)

_____ Whitworth Art Gallery (2)

_____ Manchester Gallery (3)

Q15: Briefly describe why you placed the layouts in the above order.

_____

Q16: Please provide any other questions, concerns or comments you have about the *Object in focus* online exhibition.

_____

Appendix D: Preamble for Think-Alouds

Written Preamble (emailed to participants the night before their think-alouds):

We are students at Worcester Polytechnic Institute and we are working on updating the *Object in focus* online exhibition for the International Training Programme. We will give you a prototype of the online exhibition and have you complete 3 tasks on the website. While completing these tasks please describe what you are doing, thinking, and seeing. If at any point you notice something that you like or dislike about the website, feel free to mention it. This is a test of the website and not you so please give your honest feedback. A facilitator from our team will guide the interview, and a notetaker will transcribe your comments. With your permission, the think-aloud will be recorded for transcription purposes and promptly deleted afterwards. Our notes will be anonymized so your name will not be published, however we will be happy to give you a copy of them if you want one.

Your participation in this interview is completely voluntary and you may withdraw at any time. Please remember that your comments will remain anonymous. No names or identifying information will appear in any of the project reports or publications.

The interview should take around 30-60 minutes. Thank you for your participation.

If you have any questions about the interview or our research, you can contact the team at gr-OIF_E21@wpi.edu. You can contact the team's supervisor, John-Michael Davis, at jdavis4@wpi.edu. You can contact the WPI Institutional Review Board at irb@wpi.edu.

Description of what will happen during think-alouds (for internal use, not sent to participants):

The facilitator will give a copy of our prototype online exhibit to the interviewee. They will be given a list of tasks to complete and be asked to talk about what they are doing and their thought process. While the interviewee is doing the tasks the notetaker will be taking notes on what the interviewee is saying and doing. The facilitator will remain silent and only talk to get the interviewee to continue talking or to answer any questions the interviewee may have. The facilitator may only intervene in a task if the prototype is broken and thus needs to be worked

around. Once the tasks are done the facilitator will ask for any additional comments and thank the participant.

Basic facilitator script for beginning each think-aloud:

Start the meeting by introducing yourselves to the interviewee to gain rapport, explain how the think-aloud process will work (they'll be given some tasks on the website, asked to give their feedback on what they see, etc.). Ask them if they are comfortable with us recording the call to make transcribing their comments easier. Finally, send them the link to the online exhibition's homepage and ask them to share their screen.

Tasks:

1. Please describe what you see on the homepage
2. Click on any hyperlink
3. Navigate to the General Views post from 2016.
4. Navigate to My Journey is my Home post from the middle east region.
5. Navigate to the Eternal Provisions of the Soul post from 2019.

For tasks 3-5, ask:

1. Can you see the artifacts clearly in this post?
2. Is the font of the information an easily readable size?
3. Who are the Curators?
4. How do you feel about the website's color palette?

Appendix E: Handbook

2021 Handbook for Updating the *Object in focus* Online Exhibition

Table of Contents

Forward

Hello ITP Staff and Fellows,

We are students from Worcester Polytechnic Institute (WPI) who worked with the British Museum's International Training Programme (ITP) in the summer of 2021. Our project created an online exhibition to house the *Object in focus* projects. This handbook serves as a guide to help ITP staff and fellows understand how to update the *Object in focus* online exhibition.

This handbook includes four major sections containing instructions to guide you through updating the *Object in focus* online exhibition:

1. **Table of CSS File References:** a list for where to find and change 1) the colour palette for the overall website and 2) the widths of the sidebars within the CSS code.
2. **How to Make a Gallery Page:** step-by-step instructions with screenshots for adding a new gallery page.
3. **How to Make an Exhibit Page:** step-by-step instructions with screenshots for adding a new exhibit page.
4. **Quality Control Checklist:** a list of elements to conduct a quality control assessment for exhibit pages to ensure all the information is uploaded, accurate, and similar in layout to the other exhibit pages.

We also made two videos to supplement this handbook, visually showing how to make a new gallery page and exhibit page. You can find these within the shared DropBox folder.

We enjoyed working with you and hope to see the updated *Object in focus* exhibition site.

The WPI Team 2021,
Emily Austin, Julianna Cognetta, Adam Ferrarotti, and Annie Higgins

Table of CSS File References

       This section discusses how to change the colours and widths on the British Museum's *Object in focus* exhibition site. This is especially important for when the themes on WordPress update or change. In the screenshot below, you will find a series of numbers that are associated with a colour or width. These are then listed in the following table.

Table 1: Specific lines and values of hex codes within the CSS File

Number	Description	Setting/File Location	Current Value
1	Footer Bottom Text Colour	style.css, line 267	#5fa9d4
2	Footer Bottom Text Colour Hover	Style.css, line 271	#b3e7ff
3	Hover Category Text	Style.css, line 283	#5fa9d4
4	Header Colour	Style.css, line 325	#191f22
5	Footer Colour	Style.css, line 538	#234457
6	Footer Text	Style.css, line 545	#5fa9d4
7	Footer Text Hover	Style.css, line 549	#b3e7ff
8	Sidebar Colour (over "Meet the Fellows")	Style.css, line 1571	#234457
9	Header Text	Style.css, line 1837	#549dc7
10	Header Text Hover	Style.css, line 2984	#3e86b0
11	Main Content Width (To widen page content)	Style.css, 2936	85%
12	Sidebar Width	Style.css, 2942	0%

If you want to change the colours of the drop-down menus, headers, footers, and hovers, you will go to "Appearances" and click on "Theme Editor." From there, you will see the HTML code for the website. You will need to find the hex codes that display the colours on the website to change the colours.
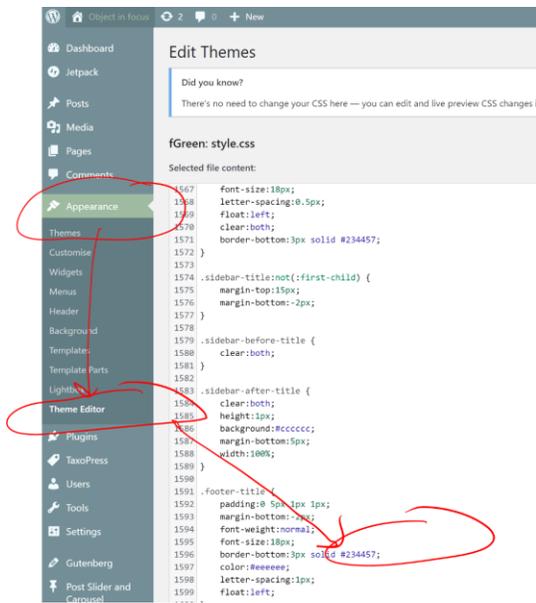
  If you want to change the website's background, navigate to "Appearance," and scroll down to "Background." From there, you can customize the background with different colours, images, etc. To change the background color, click "Colours," and under "Background Colour," click "Select Colour." From there, you can observe different colours, tints, and shades that come with different hex codes to represent them. You can choose any colour that you want here.
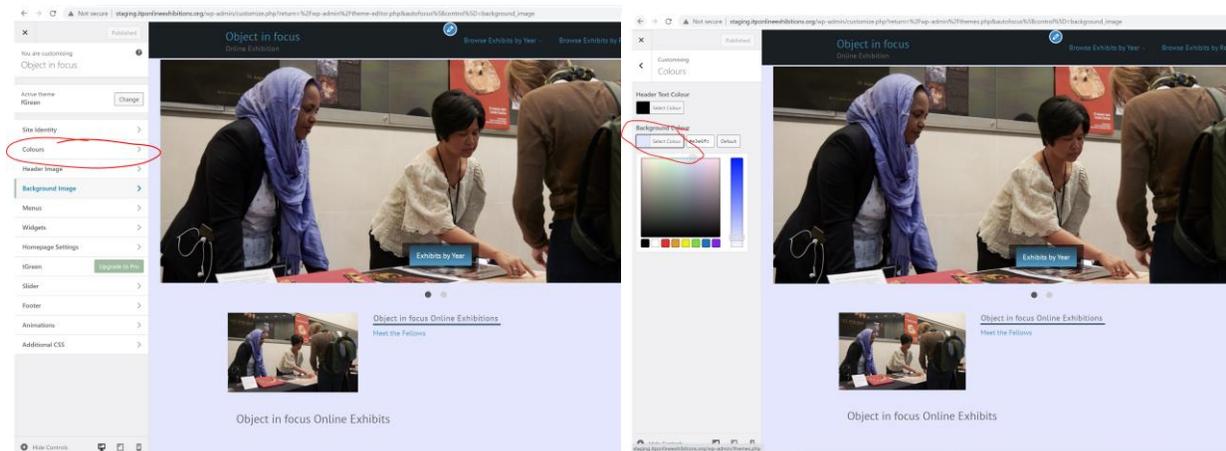
How to Make a Gallery Page

This section goes through all the necessary steps to build a new gallery page. Galleries allow visitors to the *Object in focus* online exhibition website to browse exhibits by year and region. Each *Object in focus* year and each British Museum curatorial department therefore has a gallery page on the site. New gallery pages must therefore be created for each new year of projects and each curatorial department.

All galleries have the same main elements: a title, a carousel showing exhibit posters, a list of all exhibits in the category, and a button to view other years or regions. These elements and the overall layout of a gallery page are shown on the right. Galleries will automatically update their carousels and exhibit lists when new posts are added in their category. However, a new gallery will need to be added to house exhibits from future years.
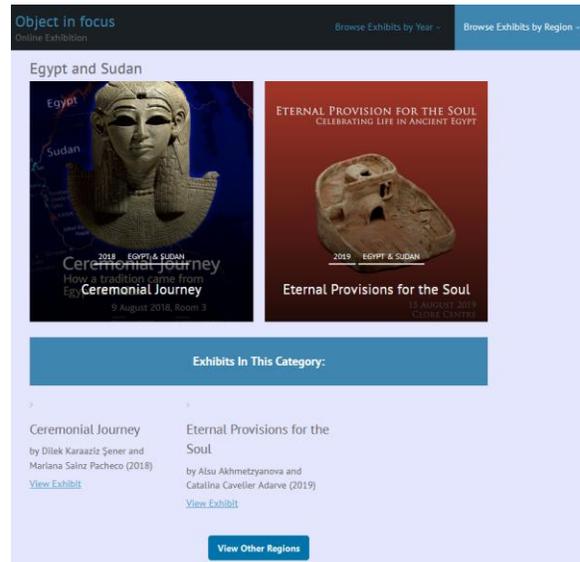
The following guide walks through the steps to make a new gallery, creating the "Britain" gallery as an example. While completing these steps, be sure to click "Update" in the top right frequently to save your work.

1. **Create a new page**
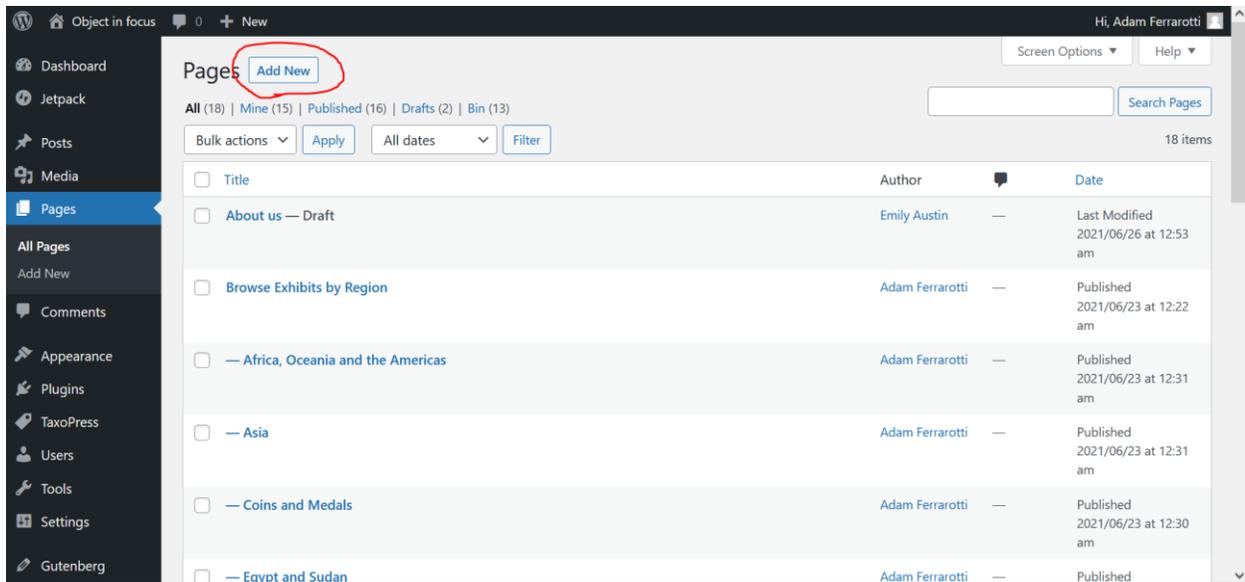
    Galleries are housed as *pages* on the *Object in focus* exhibition site, so the first step to creating a new gallery is to create a new page. This can be done through the Pages tab of the WordPress editor. Once you do this, your screen should look like the following screenshot.
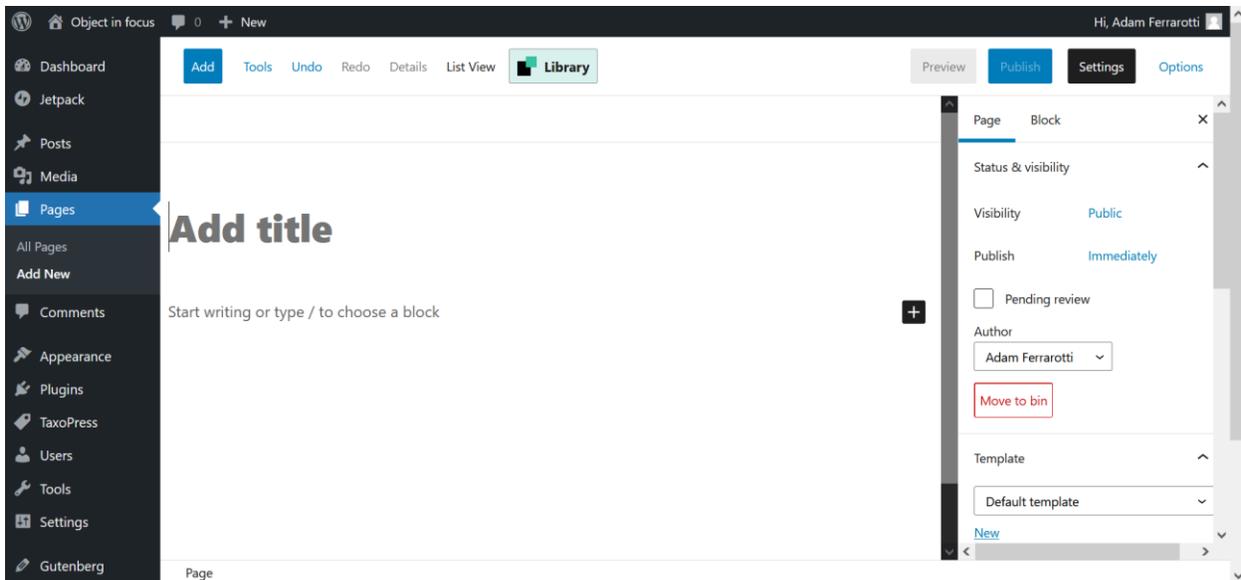
Under Page >> Page Attributes >> Parent Page on the right menu, set the gallery's parent page. For the Britain page, this is "Browse Exhibits by Region." For a year gallery, like 2019, this is instead "Browse Exhibits by Year." This step sets the URL of the gallery as an extension of the parent page's URL.

2. **Name the page and slug**
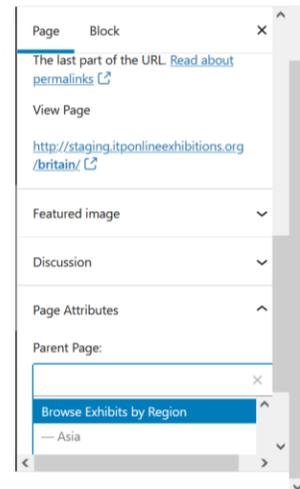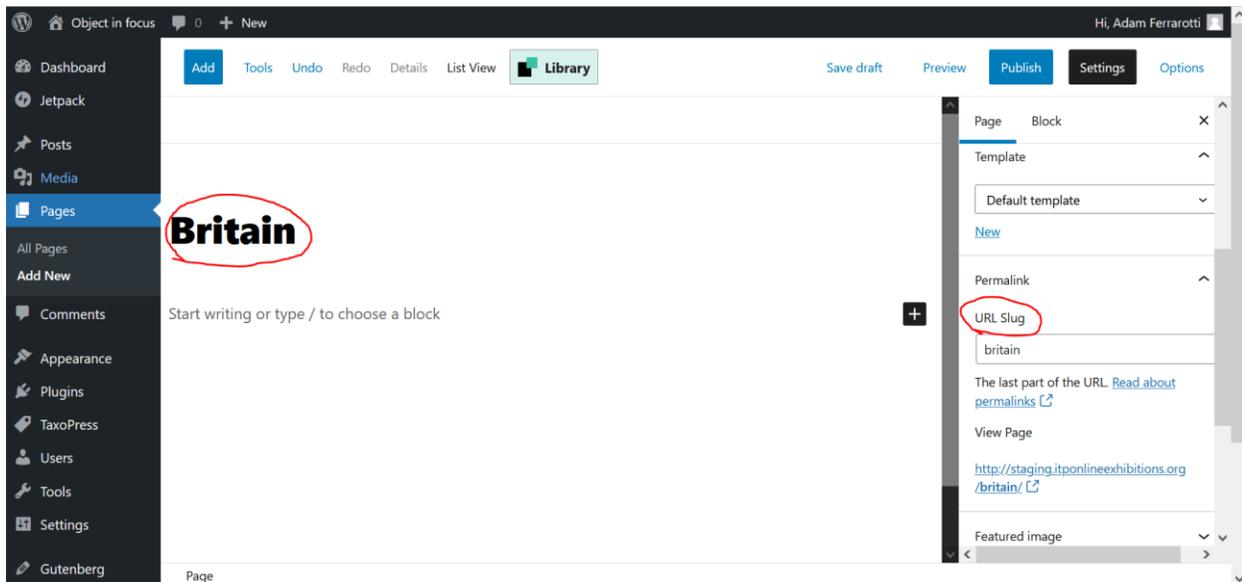
Enter the gallery title under "Add Title." This will automatically update the page's URL Slug, which can be viewed midway down the Page tab of the right-hand settings menu (open by clicking "Settings" or Ctrl + Shift + ,). The URL Slug is the last part of the page's URL that gives it a unique web address. For region galleries, we left the hyphenated, lowercase slug names unchanged (as in "egypt-and-sudan"). For year galleries, we added an additional "-exhibits" to the autogenerated slug (as in "2013-exhibits"). **Note:** WordPress will not automatically change hyperlink URLs if you change a slug. If you do update a gallery's slug, make sure to change all hyperlinks around the site that lead back to that page, otherwise they will not work.

3. **Create Gallery Category**

Gallery pages use post categories to find which exhibits to display. In our example, the Britain gallery will display all exhibits under the "britain" category. To add this category, navigate to TaxoPress >> Taxonomies on the left sidebar.
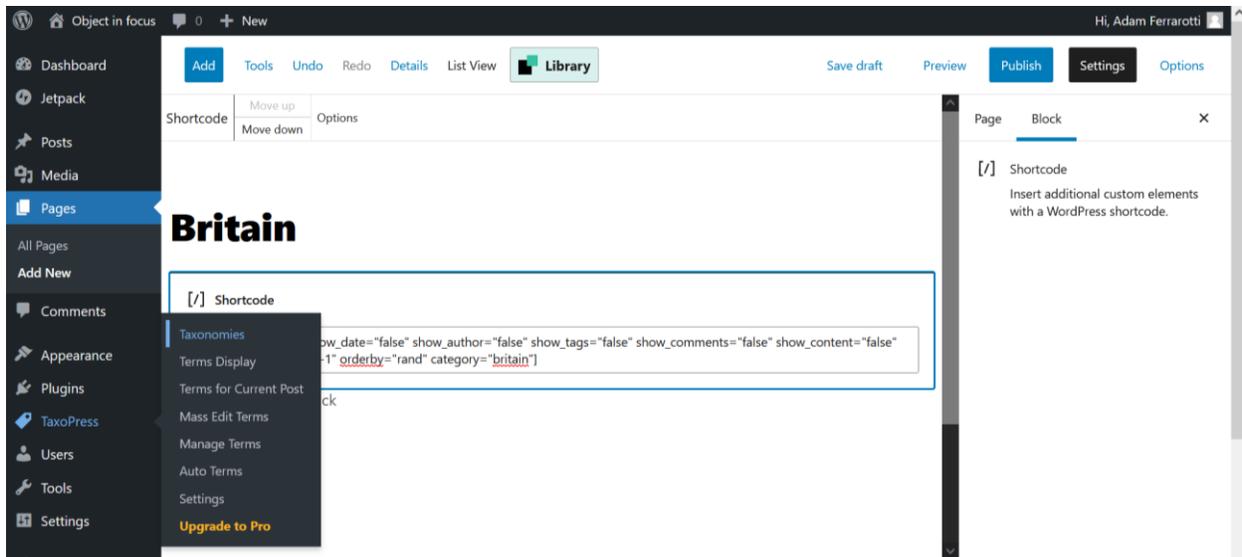
Once there, click the number under the "Count" column for the "Categories" row.
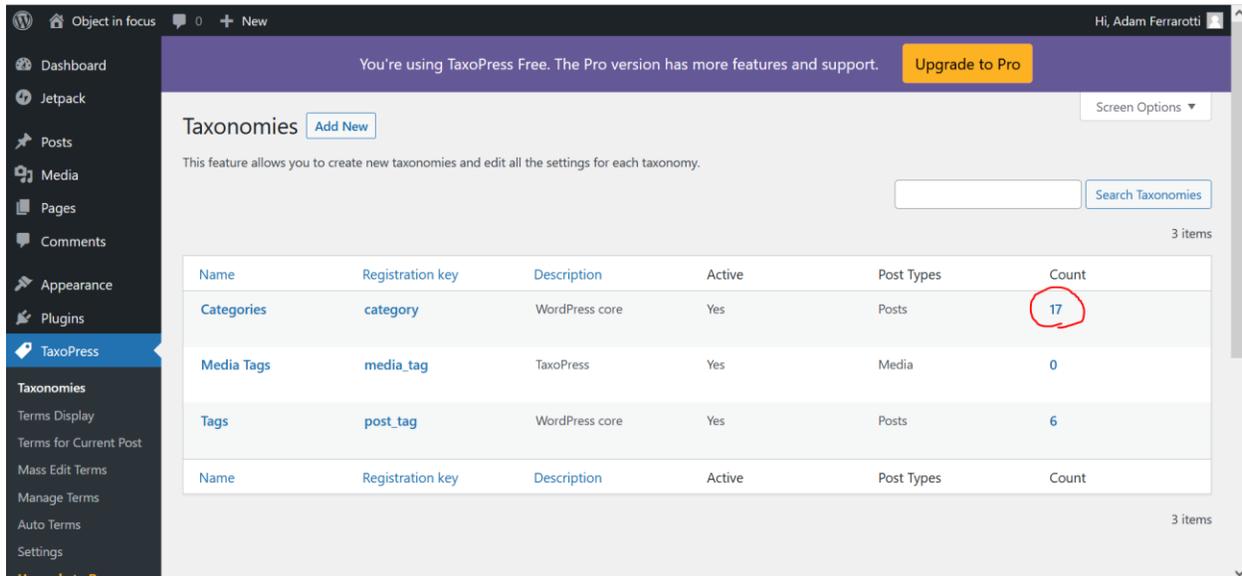
From here, you can view all the categories and subcategories used on the exhibition site. Each year is given a subcategory under the "year" main category, and each region is given a subcategory under the "region" main category.

Use the fields on the left-hand side of the page to add our "Britain" category, give it the slug "britain" (must be lowercase), make "Region" it's parent category, and optionally add a description. Finally, click "Add New Category."
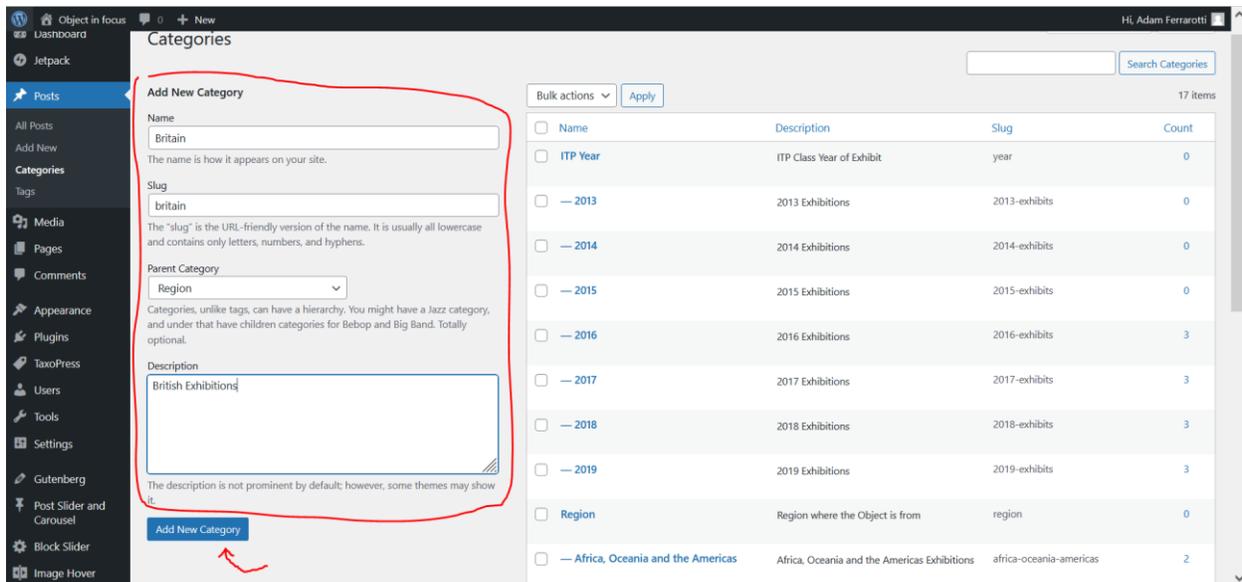
Note: Webpage zoomed out to 80% in the above webpage to show all detail.

4. **Insert Exhibit Carousel**

      The carousel found on each gallery page was created using the "Post Slider and Carousel" plugin. This plugin lets you customize a post carousel or slider and generates a "shortcode" that can be pasted onto a page or post. The shortcode for the carousel used throughout *Object in focus* galleries is:

[psac_post_carousel show_date="false" show_author="false" show_tags="false" show_comments="false" slide_show="3" limit="-1" orderby="rand" category="**CATEGORY**"]

To add this to a gallery, first copy the above shortcode and paste it onto the gallery page where it says "Type / to choose a block." Then replace CATEGORY with the gallery's category slug, in this case "britain."
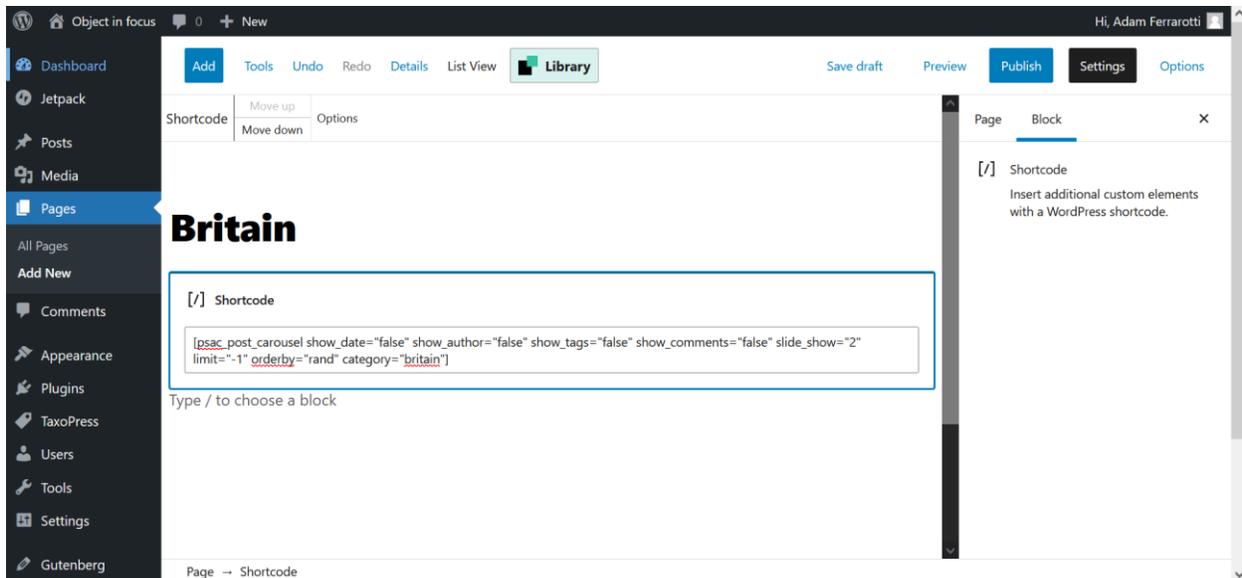
If you would like to design a completely new post carousel or slider, this can be done by navigating to Post Slider and Carousel >> Shortcode Builder on the left sidebar.
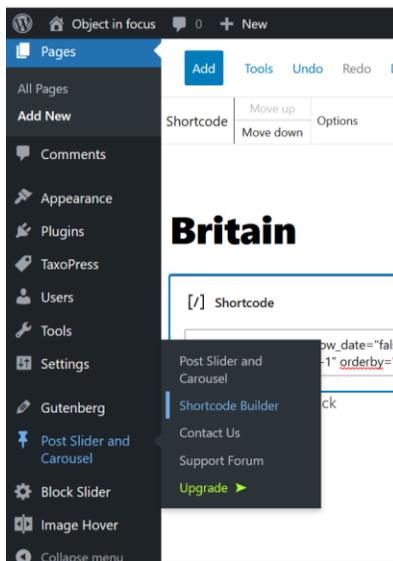
On this page you can build either a slider or carousel, which can be chosen using the dropdown in the top right. The three dropdowns on the left contain many options you can change to customize your carousel.
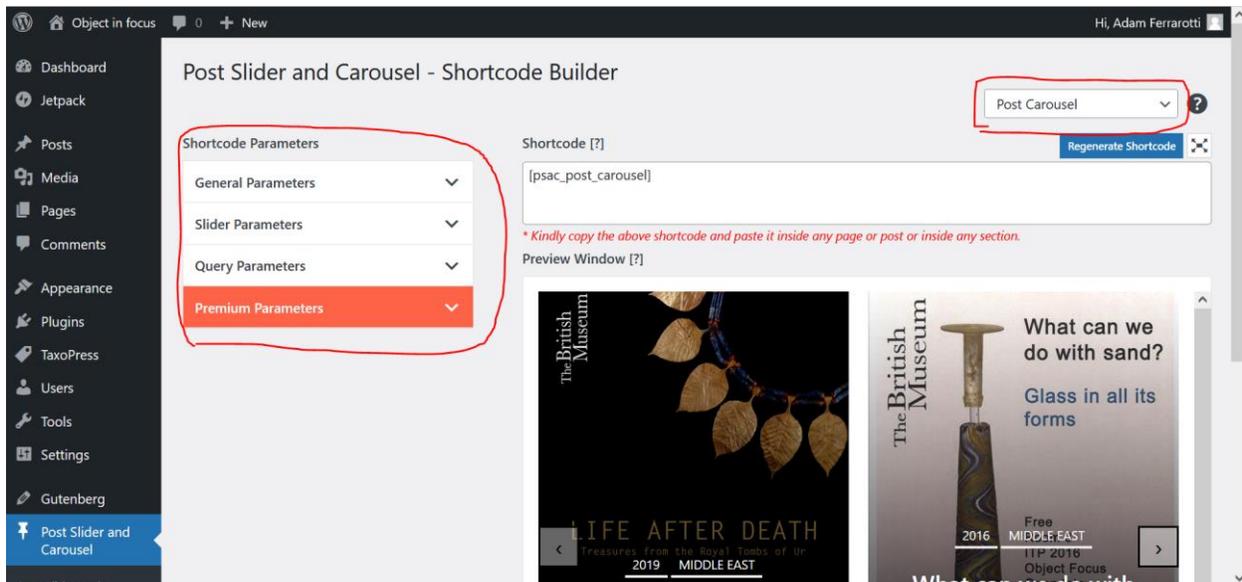
We chose to make the following changes to the default options for our carousel:

- <u>Show Post Date = False</u> (turned off because post date is when the exhibit was uploaded and is unchangeable. This is hidden elsewhere on the site)
- <u>Show Author = False</u> (turned off because author is the admin who uploaded the exhibit. Also hidden elsewhere)
- <u>Show Tags = False</u> (turned off because tags are unused on this site)
- <u>Show Comments = False</u> (turned off because post comments are turned off. If post comments are turned back on, I recommend keeping this off because they will clutter the carousel)
- <u>Slides Column = 3</u> (experimented with 2, 3, and 4. Mainly affects desktop viewing because mobile will automatically reduce the number of viewable slides to 1)
- <u>Total Number of Post = -1</u> (set to this value so that the carousel contains all posts from that category)
- <u>Post Order By = Random</u> (set to random so that posts do not get buried at the end of the slideshow, and because the exhibit list provides an alphabetic listing)
- <u>Display Specific Category = category slug </u>(changes depending on the gallery)

5. **Add "Exhibits In This Category" Subtitle**

This subtitle creates a visual divider between the carousel and exhibit list. To create this subtitle, first create a heading block by clicking into "Type / to choose a block" under the carousel shortcode and beginning to type "/heading." Select the block when it shows up directly above.
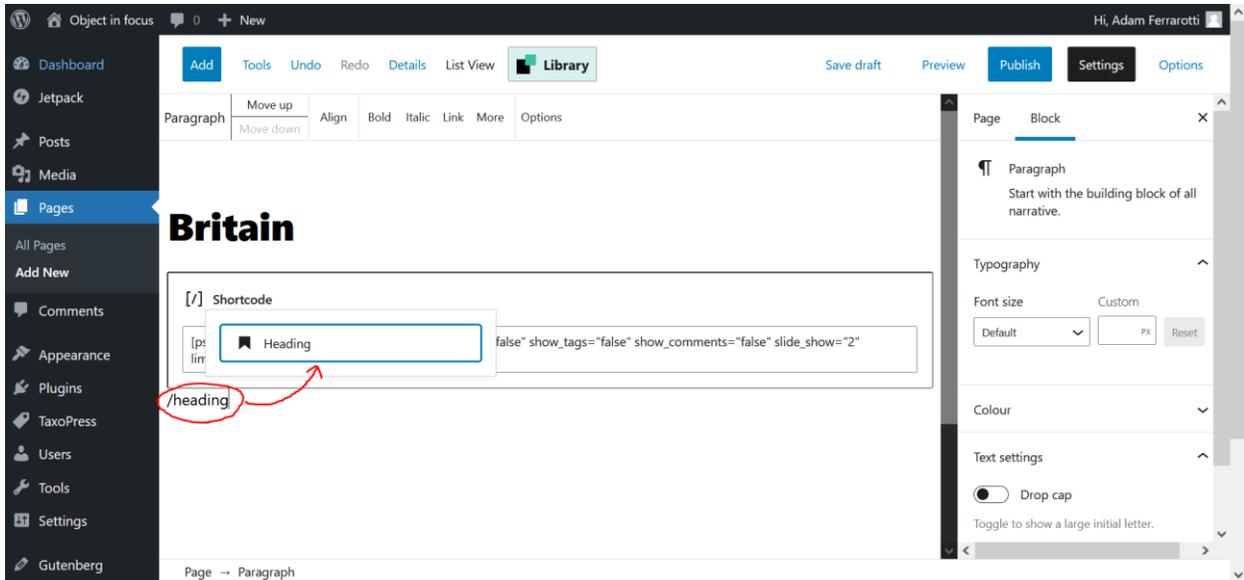
Hit Ctrl + B to make the font bold, then type the subtitle text "Exhibits In This Category:" in the heading block. Change the alignment to "Align text centre" in the top bar menu (note, for this section's screenshots, "Display button labels" was set to true under preferences)
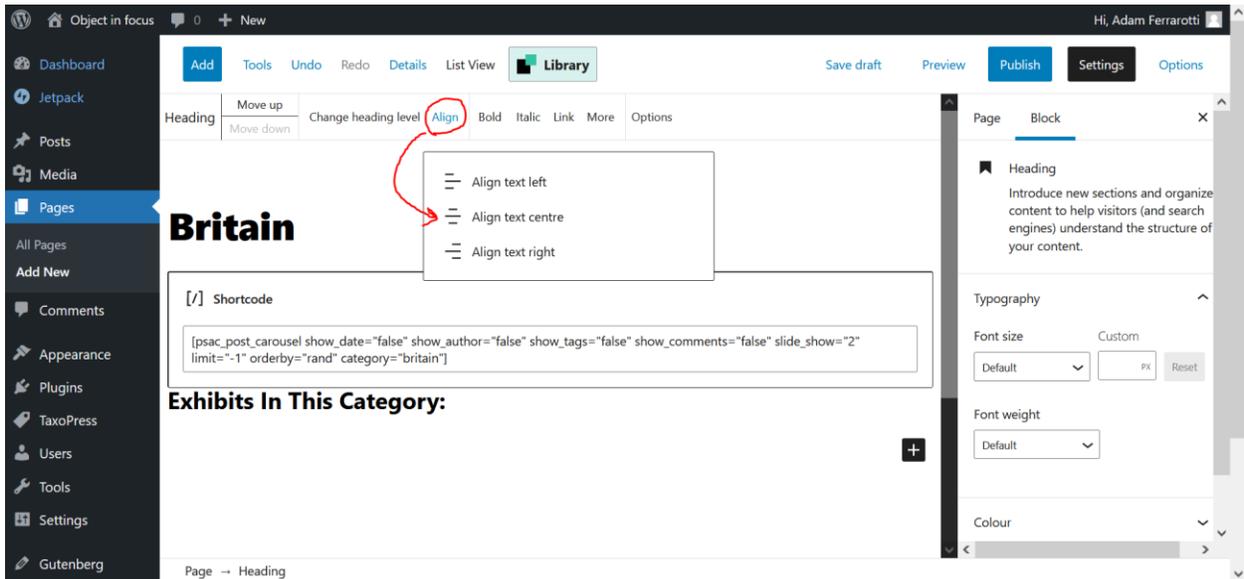
Finally, change the heading font and background colours under Block >> Colour on the right menu. Select white for the text colour using the white circle. Set the background colour by clicking "custom colour" and pasting the code "#3e86b0" into the "Colour value in hexadecimal" field. **Note:** this hex colour code is used throughout the site as a theme colour.
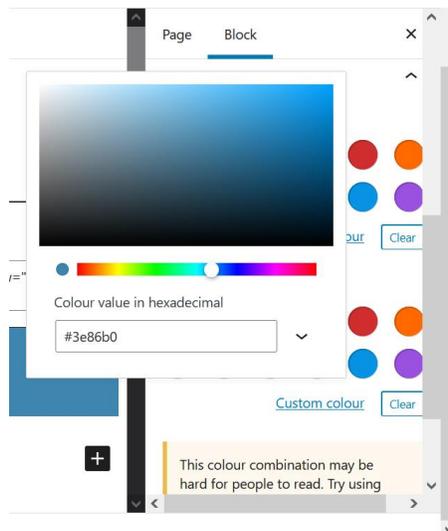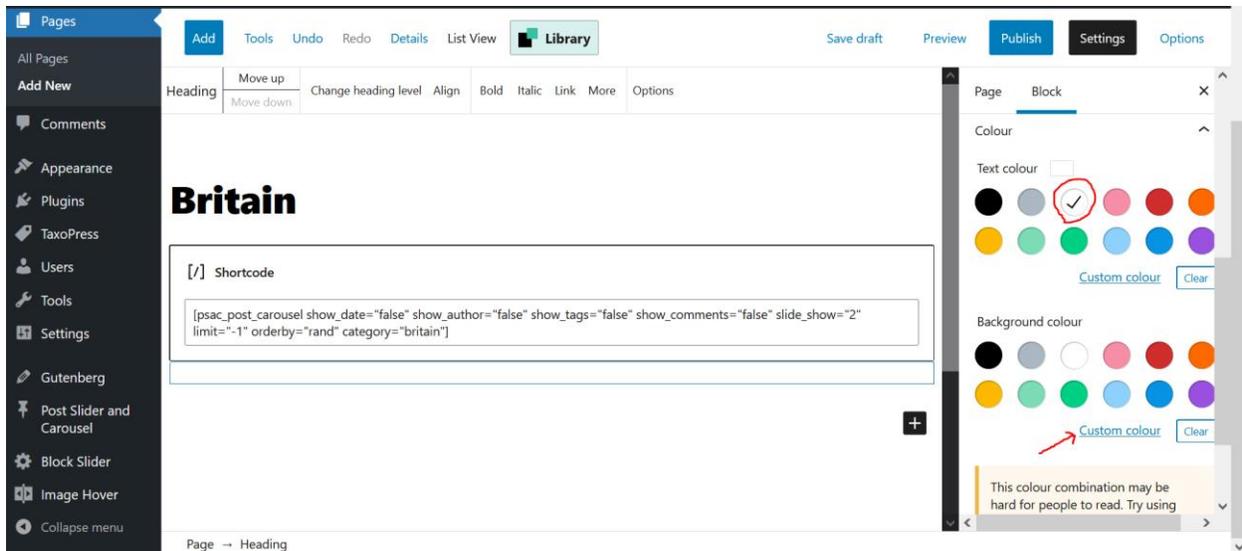
6. Add a Spacer Between the Carousel and Subtitle

Add a spacer block underneath the subtitle. Set this to a height of 25 px by either dragging the circle that appears on the spacer itself or in the right menu under Block >> Spacer settings.
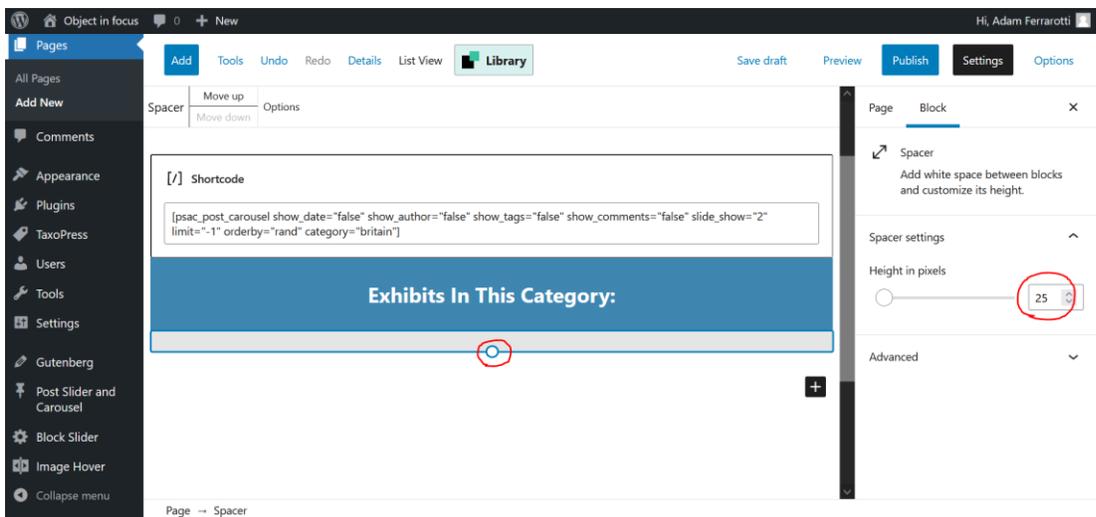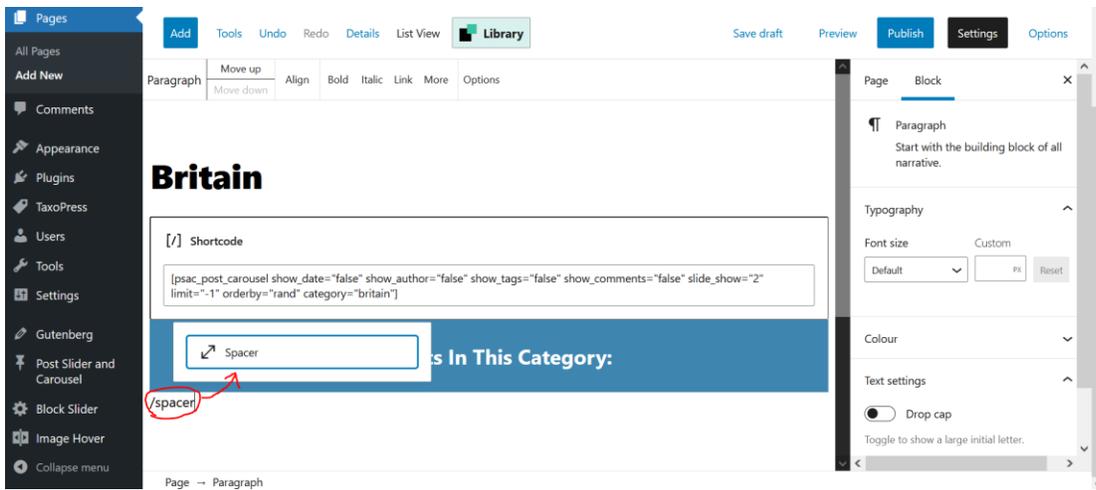
Finally, move this block up one step by clicking "Move Up" in the top left while the block is selected.
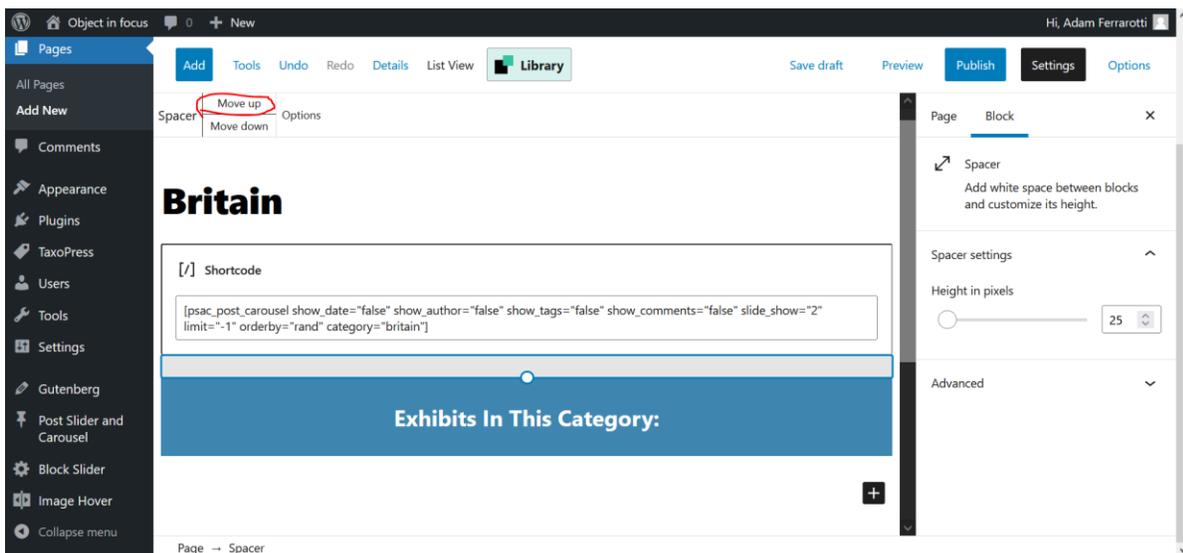
Note: the reordering step could be avoided by creating the spacer before the subtitle. However, it serves as a good introduction to using the move up/down tools, which come in handy often while building pages.

7. **Insert Exhibits List**

This is the most difficult part of creating a gallery because the Posts List block used, while functional, is somewhat finicky. Add this block below the subtitle.
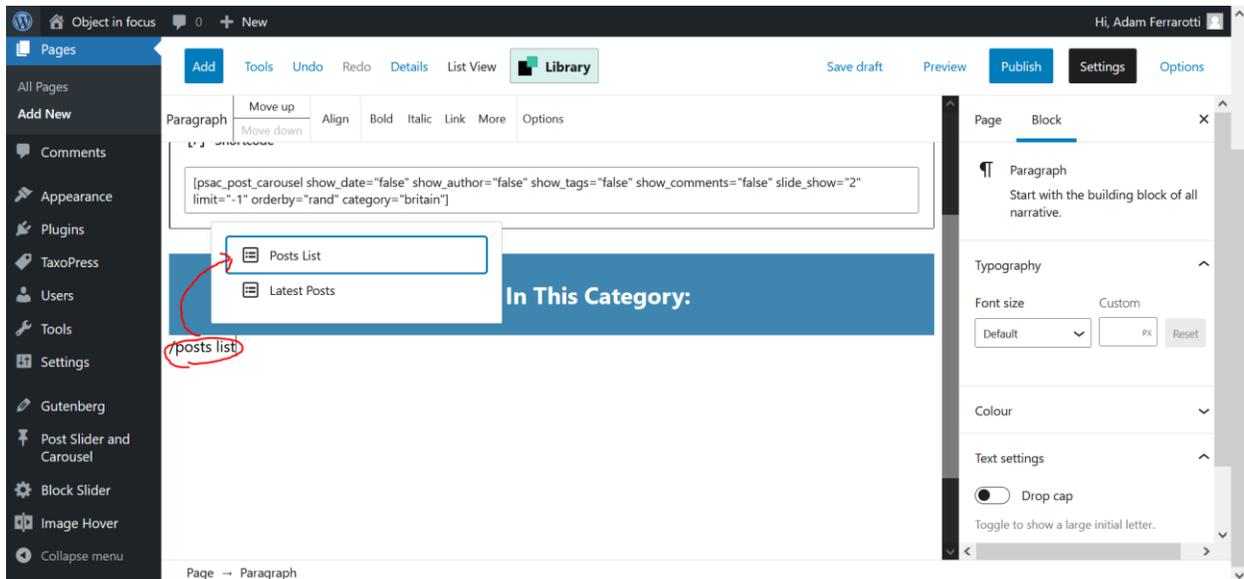
Next, click "Start blank" at the top right of the block.
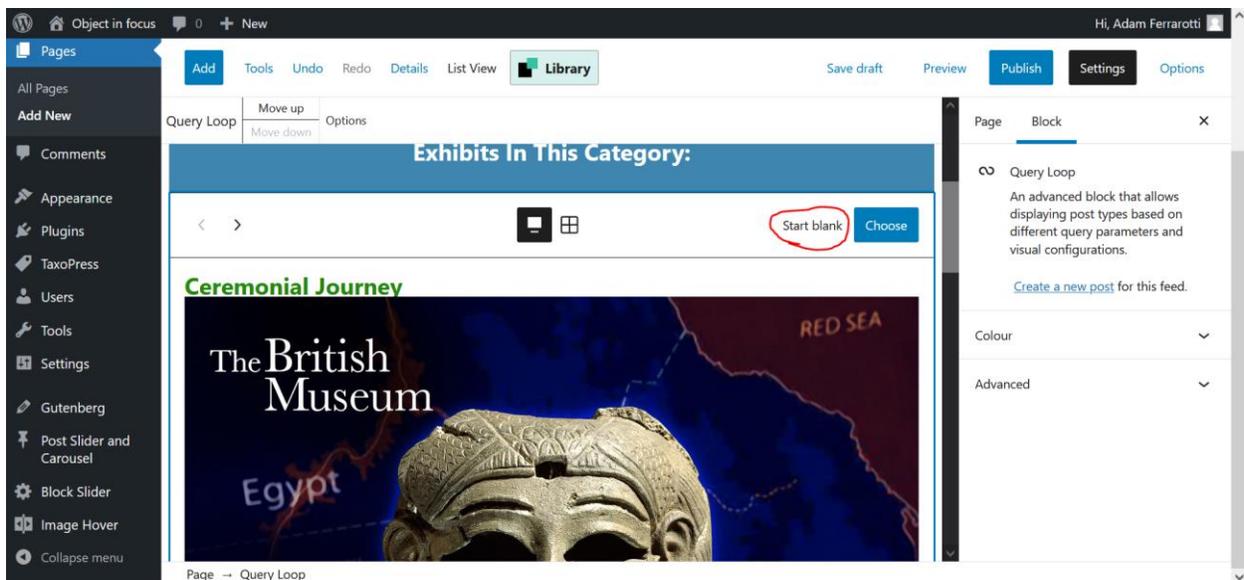
From here, select "Title and Excerpt." **Note:** exhibit posts are formatted so that excerpts list the curators that made the exhibit and their class year.
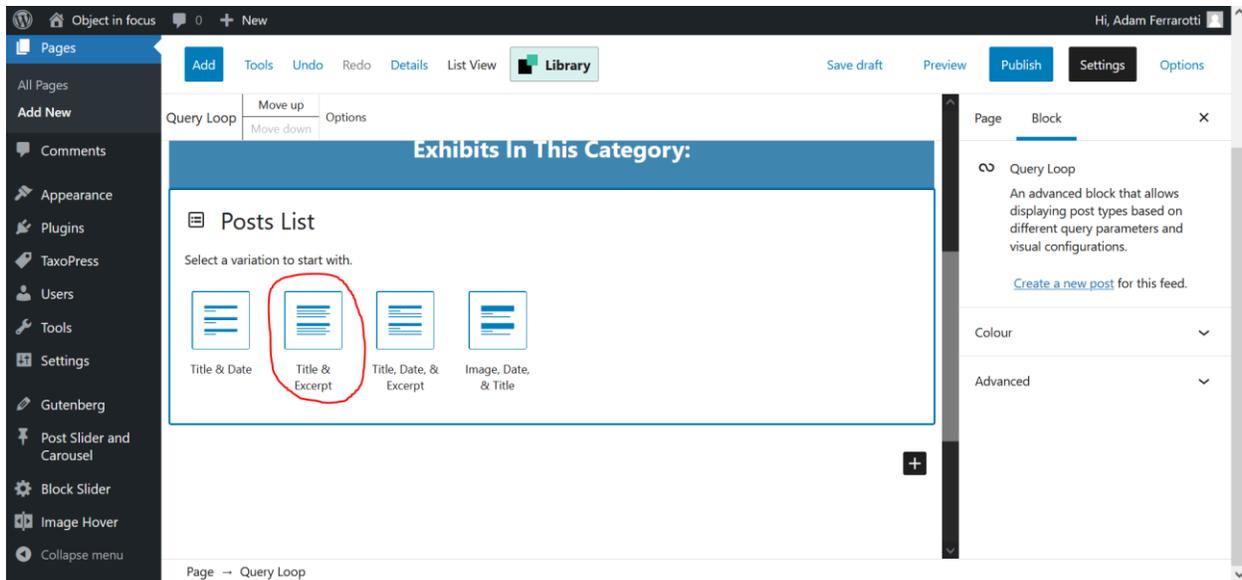
Go to Block >> Filters in the right menu. Enter the category for the gallery (in this case, Britain).
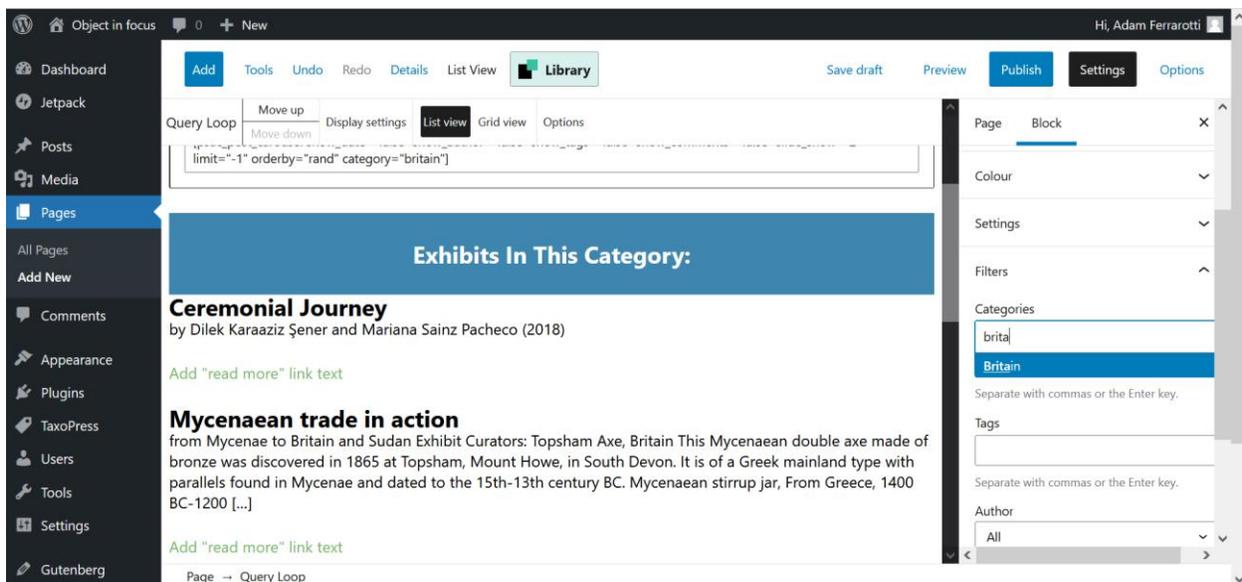
Next, go to Block >> Settings and set "Order by" to "A Z." This changes the sorting scheme to alphabetical instead of post date. **Note:** Again, post date is when the exhibit was uploaded, not the ITP year it was created. Choosing "Oldest to Newest" would therefore not necessarily put 2017 posts before 2019 posts.
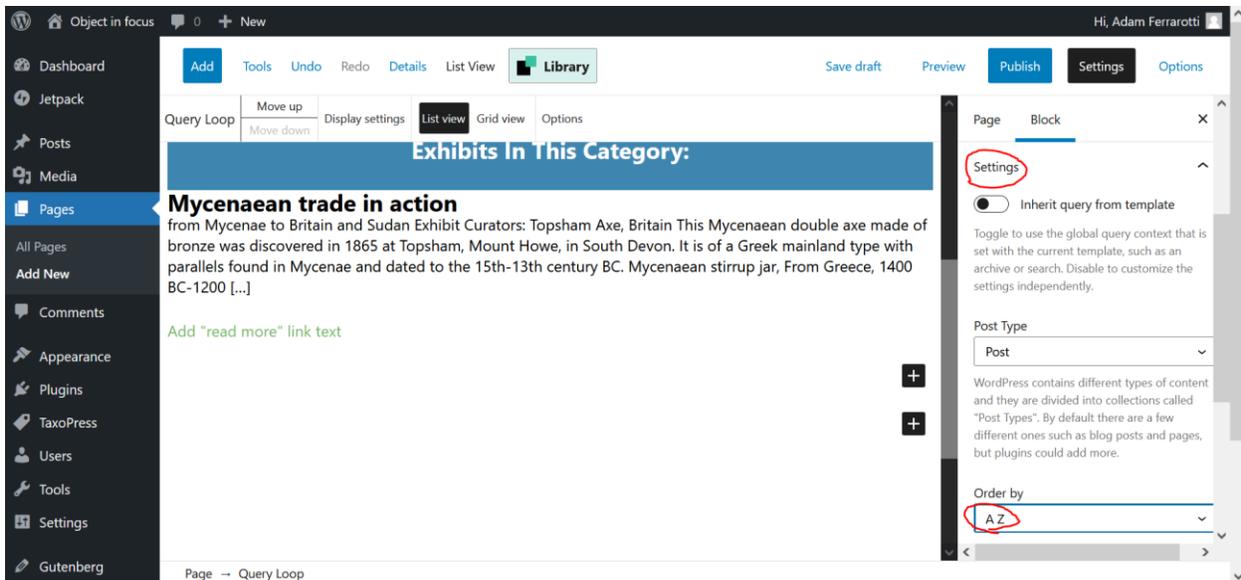
Change the list from List view to Grid view in the top menu
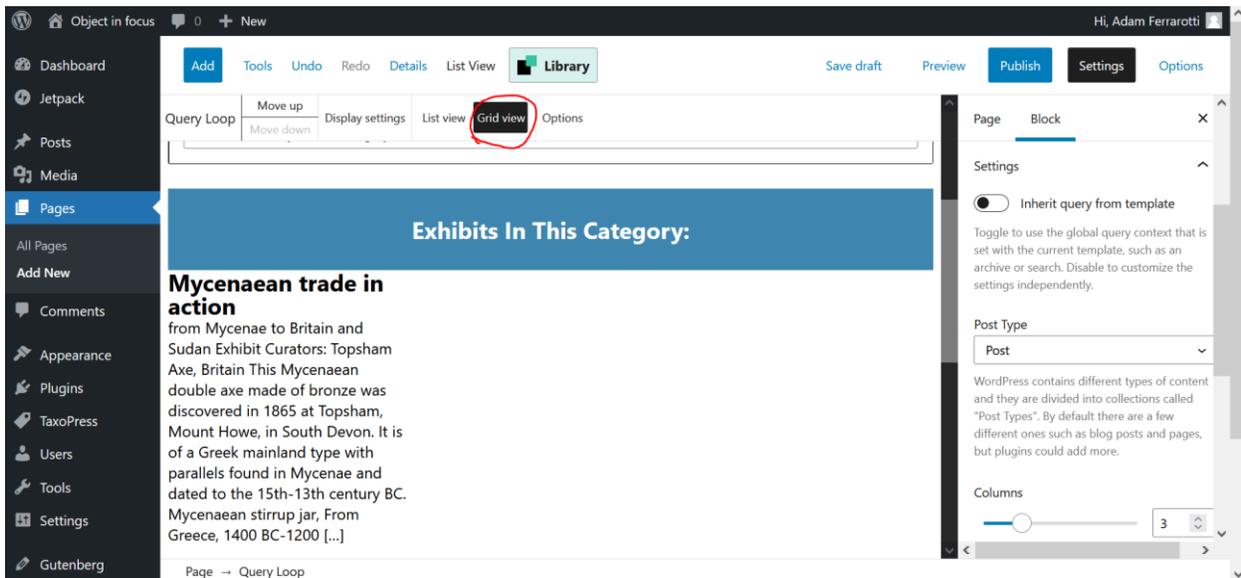
Next, change "Items per Page" under "Display settings" in the top menu to 0. This should make the list display all posts from that category. Sometimes this causes the editor to freeze or it just does not allow you to enter 0. If this happens, set this value to a high number instead, like 50.
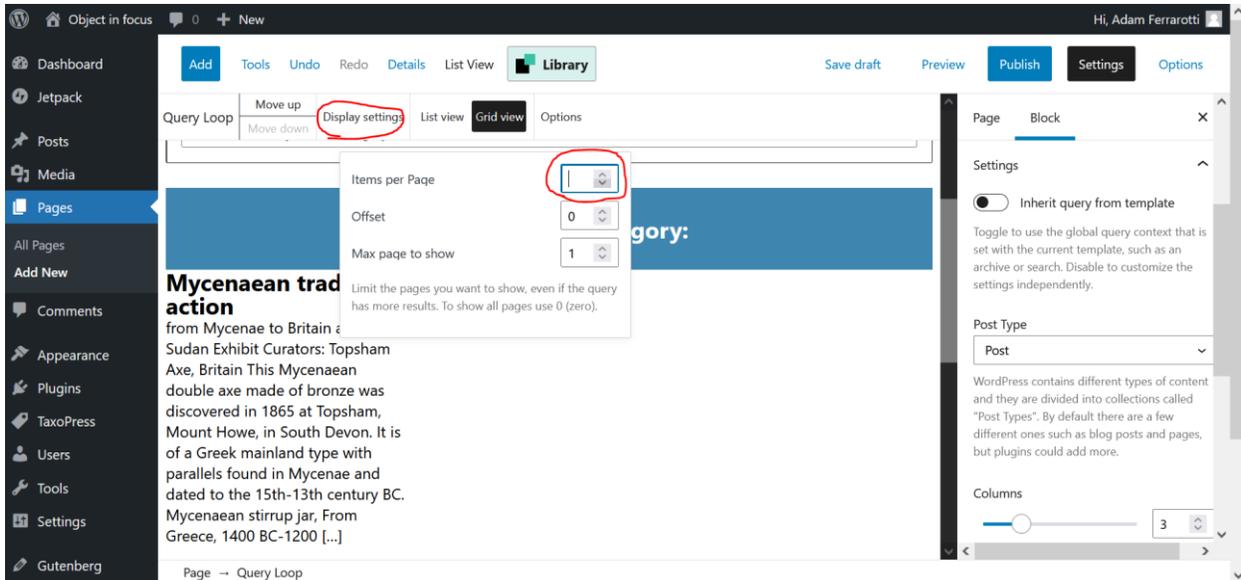
Finally, click "Add 'read more' link text" under a post and type in "View Exhibit." This will replace the "read more" text on all exhibits in the list.
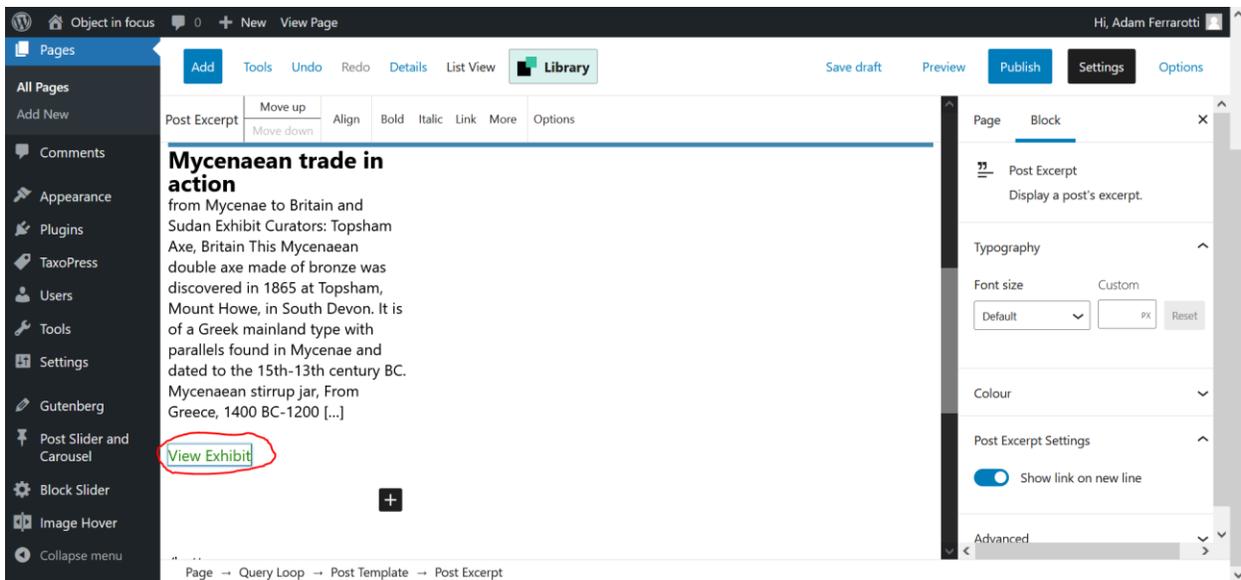
8.   **Insert "Browse Other" Button**

The last element to add is a button redirecting to the parent page. First, add a buttons block beneath the exhibit list.
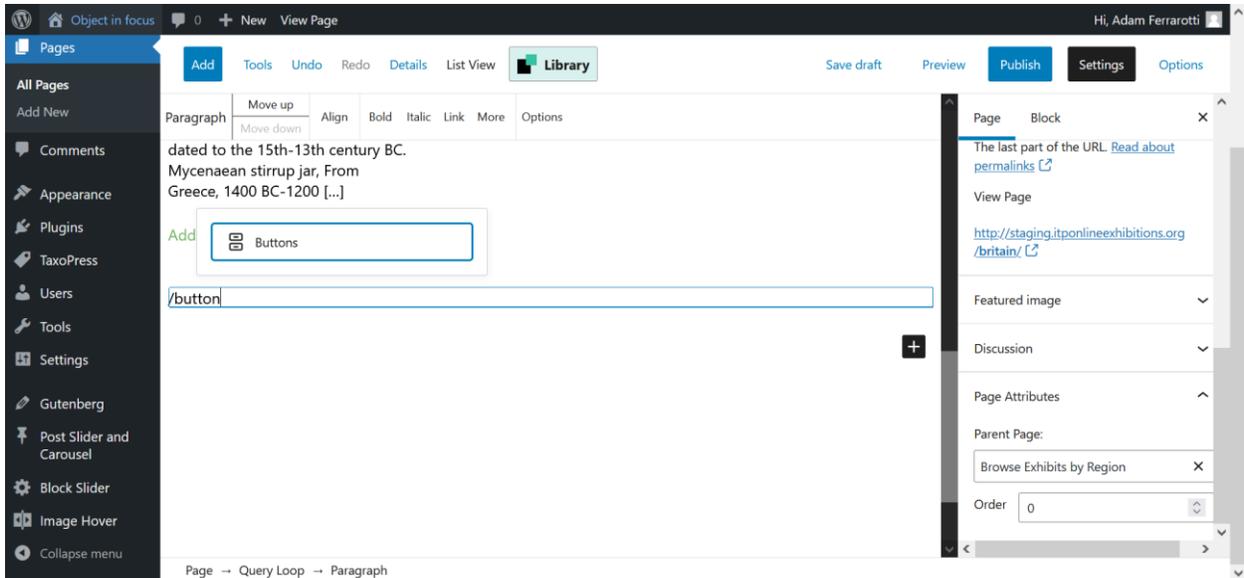
Click the new button, then under "Change items justification" in the top bar, select "Justify items centre."
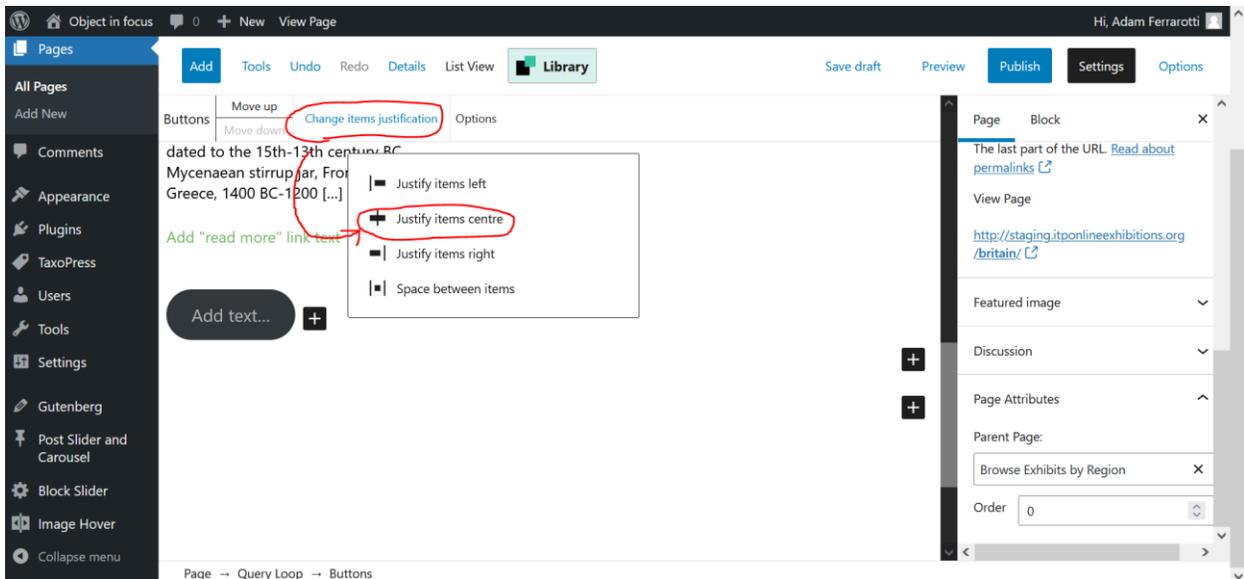
Click "Add text…" on the button and type "View Other Regions."
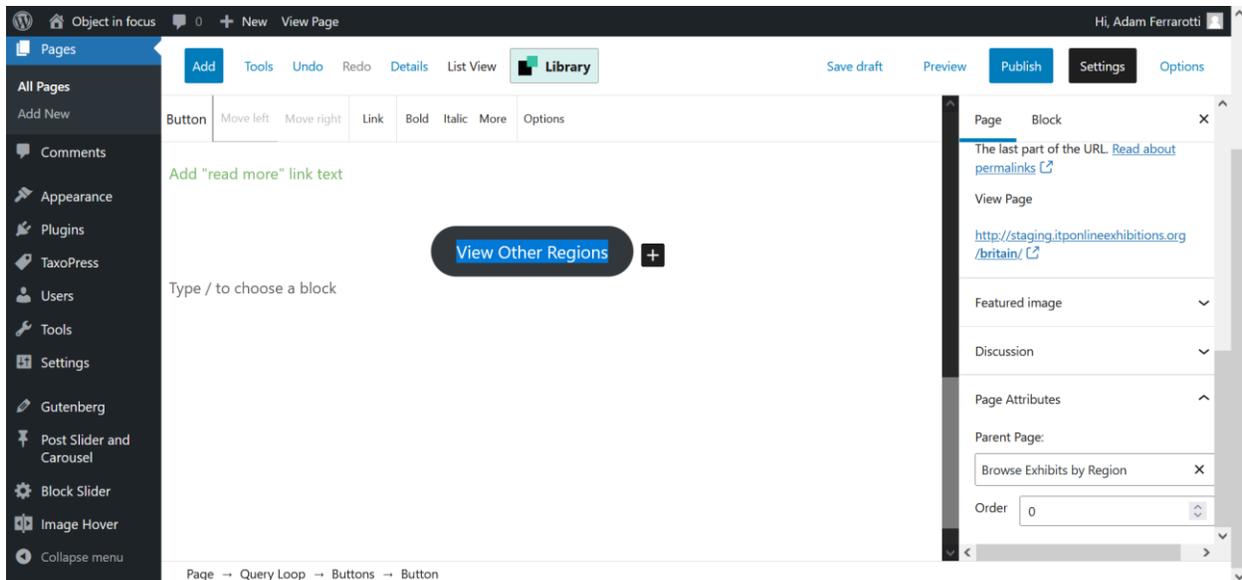
Select the text and click "Link" in the top bar or press Ctrl + k to add a hyperlink. Paste in the URL of the parent page (again, in this case this is the "Browse Exhibits by Region" page). Hit enter to confirm the link.
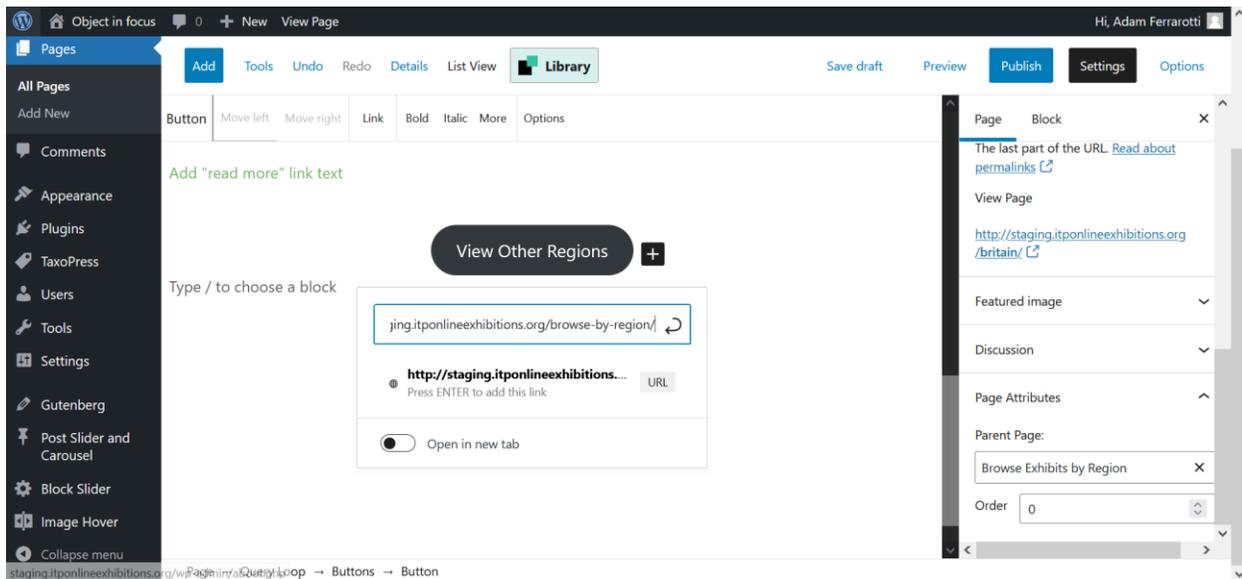
9. **Publish the Gallery Page**

The gallery page is now finished. If you have not done so already, publish the page by clicking "Publish" in the top right.
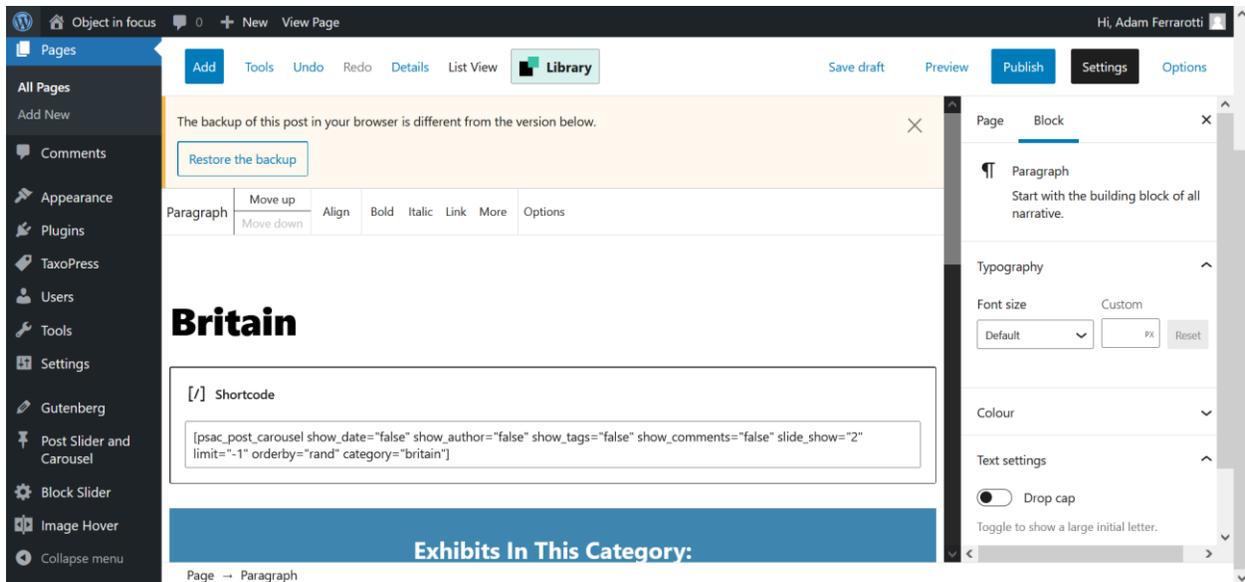
WordPress will ask you to confirm you want to publish. Do so by clicking "Publish" again.

Note: you can disable this confirmation by unchecking "Always show pre-publish checks" at the bottom of the right menu.
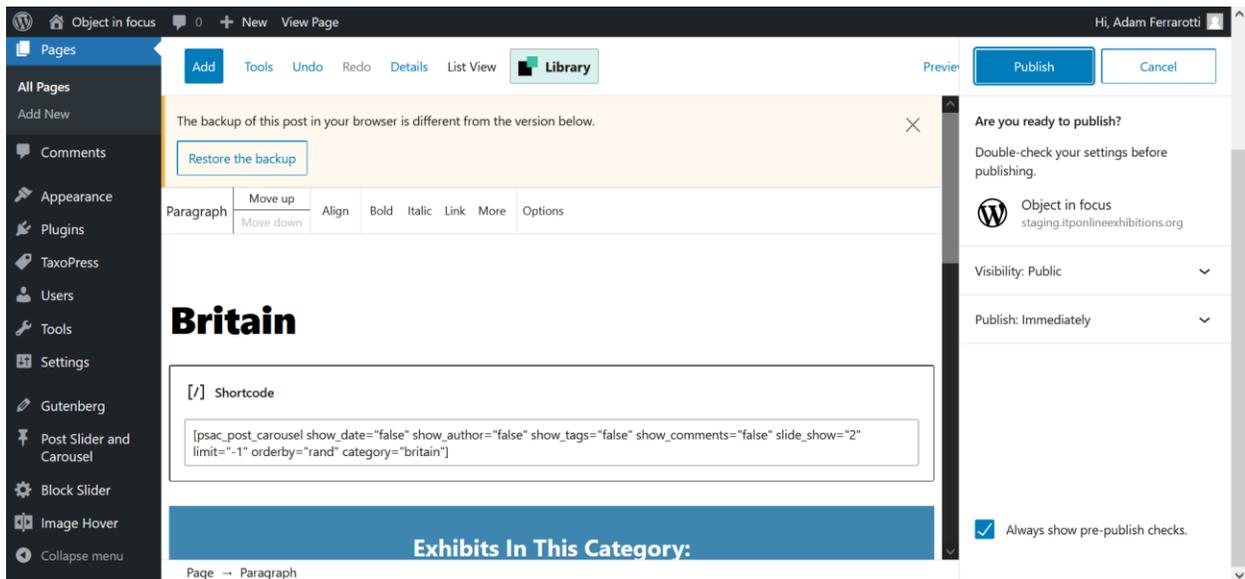
The gallery is now published.
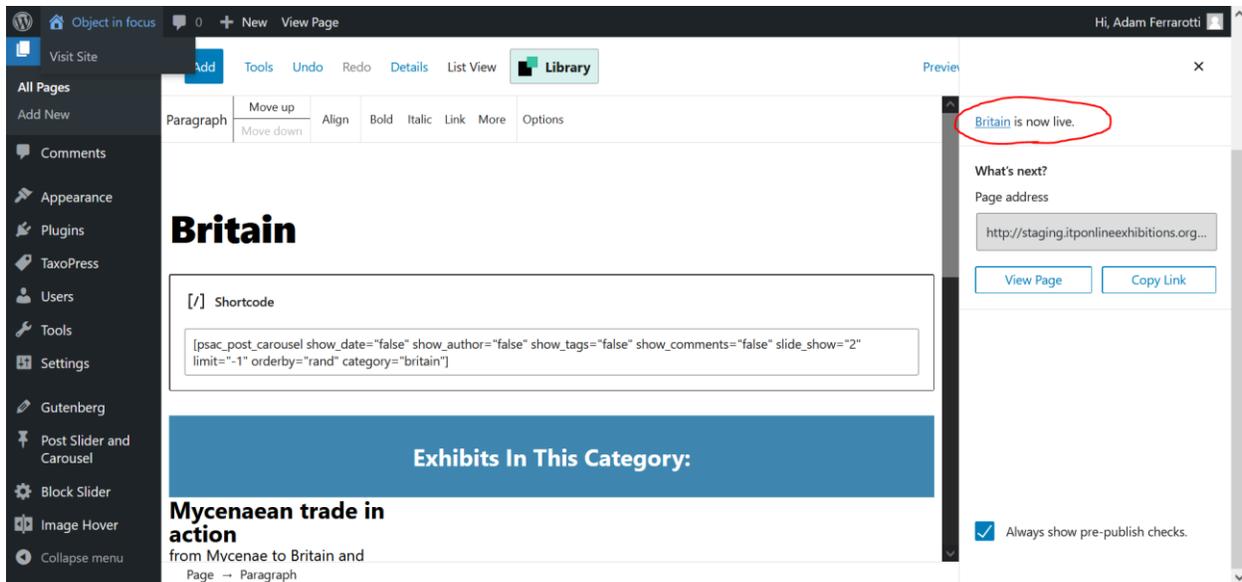
10. Add the Gallery to the Navigation Menus

Now that the gallery page itself is complete, we will add it to the navigation menus. Go to Appearance >> Menus on the left menu.
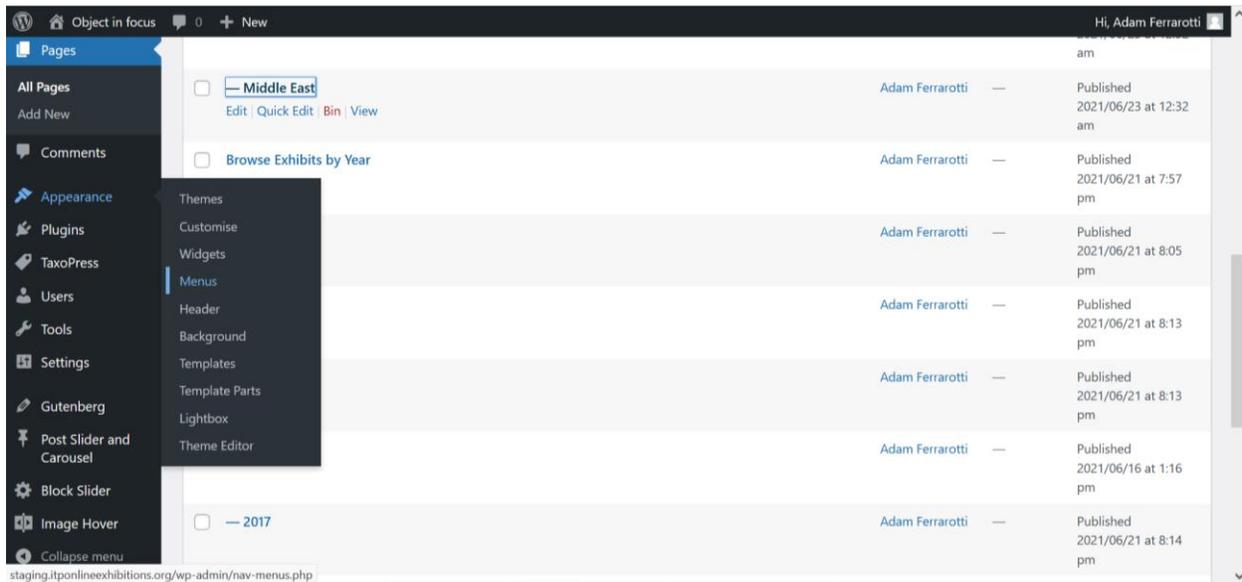
From this page you can edit all menus on the site. Select "Main Menu (Primary Menu)" from the dropdown menu in the top left and click "Select."
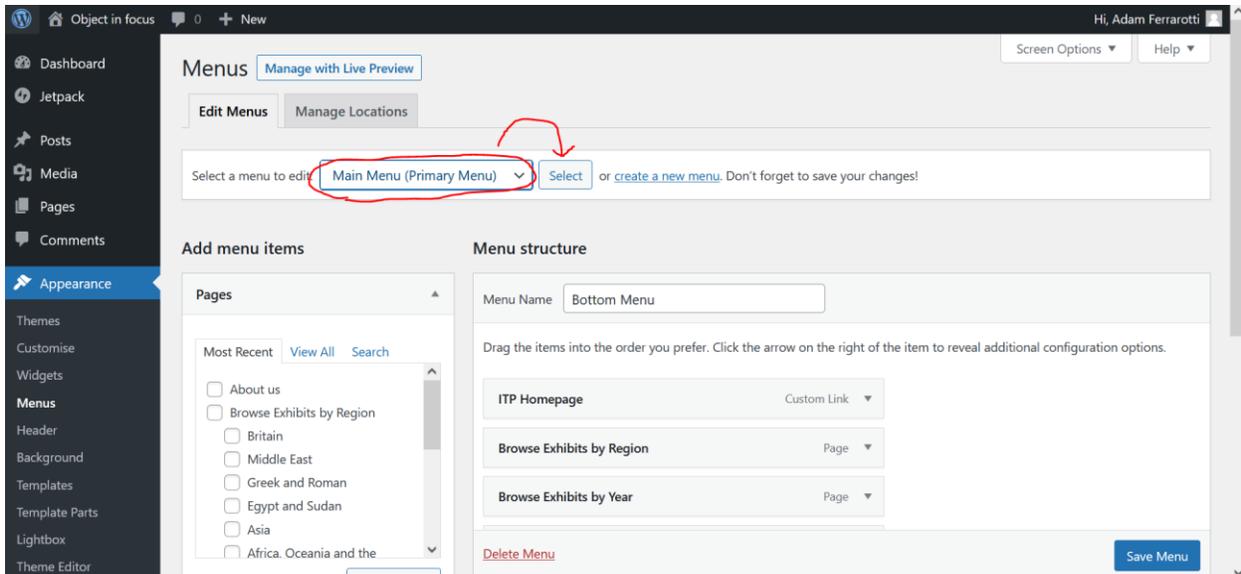
Select the page(s) you would like to add to the menu in the "Pages" list on the left (1), then click "Add to Menu" (2).
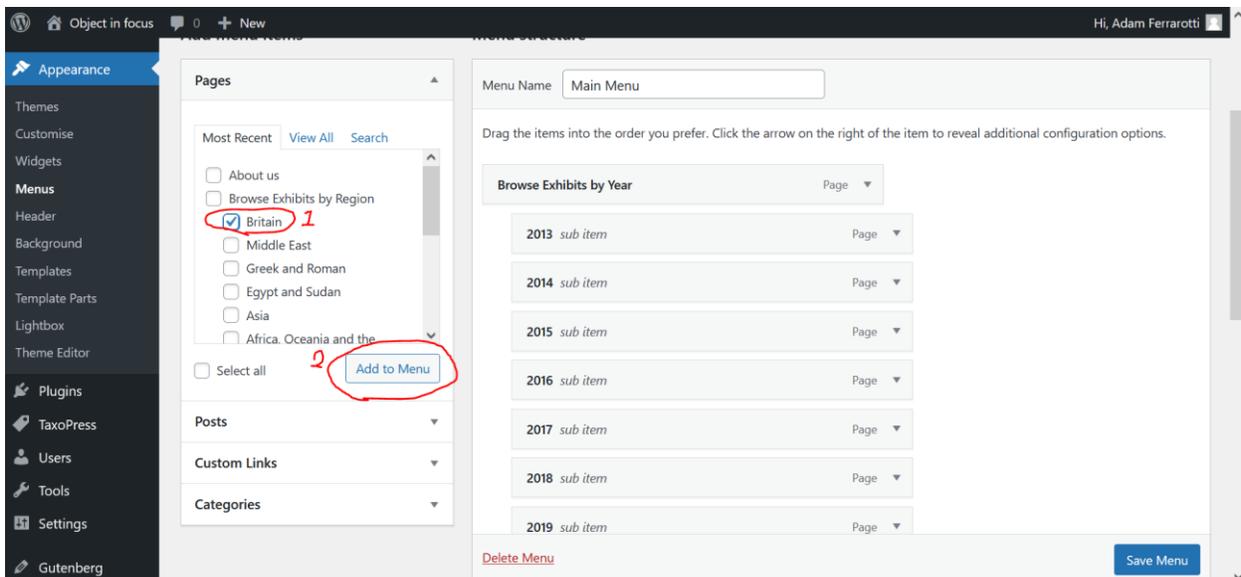
Scroll down until you find the gallery page you just added to the menu.
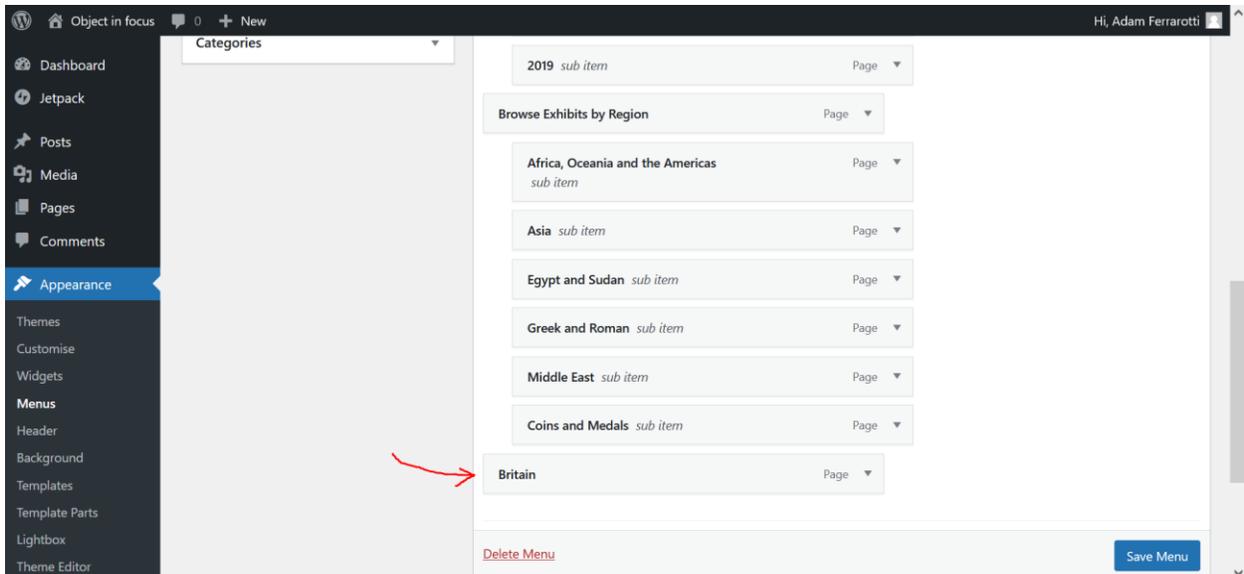
Click on the gallery card and drag it up and slightly to the right, so that it is in line with the other sub items of "Browse Exhibits by Region" and in alphabetical order with the other regions.
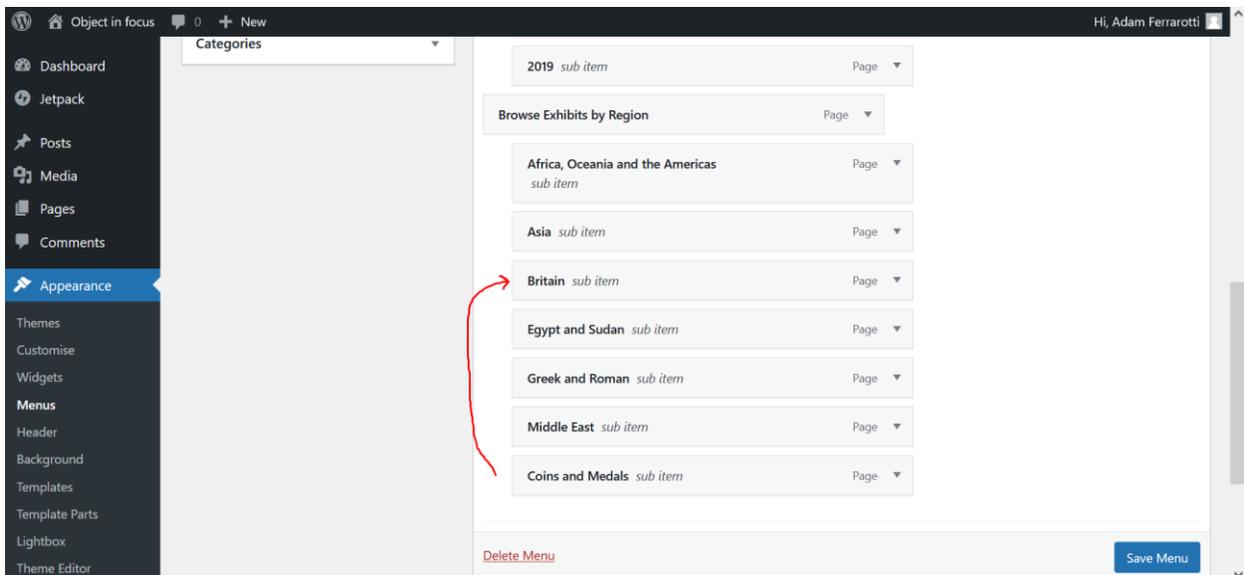
Click "Save Menu" in the bottom right. The new gallery should now be correctly placed in the site's dropdown navigation menus.
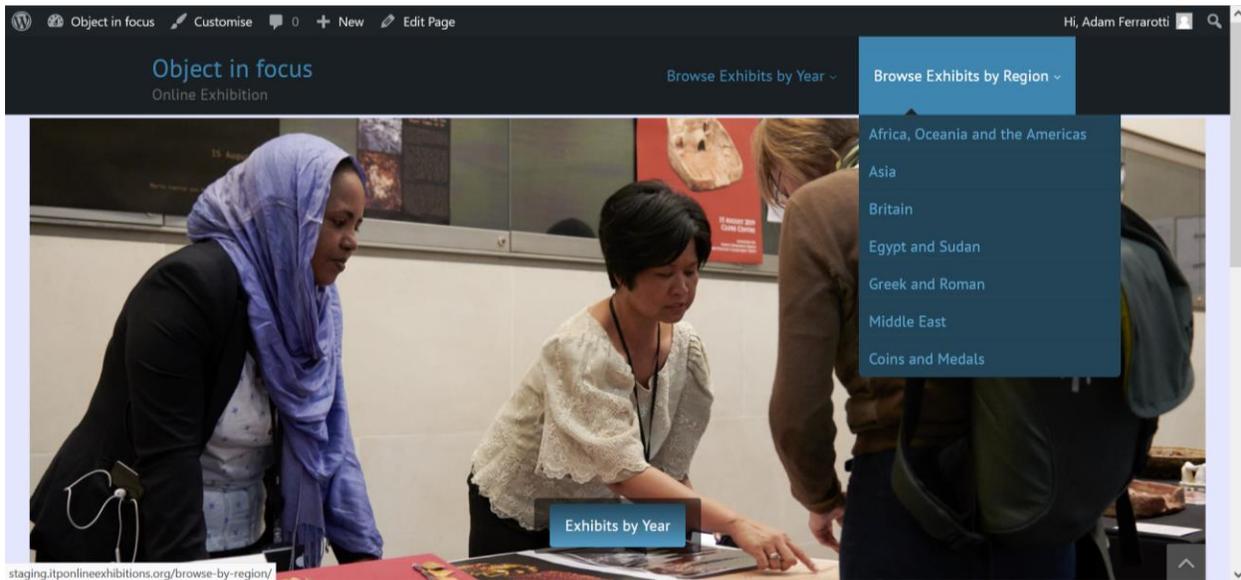
11. Update Parent Page Links

The last step is to add a link to the new gallery page to its parent page. Navigate to and open this page in the WordPress editor. Most of the time you will be adding a new year gallery, so we will go through how to do this for a new *Object in focus* year. First, navigate to the "Browse Exhibits by Year" page in the WordPress editor. As the following picture shows, this page is split up into individual, two-column blocks for each set of two years.
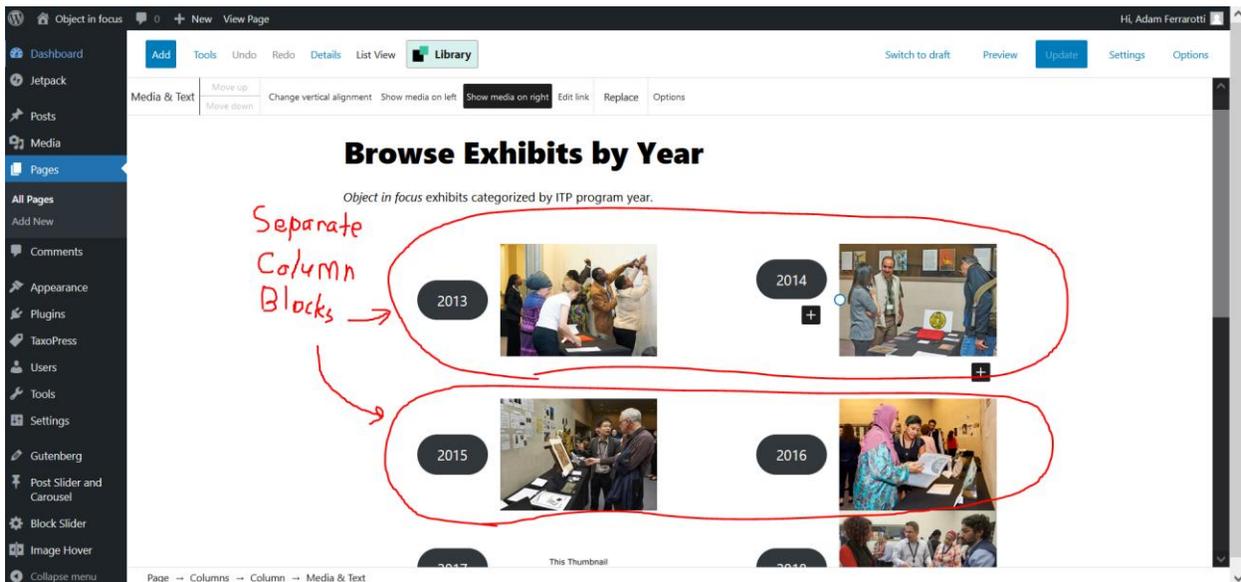
A similar look could have been accomplished using just one column block and stacks of each year. However, WordPress handles columns on mobile browsers by stacking the columns on top

of each other. As shown in the following diagram, using only one column block would cause years to become out of order on mobile. To avoid this, we opted for the more complicated, multi-row layout.
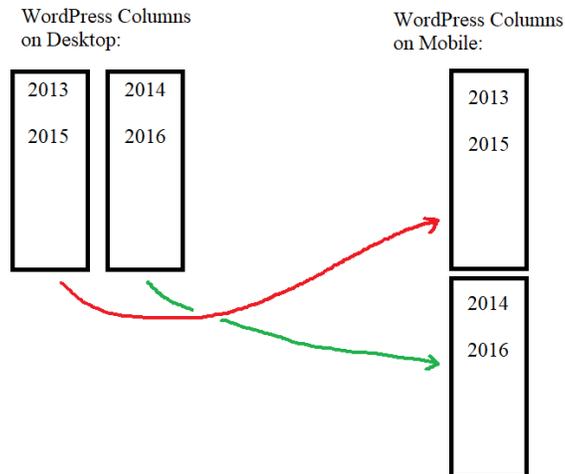
To add an even-numbered year, simply add a media and text block in the empty space at the bottom of the right column.
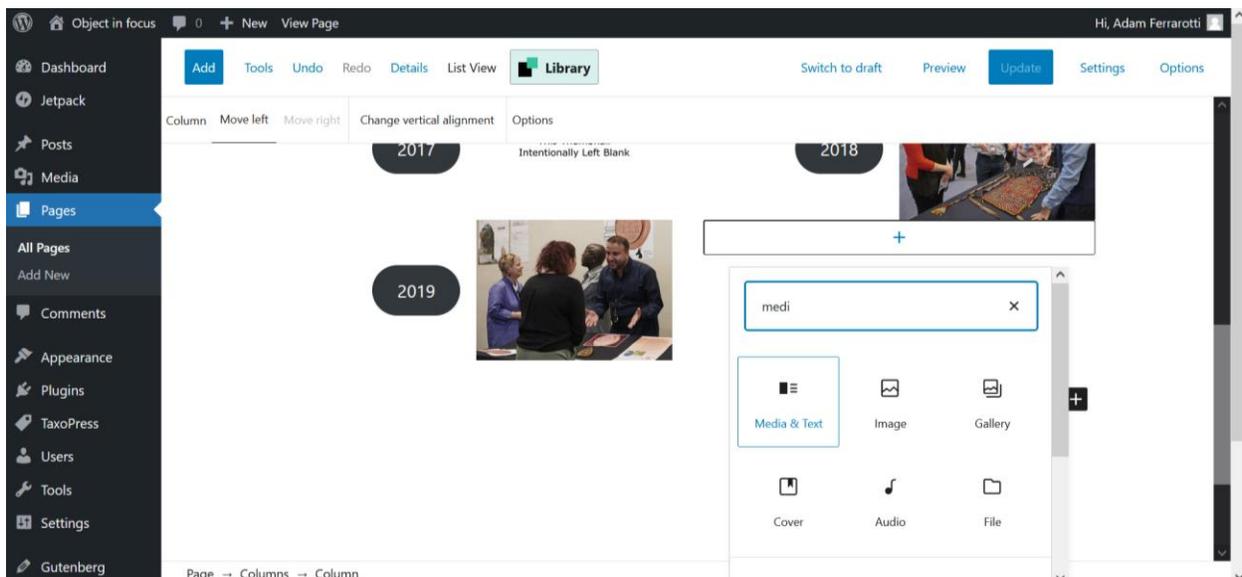
To add an odd-numbered year, first add a new columns block at the end of the page.
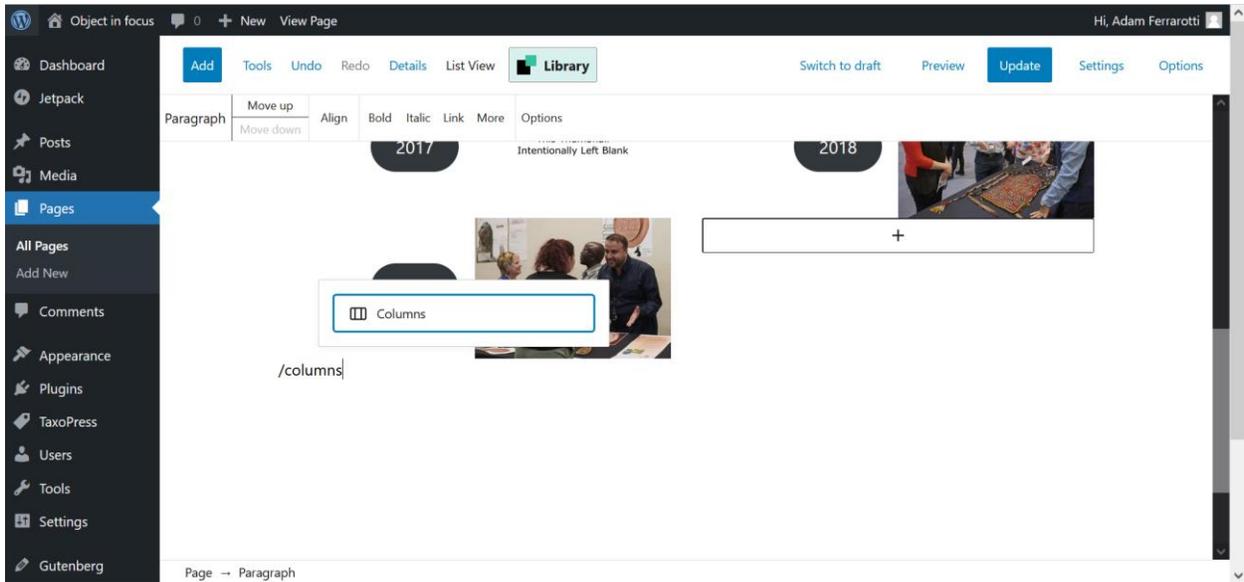
Select a 50/50 column width ratio.
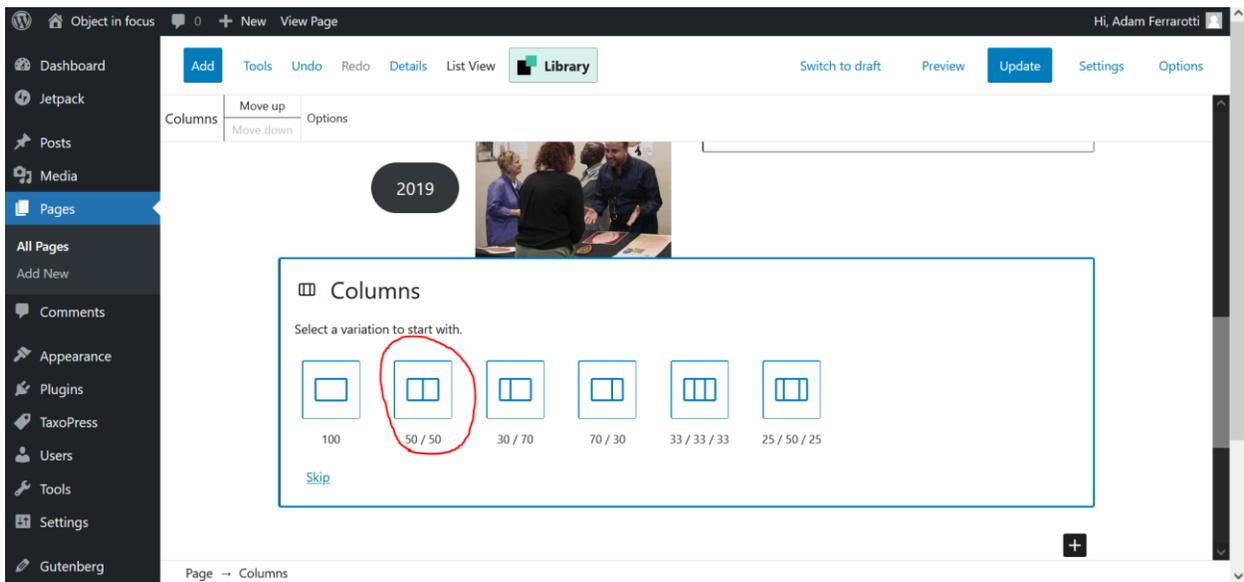
Then add a media and text block in the left column by clicking the plus-sign.
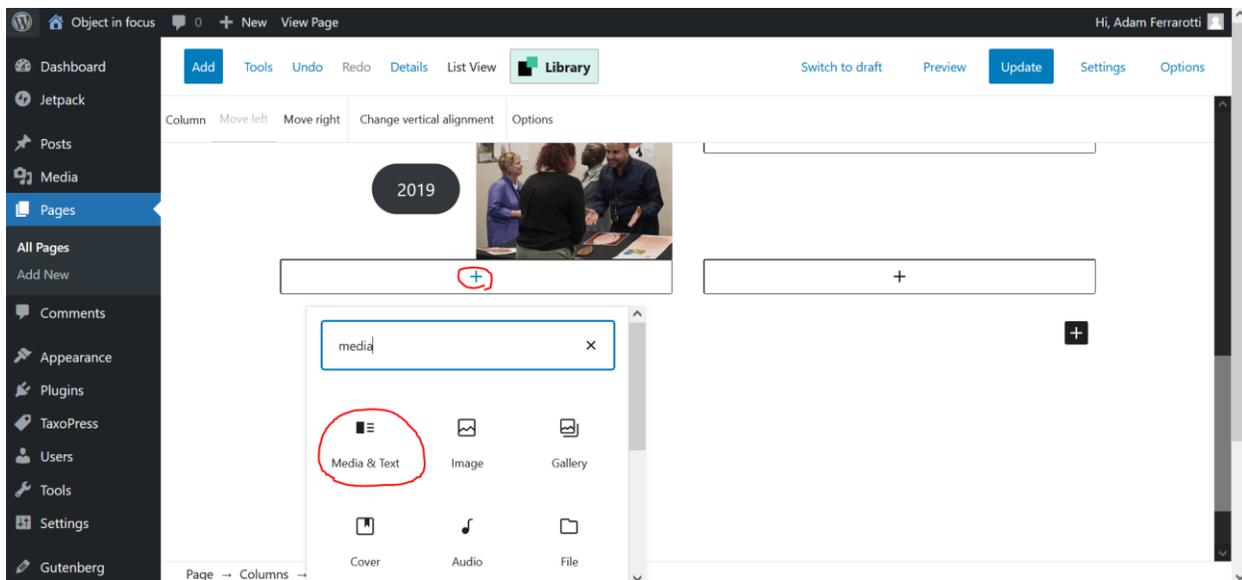
From this point, adding a gallery for either odd or even years follows the same steps. First add a photo from the *Object in focus* reception for that year. This can be either directly uploaded to the block or first uploaded through the media library. For this example, we will use a filler image. **Note:** to keep the formatting consistent with the rest of the gallery thumbnails on this page, make sure new thumbnails have a width to height ratio of 1.4.
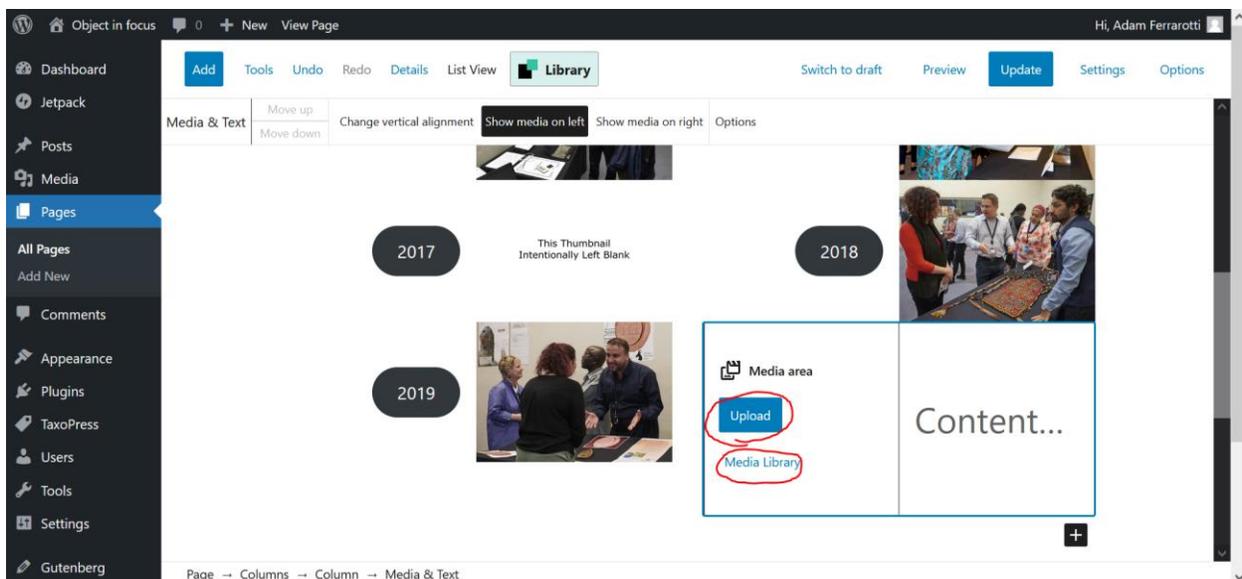
Add a button next to the image by typing "/buttons" where the block says "Content…"
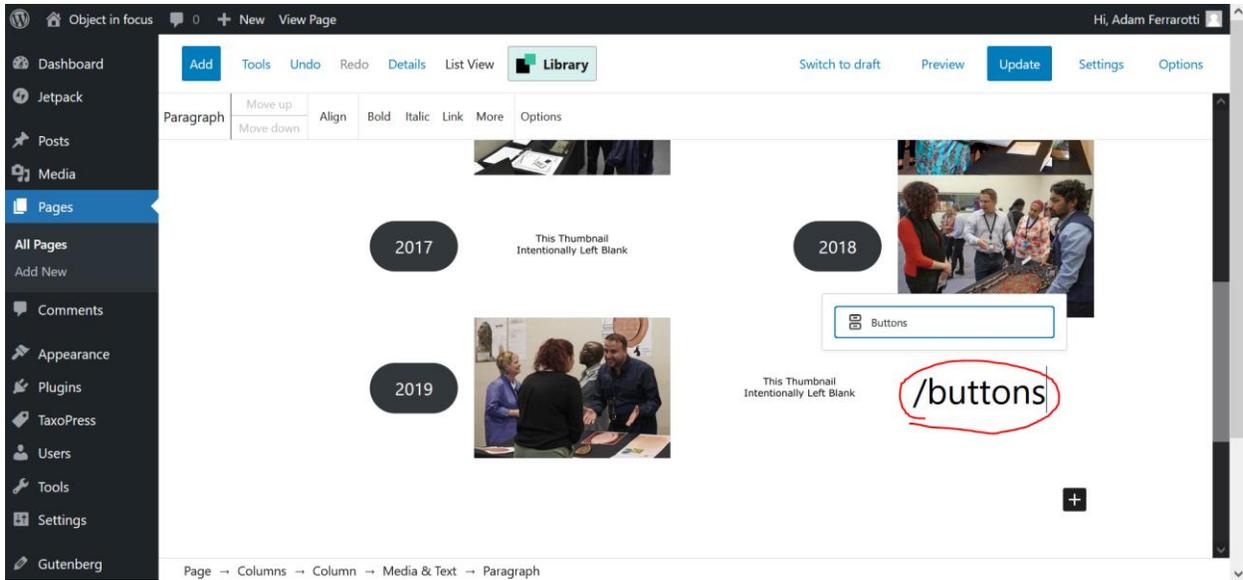
Type in the year and add a link to the gallery page.
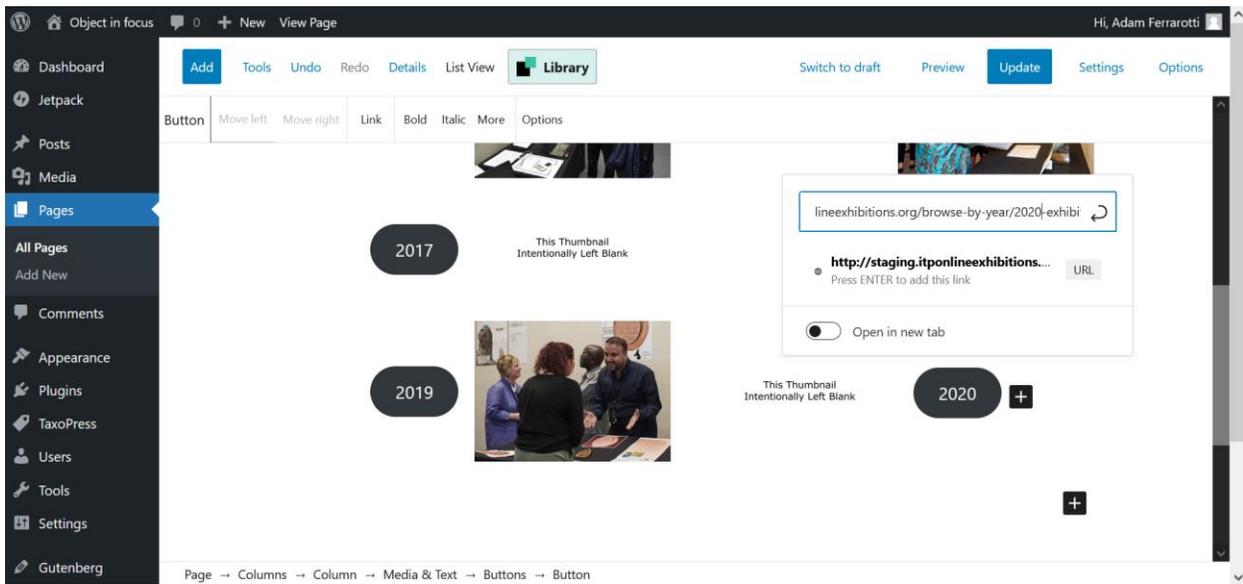
Reselect the thumbnail and select "Show media on right" in the top bar.
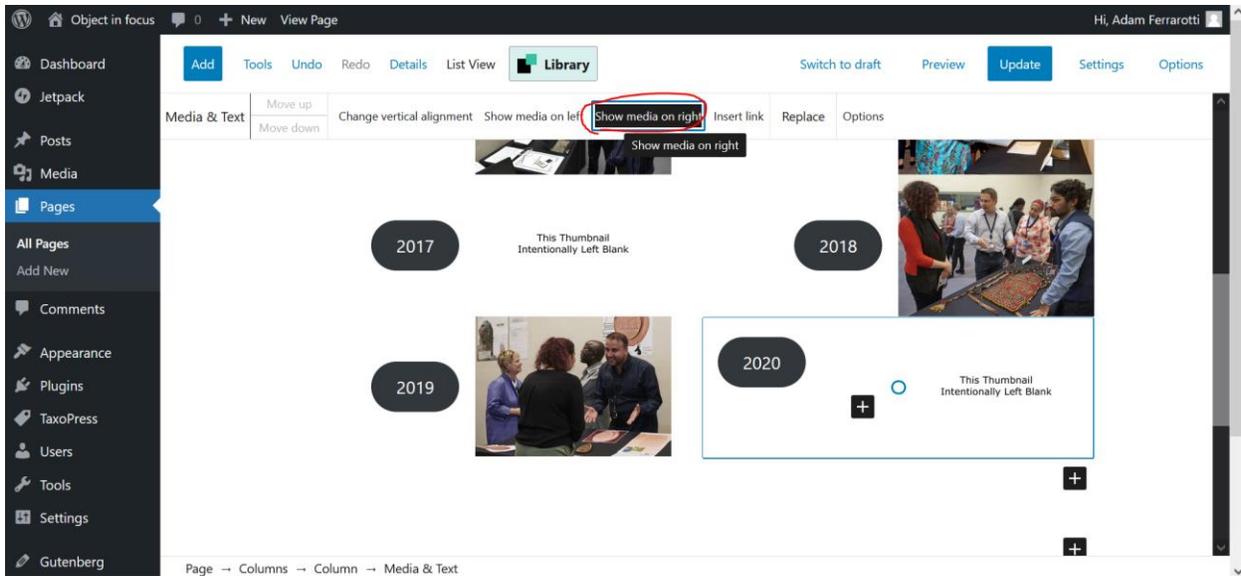
Finally, select "Insert link" in the top bar to add a second link to the gallery page accessible through the thumbnail image. Hit enter to confirm the link.
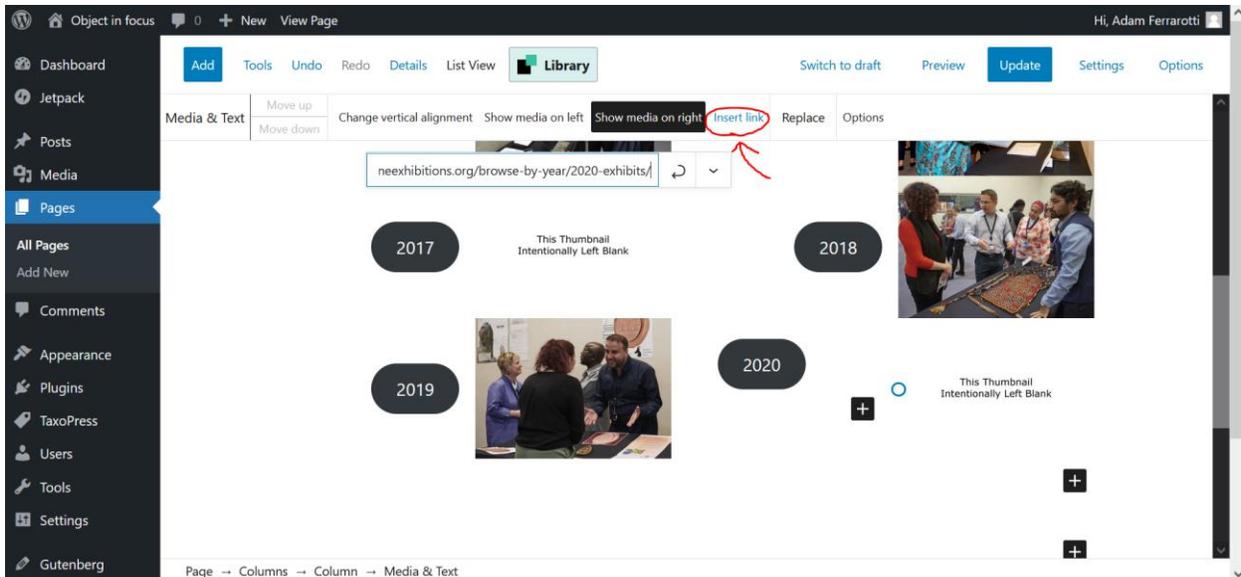
Once this is done you can update the page. Be sure to preview the gallery and parent pages to make sure all links work.

Updating the "Browse Exhibits by Region" page follows essentially the same steps. Just like the years page, the region page is also divided into separate rows of two columns each, with galleries organized alphabetically.
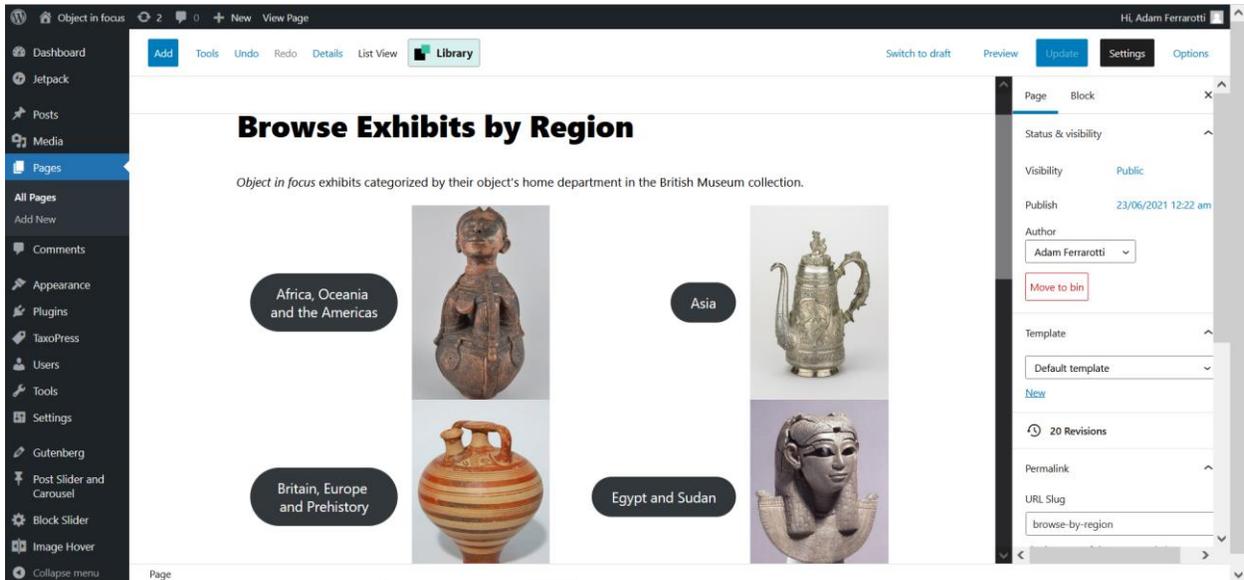
The key difference between the year and region pages is that region thumbnails are images of *Object in focus* objects from each region. These images vary widely in aspect ratio, so a few extra steps must be taken to standardize their appearance. First, after uploading a thumbnail image, turn on "Crop image to fill entire column" in the right menu. This will create a preview of the image in the right menu with a blue circle, which you can drag to change the center of the crop view. Drag this circle to center the thumbnail how you want it.
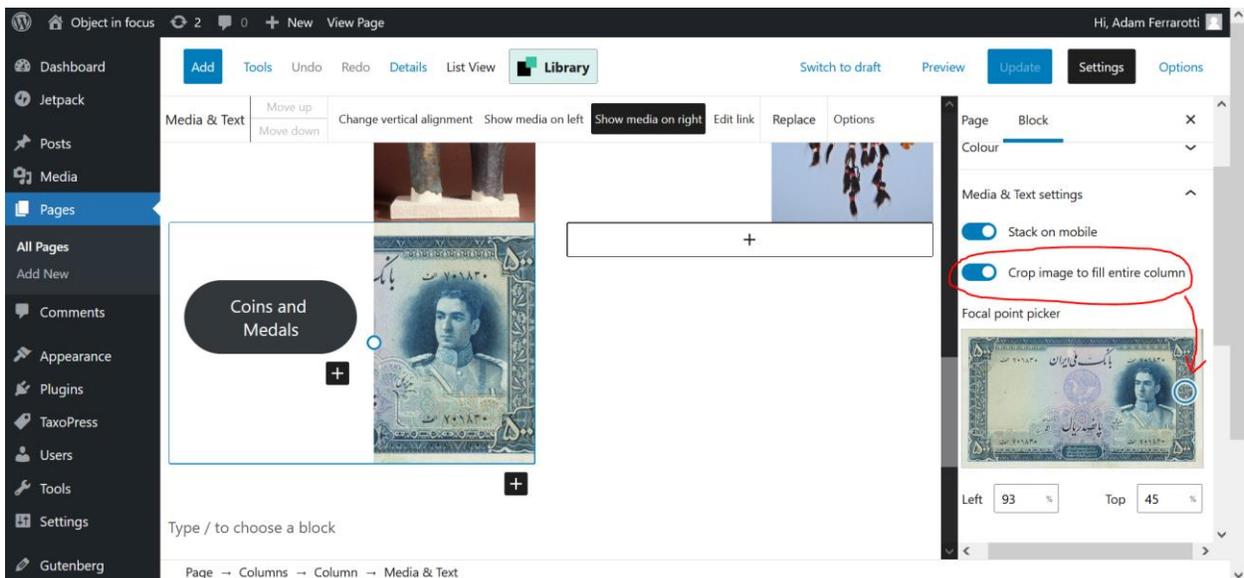
Next, set the thumbnail image's "Media Width" to 44. This can be adjusted by either dragging the small blue circle on the Media and Text block, or by adjusting the slider or number under "Media width" in the right menu.
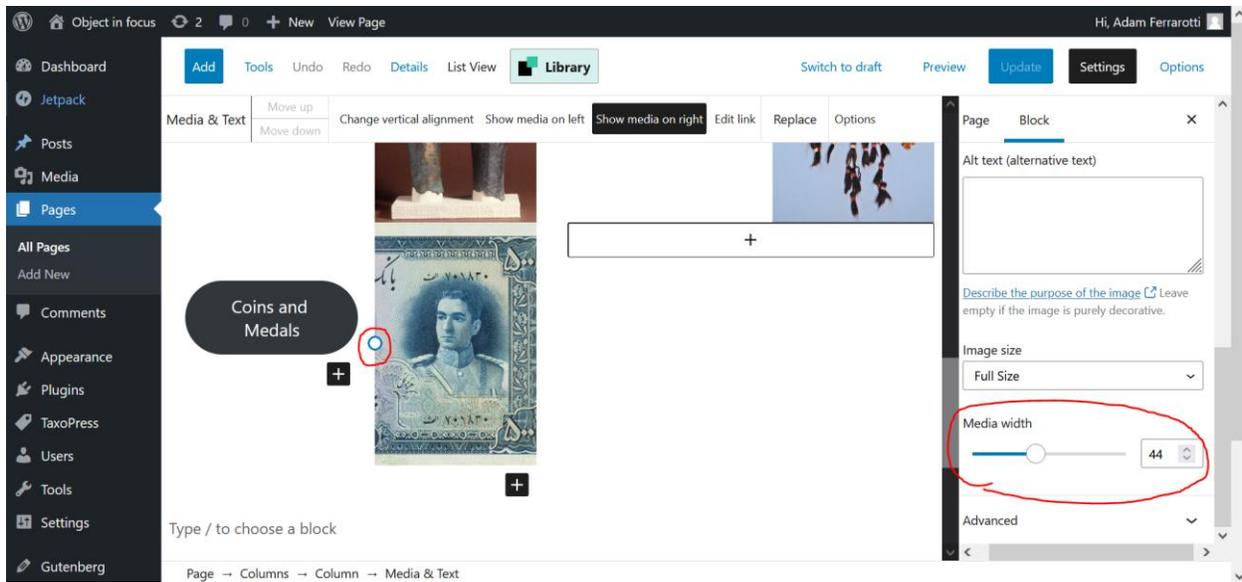
Otherwise, adding a new gallery to the regions page follows the same procedure as adding a new gallery to the years page.

How to Make an Exhibit Page

This section describes the necessary steps to build a new exhibit page. Exhibits show off fellows' *Object in focus* projects that include posters, panels, images of the object, labels, and any other extra material made. "Posts" will be used instead of "Pages" for the exhibit pages. "Posts" have built-in categories which makes it easy to sort and navigate exhibit pages on WordPress.

For this demonstration, the "Eternal Provisions for the Soul: Celebrating Life in Ancient Egypt" *Object in focus* project made by two fellows from the ITP will be used as an example. As this is an example, you may have to switch some elements of the layout to adjust to each exhibit as they all have different content (i.e., some exhibits may have the labels or other content missing or some exhibits may have extra materials to showcase). While completing these steps, be sure to click "Update" in the top right frequently to save your work.

1. Create a new post. To create a new post from Dashboard, go to "posts" and click "add new"
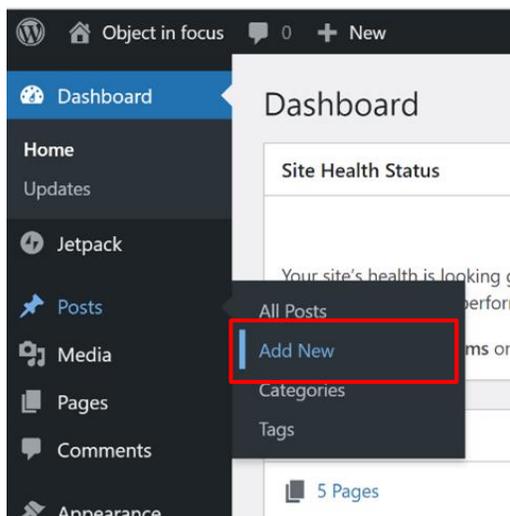
The next page to pop up should be like the one below:
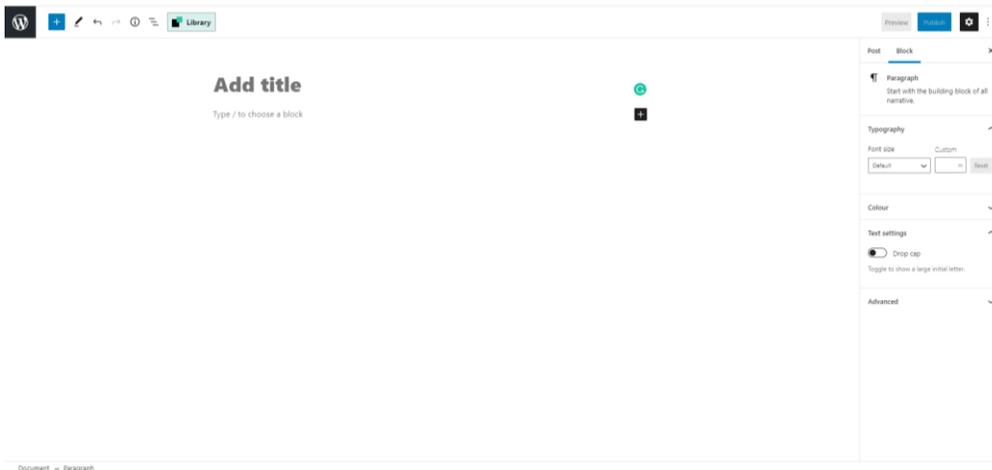
2. This exhibit has a heading (Eternal Provisions for the Soul) and a subheading (Celebrating Life in Ancient Egypt). Where it says, "Add title", add "Eternal Provisions for the Soul". Then add a subheading, by clicking the "+" button and clicking "Heading" as shown below.
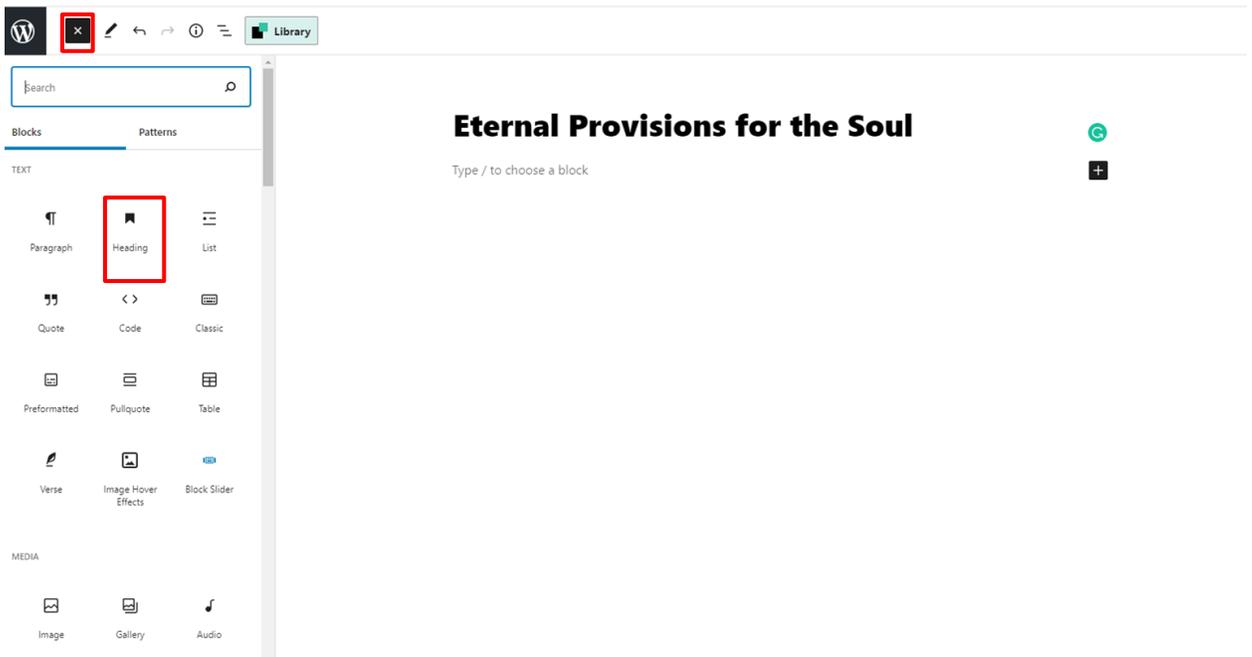
Then add the subheading of "Celebrating Life in Ancient Egypt" there. The heading has the font as "H2" which will be smaller than the title as a subheading. The heading and subheading are broken up over two "blocks" so that the slug (url) is not long.

3. Then add 2 columns with a 70/30 ratio. To add columns, go to "+", scroll down to the "Design" section to find "Columns"
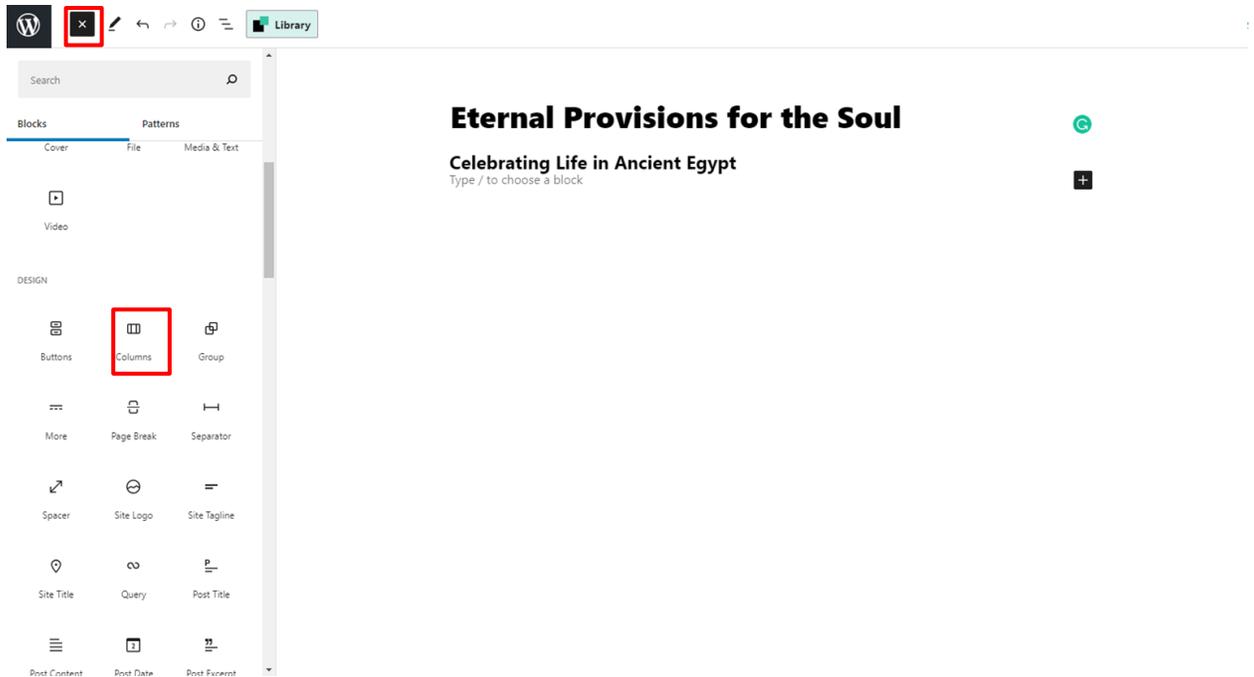
The columns block will appear as shown below:

In this case, a 70/30 ratio was chosen but you could choose different ratios if desired.

4. Next, add the poster to the left side of the column by clicking on "+" and then "Image"
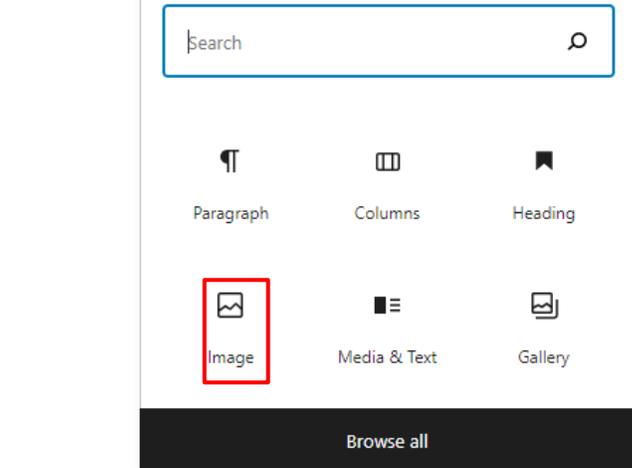
Next, the image block appears as shown below:
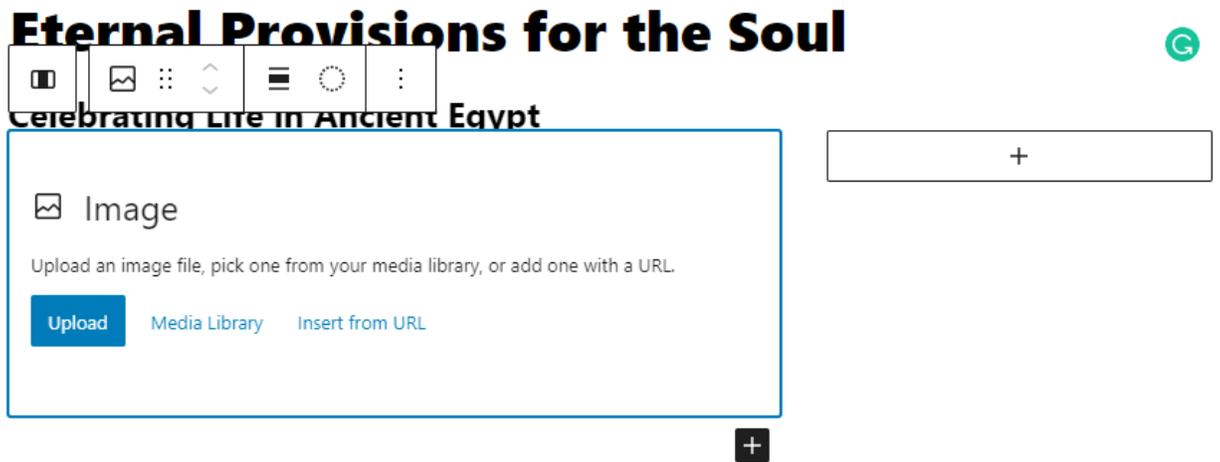
From here, click "Upload" to add the image poster. If you already uploaded it, click "Media Library" which will show all the images you have uploaded to WordPress. The images can only be .png or .jpg. Once the poster is added, add the feature "pop-up" which when the viewer clicks on the poster, it will have the poster be shown on full-screen. To

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do this, click "link" and choose "Media File" and this will create the pop-up feature for you.

The pop-up will also show the title (file name) of the image. If you need to change it, navigate to the "Media" tab from the dashboard, find the correct image, and then type a new name in the "Title" text box.
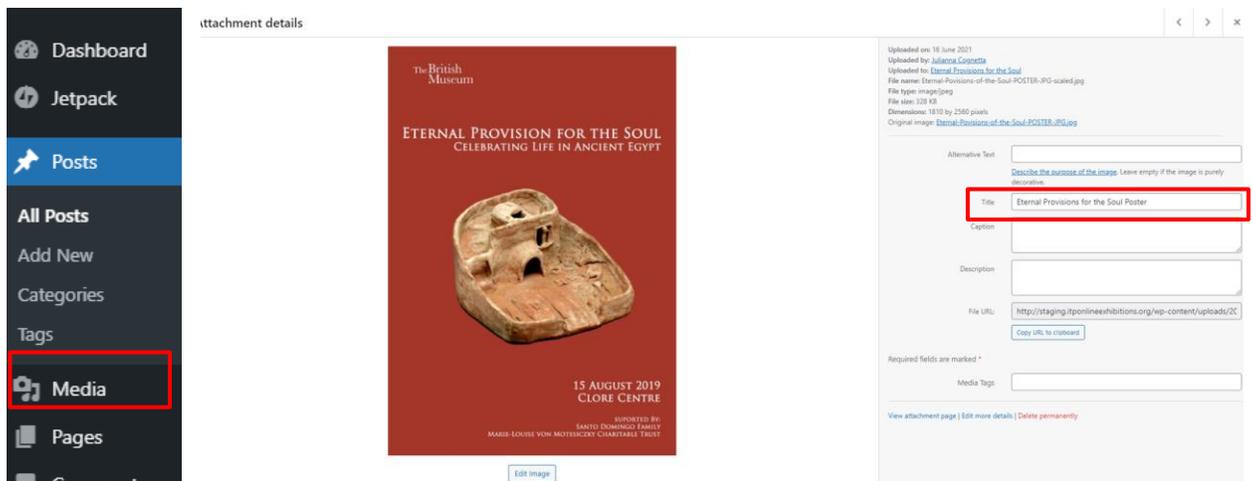
5. The right side of the poster will have 3-4 blocks to add. First, make a subheading with the same font (H2) as before. To do this, click "+" on the right side and then choose "Heading"

This heading will be called "Exhibit Curators:" (unless there is only one then "Exhibit Curator:"). To have the text centered in its column, click on "Change text alignment" and then choose "Align text centre".
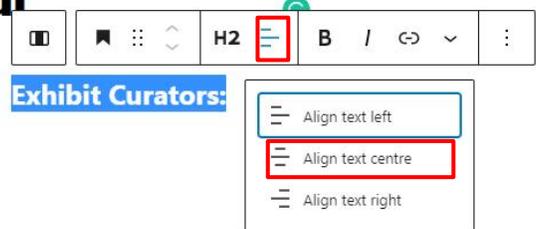
6. Next, add the two fellows who created the "Eternal Provisions for the Soul: Celebrating Life in Ancient Egypt". For each fellow, their pictures will be side-by-side with their name, country, and year. Therefore, you will need to use the "Media & Text" block. To insert this block, go to "+", search "media & text", and it should appear.
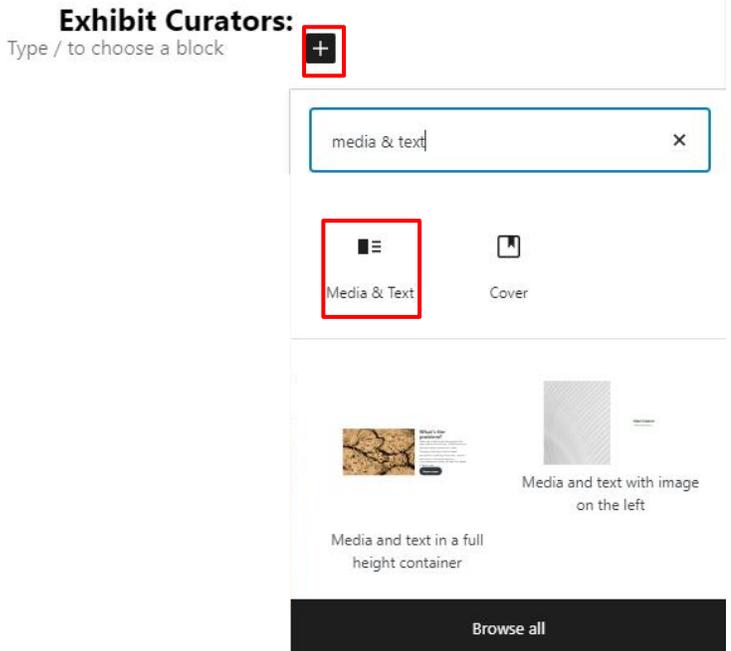
The "Media & Text" block will appear as shown below.
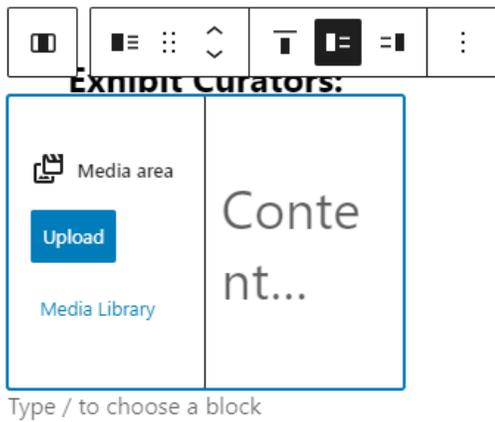
Insert the fellow image by clicking "Upload" or "Media Library" if you already have it uploaded. Next, add the fellows name on the right side of the image. After you type the fellows name, hit "shift" and "enter" to make a new text line under it without having a big space between lines. On this new text line, type the country where the fellow is from, and the year. See below for example.

Exhibit Curators:

Alsu
Akhme
tzyano
va
Uzbeki
stan,
2019

In this example, you may find the text to be larger than desired. To decrease the font size, navigate to the right sidebar, under "Block", find "Typography", and select "Small".
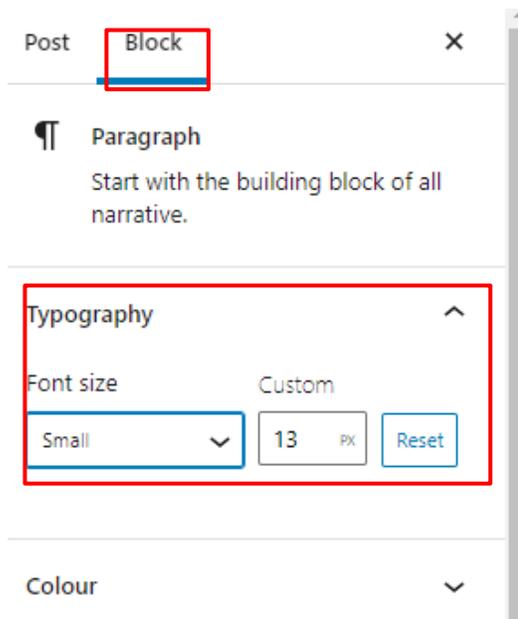
Next, add links to the fellows bios. The fellows have their pictures and bios in a directory on the ITP website (https://bmitpglobalnetwork.org/our-fellows/). This is also where you can retrieve the fellow's picture and information. To have the link bring up the two fellows instead of the whole directory, select the year (in this case "2019") and search either the title of the project or the fellow's name.
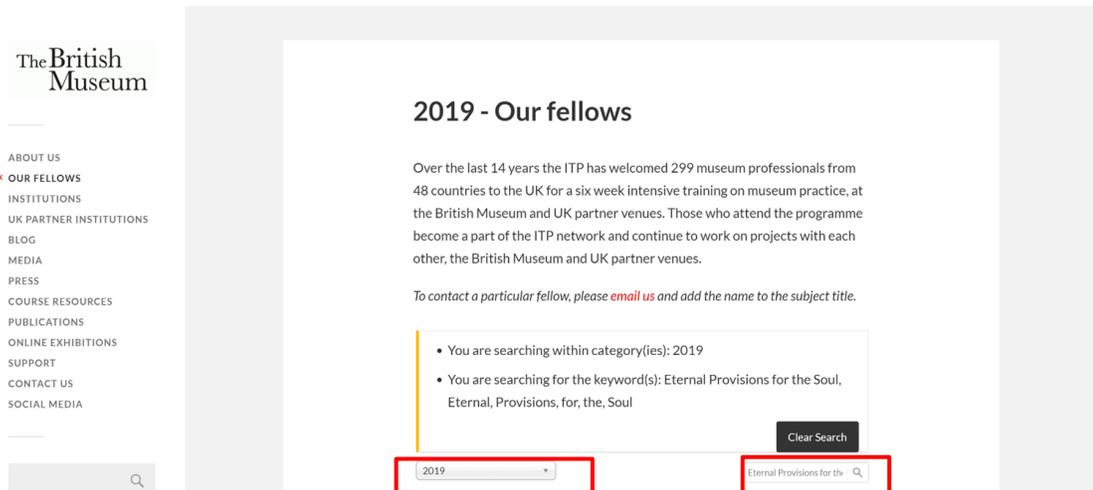
There should be a link to their bios on both their image and name. To do this for the image, select the image, click "link", enter the link, and also select "Open in new tab" since the link is to a different website. To do this for the text, select the text, click "link", enter the link, and also select "Open in new tab" since the link is to a different website.
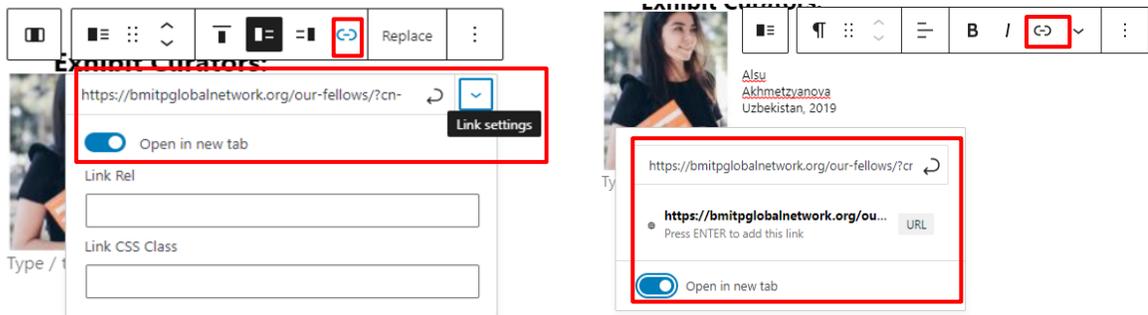
Now that the fellows name and picture is linked, change the media width to 20. This will help prevent the fellow's name from being cut off because some have long first/middle/last names. To change the media width, select the image, go to the right sidebar under "Block", find "Media & Text settings", find "Media width", and change to 20. Also, under "Media & Text settings", uncheck "Stack on mobile" because if it's not unchecked, the fellow's picture gets big, and very pixely.
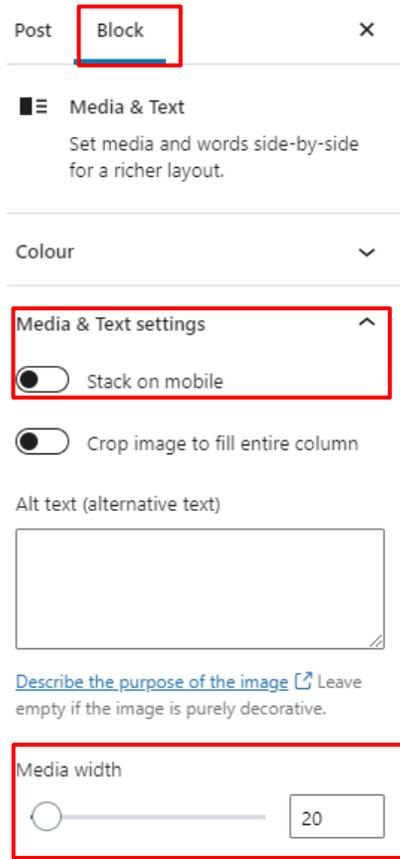
Now, you have one fellow picture and name added with a link to their bios.

7. For the second fellow, add their image and name the same way as the first fellow.

8. Now that you have both fellows added to their exhibit, add a separator. To do this, click "+", search "separator" and it should appear.
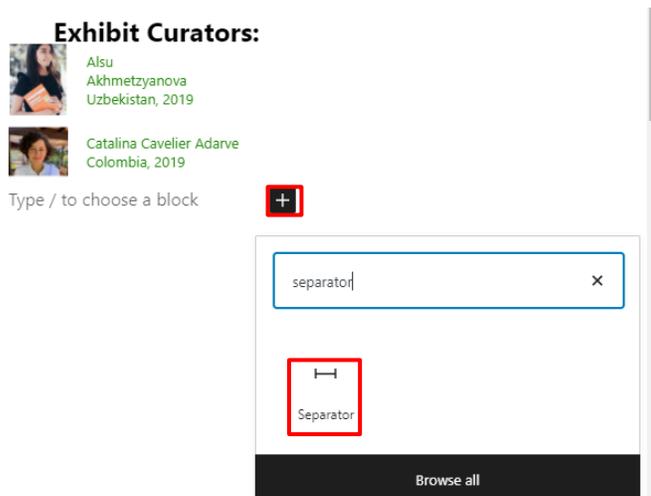
For the separator, it will originally be on "Default" so change it to "Wide Line". To do

this, navigate to the right sidebar under "Block", find "Styles", and choose "Wide Line"
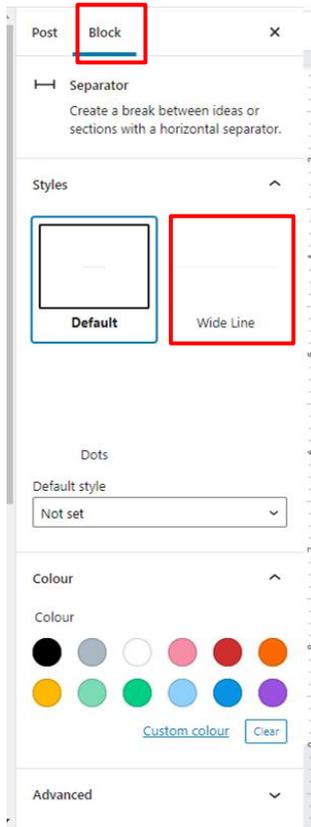
9. After you add the separator, add the images of the object provided in Dropbox. To do this, click "+" and "Image"
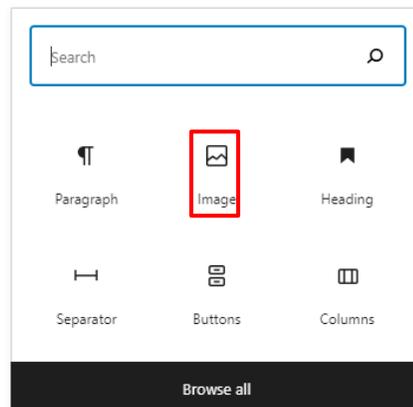
Then upload the image you want. In this case, there were two images so both were added here. If there is more, you may want to place them somewhere else. The images will also need the pop-up feature, so click "link" and then "Media File" (the same way you added the pop-up for the poster).

10. Add the second image with a pop-up feature the same way as the previous step.

11. Next, add a button called "View in British Museum Archive". To add a button, click "+" and then search "Buttons" and select "Buttons".
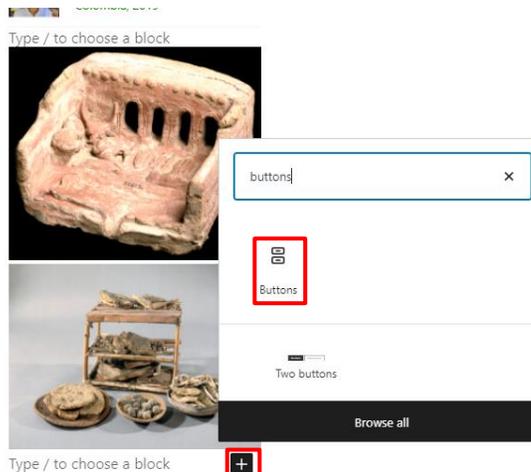
Next, type in the name of the button ("View in British Museum Archive") which would bring you to the British Museums Collection page of the object. Next, make the button colour the same as the panel/poster so find the hexadecimal colour value to use for the background colour. To change the button colours to be the same as the panel/poster, go to the right sidebar under "Block", "Colour", and then "Custom colour". Also add the link to the British Museum Archive by going to "link", enter the url, and then click "Open in new tab" as the link is to a different website.

Note: To find the hexadecimal colour value, you can use Photoshop or similar software (e.g., GIMP, etc.). Here is a quick tutorial to get the hex colour in Photoshop: https://www.youtube.com/watch?v=aALOsXVRZWo. If you have different software, you can Google to find the hex colour within the software you have.
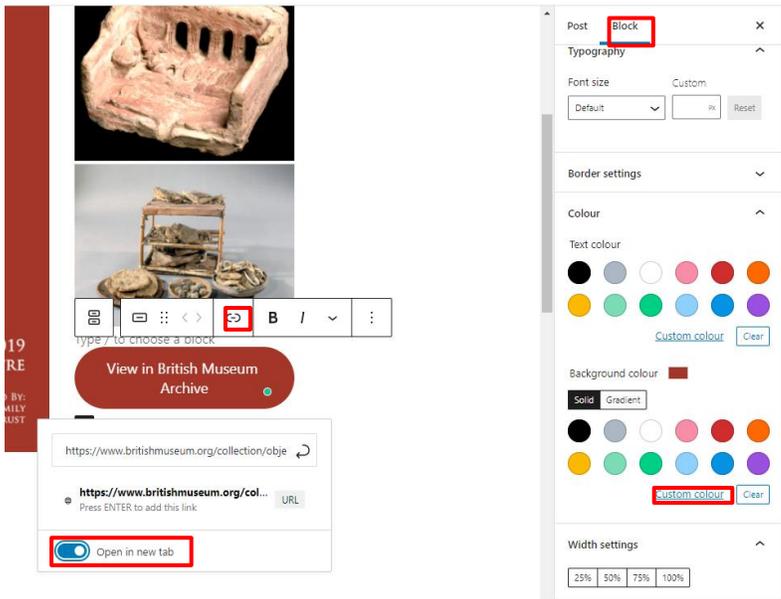
12. Now, the first 70/30 column is done. Add another column below that one. To do this, follow the same step as before by clicking "+" and then "Column".
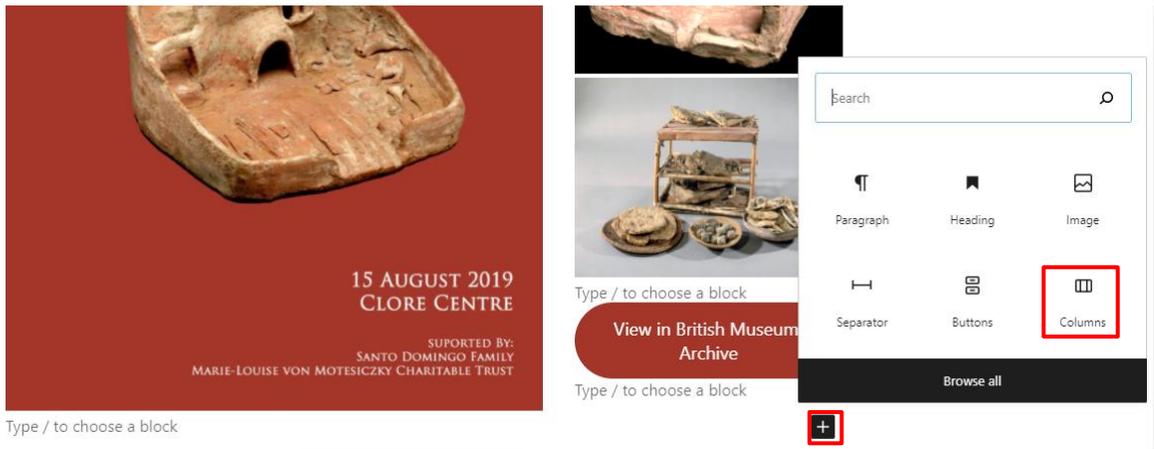

Choose 70/30 or another desired ratio.

13. On the left side of this column will be the panel. To add the panel, click "+" and "Image".
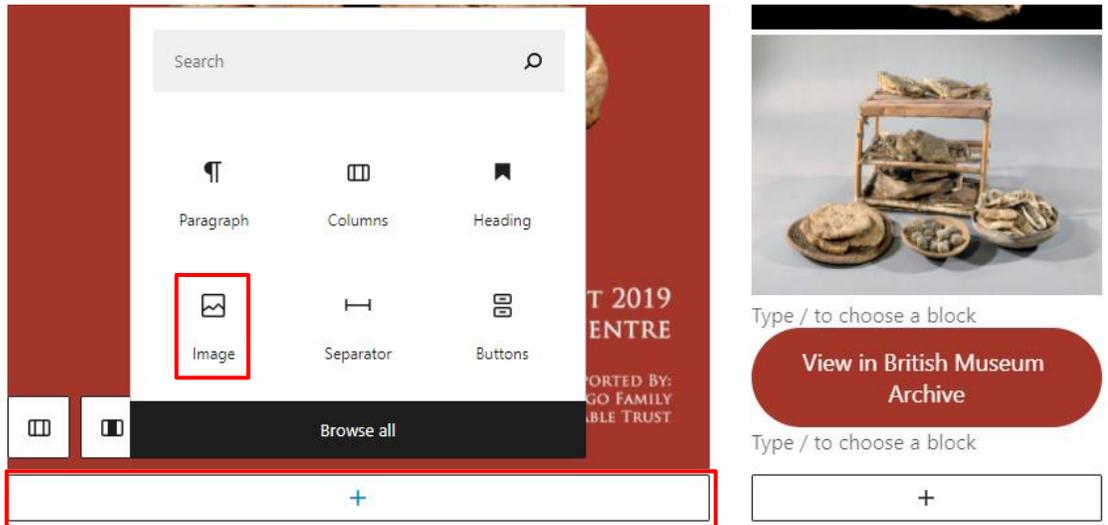
Then upload the image of the panel and add the pop-up feature (click "link" and then "Media File".

14. On the right side will be the label. You will have to manually type the label in to have control of the font. First, add a paragraph.
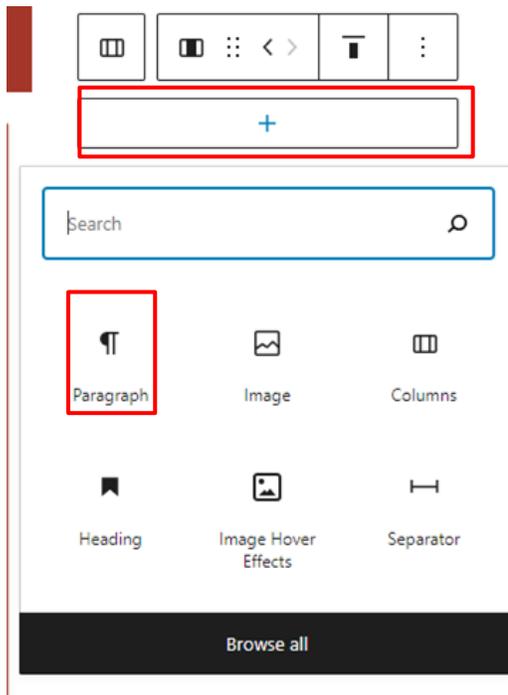
The words should match the label. The label had a heading, so we changed the font to "Normal". For each section/paragraph after the heading, add a new paragraph. These sections/paragraphs should have a font size of "Small". Next, make the colour the same

as the panel/poster so find the hexadecimal colour value to use for the background colour. This colour will be the same as the one used for the button to the British Museum Archive. The font colour was changed to white.
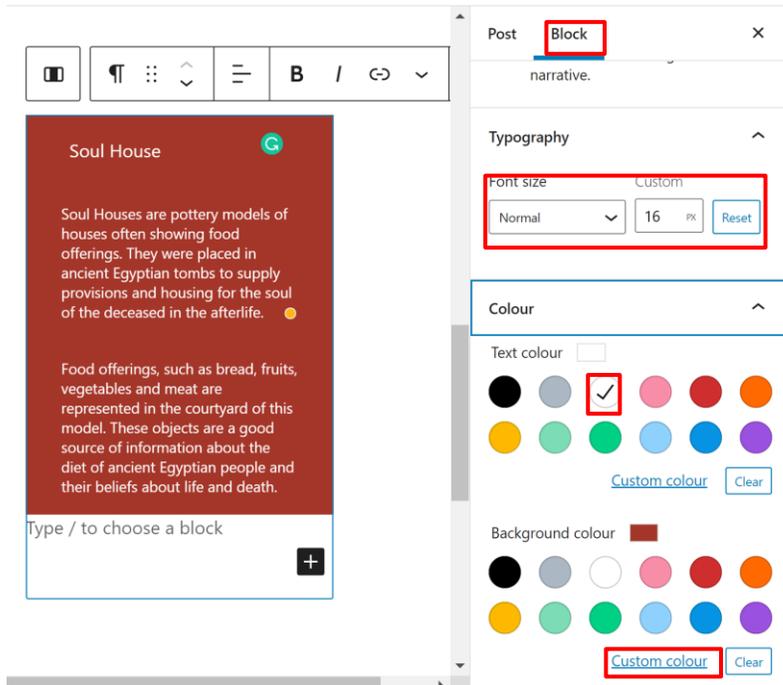
15. The right side column should be aligned in the middle of the panel. To do this, click the column, then click "Change vertical alignment" and "Align middle"
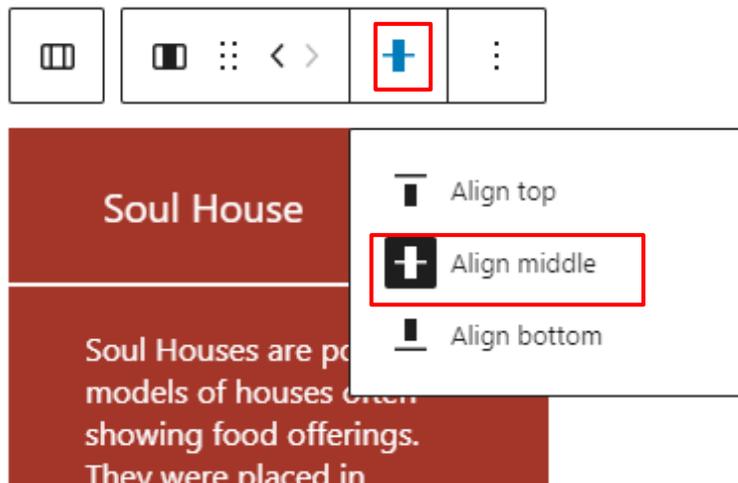
16. The exhibit page is almost done. Click out of the columns and add a new heading.
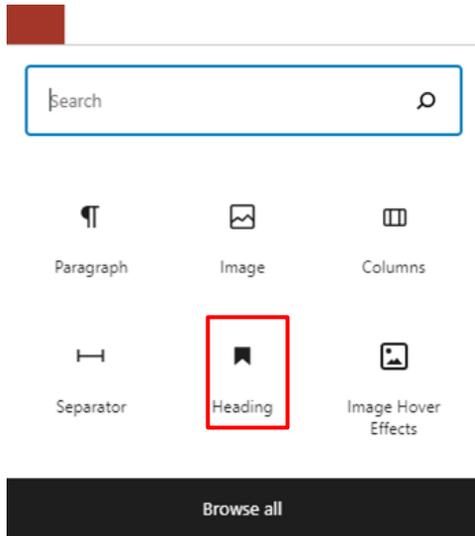
Name this heading "Explore More:". Also make the text centered by clicking on "Change text alignment" and then choose "Align text centre".
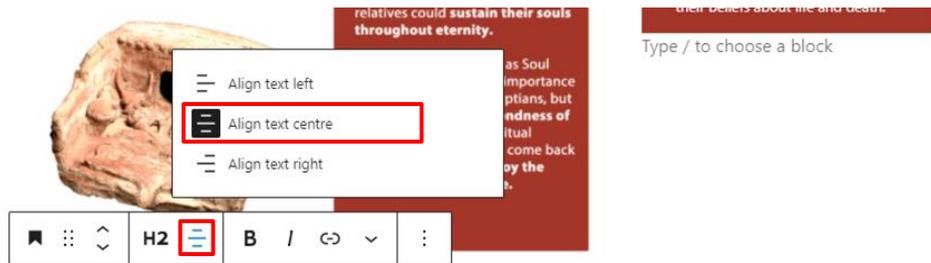

17. Now we want to add two buttons so we made two columns with a 50/50.
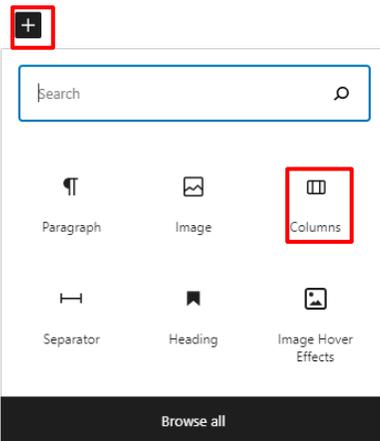
Choose 50/50.

18. To add a button on the left side, click "+", search "buttons", and it should appear.
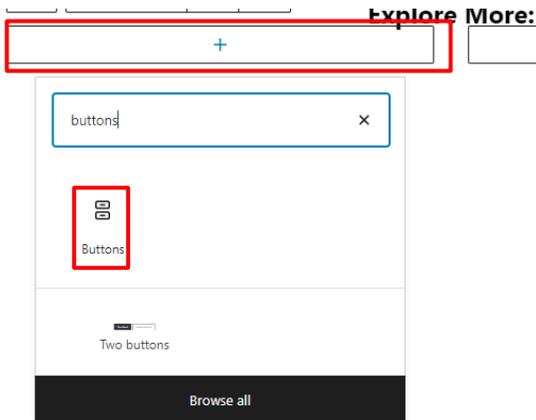
Name this one "More from 2019". We wanted this button centered in the column. To do this, click on the column, click "Change item justification" and then "Justify items centre". You may change the colour if you want or leave it standardized on all exhibit pages.
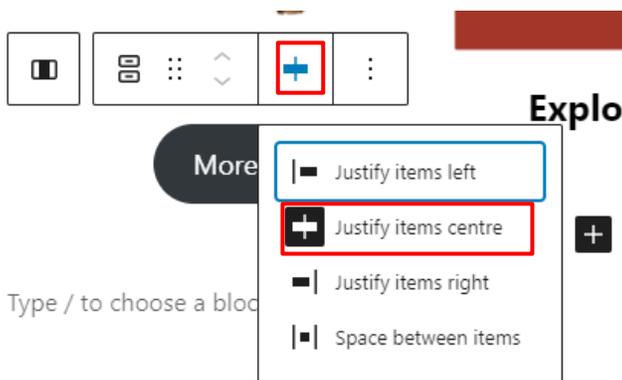
Now to link the button to the 2019 gallery, click "link" and enter the link.
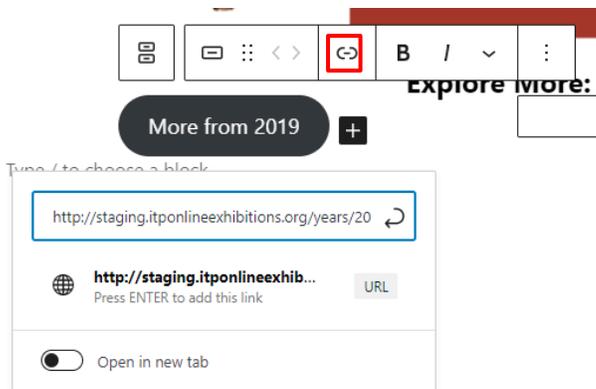
Since this is linking to a page on the same website, we did not click "Open in new tab".

19. Create another button called "Find exhibits from other years" the same way as the previous step.

20. The exhibit page layout is done. Now we need to add categories. To do this, go to the right sidebar and go to "Post". Under "Post", find "Categories" and select the year (in this case "2019") and the British Museum Department which is "Egypt & Sudan" in this case. Also, add the poster to "Feature image" which will show up on the gallery pages.
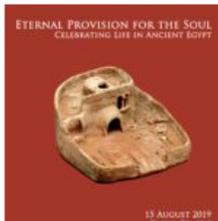
Also under "Post", add an excerpt that says, "Curated by: [fellows names] (year)". This will allow their names and year to show on gallery pages. Right below "Excerpt" is a "Discussion" section that has "Allow comments" and "Allow pingbacks & trackbacks".

Make sure these are unchecked.

This was the step-by-step process for uploading new exhibit pages to the *Object in focus* online exhibition.

Quality Control Checklist

The following checklist is to be used for quality control for exhibit pages to make sure all the information is uploaded, accurate, and similar in layout to the other exhibit pages.

- Is the title correct?
- Is there a subheading?
  - If so, is it beneath the main title?
- Is the poster displayed on the exhibit page?
  - Is it on the left side of the column (70%)?
  - Does the image link to "Media File"? (this will let it pop-up when clicked)
  - Is the title of the image correct? (the pop-up shows the title)
    - This can be edited under the "Media" tab
- Are the fellow(s) displayed on the exhibit page?
  - Is the "Media width" at 20?
  - Is the font size on "Small"?
  - Is "Stack on mobile" unchecked?
  - Does it have the correct link?
    - Make sure the link is on the image and the text
    - Make sure the link opens a new tab
- Is there a separator under the fellow(s)?
  - Is it on the "Wide Line" setting?
- Are all the images uploaded from Dropbox?
  - Does the image link to "Media File"? (this will let it pop-up when clicked)
  - Is the title of the image correct? (the pop-up shows the title)
    - This can be edited under the "Media" tab
- Is there a button to "View in British Museum Archive"?
  - Are the button colours the same as the text box colours?
  - Is the link correct?
    - Make sure the link opens a new tab
- Are the panel(s) all uploaded?
  - Does the image link to "Media File"? (this will let it pop-up when clicked)

- - ○ Is the title of the panel correct? (the pop-up shows the title)
    - ■ This can be edited under the "Media" tab
- Is the extra material(s) all uploaded?
  - ○ Does the image link to "Media File"? (this will let it pop-up when clicked)
  - ○ Is the title of the panel correct? (the pop-up shows the title)
    - ■ This can be edited under the "Media" tab
- Is the label typed out?
  - ○ Does the text box background colour match the colour in the poster/panel?
    - ■ This colour should be the same one used for the fellows hover image
  - ○ Is the heading of the label on the "Normal" font?
  - ○ Is the main text of the label on the "Small" font?
- Are there two buttons (more from [same year] and find exhibits from other years) to "Explore More" at the bottom of the page?
  - ○ Are they the correct links?
    - ■ These don't have to open in new tabs since the links are on the same site
- Are the categories correct (year and regions)?
- Is there a featured image (should be the poster)?
- Does the excerpt say "Curated by: [fellows names] (year)"?
- Is the "Allow comments" and "Allow pingbacks & trackbacks" turned off?