

Adobe's Content Authenticity Initiative Curriculum

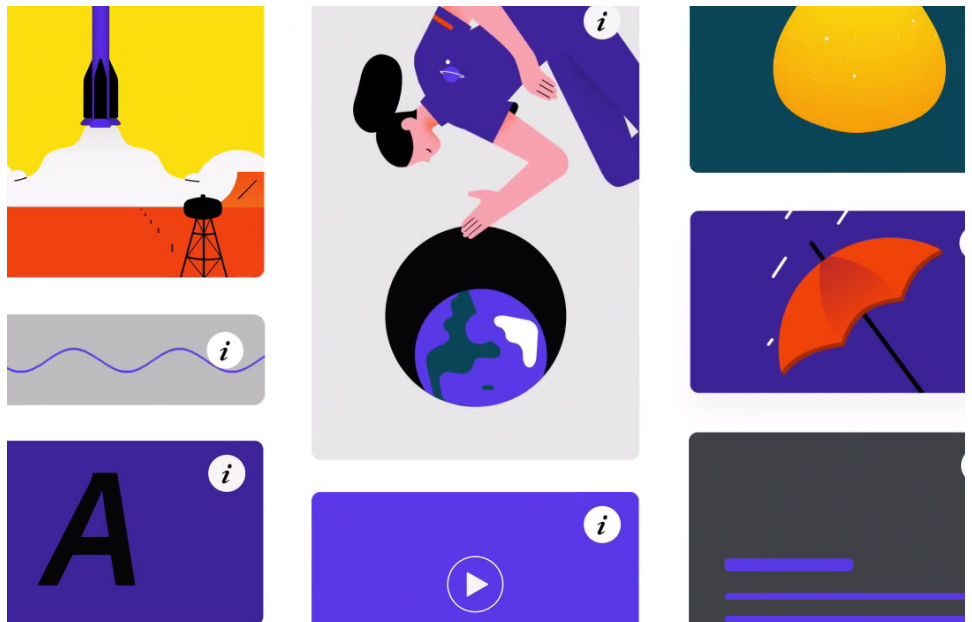
Images with Integrity

How the CAI works

- 1. Capture** - When an image is captured, we use cutting-edge technology to secure the image and protect its metadata from manipulation. The user can preserve all attribution and/or redact certain fields for anonymity/security reasons.
- 2. Edit** - Any subsequent changes made to an image or its metadata using editing tools (cropping, toning etc.) are securely captured, creating a history of what was done (or not) to an image.
- 3. Publish** - Working with publishers and their CMS systems - in both traditional and social media - the image history and metadata are preserved through the publishing process.
- 4. Trust** - By making the image history and metadata public facing, consumers of digital content will now see and understand where an image came from and what was done to it along its journey.

In this resource, you'll explore the **Adobe-led Content Authenticity Initiative (CAI)**; you'll become familiar with the initiative's goals and learn why its mission is so important.

You'll also gain access to everything you need to promote a similar message in your own classroom.



What is CAI?

The Content Authenticity Initiative (CAI) is a group of hundreds of media and technology companies (and others) working together to fight misinformation by adding a layer of verifiable trust to all types of digital content, starting with photo and video, through provenance and attribution solutions.

The CAI was announced by Adobe in 2019 in partnership with Twitter and the New York Times.

The initiative is focused on cross-industry participation, with an open, extensible approach for providing media transparency that allows for better evaluation of content provenance.

Foreword and expert insights from Dr. Kim Beil

Start by reading the following essay by Dr. Kim Beil, Associate Director at Stanford University. This essay provides a useful introduction to a number of relevant topics, including: the history of modern photography, the value of creating authentic content, and the importance of the CAI's mission statement.



Dr Kim Beil is a scholar of visual culture, with an emphasis on the history of photography. Her book, *Good Pictures: A History of Popular Photography*, looks at 50 stylistic trends in the medium since the 19th century.

In prior research, she has focused on the relationship between color photography and modern architecture, and on the use of blur to represent speed and individuality in automotive advertising. She writes frequently about contemporary art and publishes in *Artforum*, *Art in America*, *X-TRA*, *Contemporary Art Quarterly*, as well as scholarly publications including *Afterimage*, *Museums and Social Issues*, and *Visual Resources*.

The first public announcements of photography in 1839 were greeted with awe. Viewers marveled at the photograph's level of detail and accuracy, unimaginable in earlier artistic renderings. Edgar Allan Poe declared that the photographic process was "infinitely more accurate in its representation than any painting by human hands" (Poe, 1840, *The Daguerreotype*). In comparison with prior means of representing the visual world, all of which required an artist's intervention, photography seemed to simply reflect the world as it was, like a mirror.

The English inventor William Henry Fox Talbot described his photographic method as "the process by which natural objects may be made to delineate themselves without the aid of the artist's pencil" (Talbot, 1843, *Some account of Photogenic Drawing* ...). He even captioned one of his architectural photographs: "the first building to have drawn itself." Photographs seemed to almost make themselves.

Nineteenth-century commentators like Talbot and Poe emphasized the mechanical nature of photography because it appeared to eliminate the need for artistic interpretation and the possibility of manipulation or distortion. Photography was praised for its objectivity and photographic images soon came to be associated with absolute truth.

Some of this faith in photographic truth lingers today, even if contemporary viewers are also more familiar with the ways that photographs may misrepresent their subjects. Despite this growing awareness, the demand for photographic testimony seems only to have increased.

The popular adage "you have to see it to believe it," once suggested that a viewer needed to witness an event in order to trust in its occurrence. Now, the demand for in-person visual witnessing has been replaced by "pics or didn't happen." This paradox between utter faith in the image and widespread understanding of its openness to manipulation is at the heart of visual culture today. It's what makes memes funny and it's the engine of Insta-envy.

In some situations we easily recognize that an image is being used out of context, such as the *Disaster Girl* meme. But in others, we are drawn into the image, either because we trust its source or its statement, whether it's a friend's luxury beach vacation or a political demonstration. Becoming critical viewers means that we have to pay close attention not only to images, but also to their contexts, including who made or shared the image and why.

Broadly speaking, there are four main areas that can help us make sense of the digital world and fight the scourge of misinformation and misleading imagery that plagues online sources. These areas of focus are: **Education**, **Detection**, **Regulation**, and **Provenance**.

Education centers around media literacy and teaching consumers of digital information how to cross-check sources and identify bad actors. In some countries, this process begins in primary school and carries on through the formal education process, while in other regions media literacy is barely mentioned.

Detection involves running suspect imagery through complex algorithms that look for tell-tale signs of manipulations (inconsistent pixel patterns, varied lighting sources, etc.)

It can be very useful and the technology is developing fast, but looks likely to become an 'arms race' whereby bad actors try to stay one step ahead of the detection software.

Additionally, detection software is unlikely to become scalable enough to address the billions of images generated every day.



Regulation involves governments and other authorities codifying best practices and, in some cases, criminalizing deliberate and harmful use of technology to misrepresent events (deepfake pornography, for example, where images of people's faces are synthetically superimposed onto scenes).

Provenance is the verifiable chronology of digital content, including its origin and subsequent history. Understanding the provenance of digital content involves securing metadata and tracking what is done to an image (or other media type), following its journey from creation, through editing, and ultimately, to publication.

Four focus areas to fight misinformation

EDUCATION
Better Media Literacy

DETECTION
Automating detection of suspect imagery

REGULATION
Legal routes to codify best practices

PROVENANCE
Verifying the authenticity of content

The **Content Authenticity Initiative (CAI)** is an Adobe-led collaboration between media organizations and technology companies to provide an open system that can verify the provenance, or history, of digital content.

An image made using CAI will securely record the location and time when the photograph was taken, as well as information about the camera settings. The CAI also captures any changes subsequently made in the editing process (cropping, toning etc.)

When the photograph is published or shared, some or all of this information will be easily available to viewers, who can use it to understand where the picture came from, as well as what (if any) changes were made to it along its journey.



Evaluating image integrity

Photo editors have long relied on this kind of information to assess the integrity of the images they publish. **'Image integrity'** describes a photograph that represents a scene completely and without any alterations that violate its original appearance.

Some publications, such as the National Geographic, require that photographers file their entire take, which can be tens of thousands of images, along with their 'selects,' or preferred images. Photo editors review all of these in order to find pictures that tell the story most completely and accurately.

Most news organizations don't have time to review every single picture. Instead they rely on relationships with photographers that they have forged over a period of years or who come recommended by other trusted photo editors.

“Just don't touch it! Don't touch anything. Just send us what came out of the camera.”

Brent Lewis, NYT photo editor

MaryAnne Golon, the Director of Photography at the Washington Post, recalls that during the Russian invasion of the Crimean peninsula she'd received a recommendation for a photographer working in Ukraine. "But," she said, "I don't want to have somebody in a hostile situation or in a war zone situation or any kind of situation, for that matter, who I don't know and trust. So I interviewed him on the phone. I went through his work. Then our Berlin bureau chief, who was doing reporting there, went and met with the photographer. I said, I need a gut check here. Because this is not the kind of thing that I take lightly."

In breaking news situations, photo editors sometimes publish images submitted by bystanders or citizen journalists.

Brent Lewis, a photo editor at the New York Times, says he often goes back to these amateur photographers and asks for their raw files to ensure that the photograph is truly unaltered.



For example, he says: "If the light looks a little too right for this to be outside and the metadata says it's at noon, but this [photograph] looks like it's definitely evening light. Then, we need to talk about that."

Lewis also seeks out photographs of the same event from other sources, especially videos, which might have captured a greater arc of the action and can help confirm the integrity of individual photos.

Without access to raw files, photo editors like Lewis look closely at the photos themselves to make sure that they have not been altered in any way. On the surface level, he says, if something looks too good to be true, it probably is. Lewis also looks up close and at the edges of images that look too pixelated and might be oversharpened.

He implores people who submit news photos to his desk: "Just don't touch it! Don't touch anything. Just send us what came out of the camera."

Lewis holds citizen journalists to the same standards as professionals when their photographs are going to appear in the New York Times.

According to the National Press Photographers' Association (NPPA) Code of Ethics, "Editing should maintain the integrity of the photographic images' content and context." Changing pixels, such as moving elements in a photograph or even combining multiple photographs, is never allowed in photojournalistic work.

Subtle alterations, such as toning, are sometimes necessary to correct exposure or white balance. The documentary photographer Gabriella Angotti-Jones notes that historically the photographic industry has privileged lighter skin tones and she has to be mindful of these limitations when photographing people with darker skin tones.

She explains that in the middle of the twentieth century, Kodak distributed sample prints to help local labs color balance

customers' color film. Those sample prints came to be called 'Shirley Cards,' named after the white model who appeared frequently in the images.

Angotti-Jones says: "It was super-racist because it wouldn't give any depth to darker skin tones and it wasn't actually until, I think, a bunch of chocolate companies complained. They complained to Kodak because the detail of the chocolate wasn't showing up. So, [Kodak] changed their formula a little bit, but it still wasn't good [at depicting darker skin tones]."

Even when using digital cameras today, Angotti-Jones pays particular attention to skin tones in her own photographic work. She exposes for the shadow areas of the image, because the dynamic range of many sensors is still limited and tends to render darker skin tones as flat and washed out if she doesn't expose for them intentionally.

“ ***Editing should maintain the integrity of the photographic images' content and context.*** ”

***National Press Photographers' Association
(NPPA) Code of Ethics***

Lynn Johnson, an independent photographer, says that when toning she relies on a sensory memory of the scene. She explains: "Sometimes I can just smell it. You're in a smoky space where maybe the mother of the house was cooking over an open fire. It's just like a body memory. A lot of photography is [...] very physical. And that includes the sense of light and the sense of color."

Angotti-Jones agrees; she also learned to take in the scene with all five senses. To practice identifying the color of light while photographing, Johnson suggests testing out how it affects objects of different colors in the scene.

Stan Alost, a professor of photojournalism, recommends photographing your own hand in different lighting situations. Both of these techniques provide a baseline, which can supplement a photographer's memory of a scene.

Establishing facts in the field

Questions of image integrity arise long before a photograph is published. Photojournalists do extensive research before embarking on an assignment, but they also need to weigh the truth of the information that they learn from local sources.

Johnson, who often photographs for National Geographic, says this means inquiring after a person's motive: "When I meet a new person or enter into a new situation, [...] I just want to listen and try to understand who that person is and why they might be allowing us into their life and their home, because, you know, it's never a simple reason."



Johnson encourages people to open up to her by doing the same herself. She describes her motivations for photographing them and what impact she hopes the story will have. In turn, she finds that they are more willing to reflect on their own rationale. Understanding their intentions helps Johnson identify what they hope to gain from sharing their story and, therefore, any biases that might shape the story they tell her.

Johnson also advises triangulating between local sources in order to verify information. Like Lewis' use of multiple photographs, Johnson tries to find several people who will tell the same story in order to corroborate its claims. She explains: "You need at least three or four sources, but if you're in a culture that you don't understand and you're using the help of an interpreter, that person is the key."

Johnson continues, revealing the enormous challenges of authenticating information in order to represent a situation accurately: "That person who's helping you interpret language, intention, culture, landscape: that person is helping you find individuals that hopefully represent the issue that

you're trying to document, and that person brings their bias. So you have your bias; you have their bias; you have the editor's bias; you have the bias of the culture you're working in." Being aware of these layers of partiality is critical to reporting and photographing a story with integrity.

The independent photojournalist Sebastián Hidalgo has deepened his own understanding of current issues by focusing on one area: working-class communities of color. He is steeped in research about the communities he is photographing, but he also knows these people and places intimately, because they are like the community where he grew up. He's always looking to learn from the people he's photographing, because he finds that academic research and statistics are often limited to diagnosing problems or shortcomings.

He says, "You know this data set would say, 'the majority of these people are living in poverty,' but if you talk to the people that's referring to, they might have a different understanding of what [poverty] is. Like, 'Yeah, I classify as this, but I have a lot already. I have enough to put food on the table. That's what's important to me.' That is information that is extremely valuable. If you're looking at it through a solutions lens, you can determine, yeah, people live in poverty, but they also have their own solutions. They have their own definitions of what affordable housing looks like. You dig deeper and deeper and deeper."

Ron Haviv, a photojournalist who works with the VII Photo Agency, points out: "You're doing journalism while you're photographing. So often photographers kind of forget about the journalism part of that equation. Your obligation is to be constantly speaking with people, understanding what's going on and figuring out how that relates to the photographic representation."

Similarly, James Estrin, a staff photographer who also writes frequently for the New York Times, says: "Anyone who's a photojournalist is also a reporter. You can do research on the web, but the best way, if you're writing a story, is to talk to sources. Develop sources, talk to real human beings. That's where you get the most important information."

According to the NPPA Code of Ethics, photojournalists are expected to avoid influencing the events that they photograph. This means they must resist staged photo opportunities, but also avoid more seemingly simple interventions, such as asking a person to look away from the camera or moving a distracting object out of a scene.

Haviv says: "You're there to basically be an observer, to influence the situation as little as possible, with the understanding that the viewer knows that you're there, but you're trying to show them the reality as it appeared before your eyes."

Golon recalls a situation in which one of her photographers was doing a story on a woman who was awake exclusively during the night and slept all day. Trying to improve the nighttime pictures, the photographer asked Golon if it was permissible to turn on a light in the woman's home. Golon decided that, no, turning on the light would alter the scene. Instead she suggested: "Wait for your moment, because a door will open and light will shine into the kitchen. You have to be positioned in the place to get that light when that light shows up. Or, when Mom lights her cigarette: there's going to be light in the room. It's about being patient and waiting and positioning yourself in such a way where you've seen things happen before that are likely to happen again."

Photojournalists have to work closely with their editors in order to establish these professional boundaries. Lewis frequently texts with his photographers in the field. He says they can reach him at any time, day or night, with questions or to review images in process.

Golon has built long-term relationships with each of her staff photographers and talks through potential issues that they encounter in the field as the story is evolving, as well as when the story is edited for publication.

As Johnson insists, "Your integrity is really all you have. If people want to have a long career and have a credible voice, then staying true is a critical path."



Ethics and aesthetics

The way photographs look powerfully influences the way that viewers understand the stories they tell. For established photojournalists, reflecting on how they see the world and how they choose to represent it in photographs is crucial to creating effective pictures with integrity.

Haviv says: "Some photographers think that you should just be essentially like a surveillance video; you show up, you just point the camera at whatever's in front of you, and you move on. I am of the belief that aesthetics are incredibly important. [...] My idea is that I want to engage the viewer through the use of the aesthetics so that they have an emotional connection to the image." Haviv uses strong color and composition to engage viewers, making the photograph and the scene that it shows unavoidable to look at.

Tamir Kalifa, an independent photojournalist who works frequently with the New York Times, also thinks deliberately about what his photographs look like. He avoids using long lenses in his work, preferring to be close to the people that he's photographing and to get their permission when possible. For him, this approach creates a more authentic photograph, especially of people who have endured trauma. He says: "I gravitate towards photography with a human touch. I do think it's clear when photographers have connected with the people being photographed."

James Estrin recommends that photographers think of themselves as taking on the role of the host when they photograph, especially when working in private homes. Like a host, the photographer is responsible for creating a decent experience for those who've allowed him into their space. While Estrin wouldn't ever allow someone he's photographing to buy him lunch at a restaurant, the rules are different in a private home. He asks: "Depending on the way you interpret ethics, you shouldn't take anything right? Well, no. What is the value of insulting someone?"

Estrin explains: "I'm trying to find my own moral compass, my own human compass in the way I interact with people. That's more and more valuable as time goes on for me. And it's more and more what I love about what I do as time goes on." Learning how to interpret the rules in different situations, and working closely with an editor on all of these questions, is crucial for photojournalists at all stages of their careers.

Kalifa believes that it's important to spend time with people and to look beyond the stereotypical pictures that are often

used to sum up an issue in a single shot. He describes a recent assignment he had from the New York Times to show how lower-income communities were affected by Covid-19.

He recalls: 'When I'm in these places, there are a lot of very potent symbols of poverty that are just right in front of you. I mean, you know, rundown houses and homelessness and issues like that. Those are things that I try to stay away from or I try to qualify them by showing them with a little bit more context or presenting the vitality in those communities as a counterbalance to some of the more difficult images or aspects of those places.'

“ *People are not symbols, even for important social concerns.* ”

James Estrin, photographer



Ryan Christopher Jones, an independent photojournalist whose work is frequently published in the New York Times, also highlights the importance of avoiding stereotypical images in favor of representing people as humans with full and complex lives. He says: "When I'm doing any reporting on immigration or addiction or labor, where it's really complicated and there's very much a very clear imbalance of power, I'm always asking 'How is this person being communicated to an audience so that they are more than just a victim? More than just a victim of circumstance? More than a victim of social suffering or structural violence?'"

Jones says that showing human touch and relationships in his photographs helps him represent peoples' humanity and present them as individuals, rather than just tropes or symbols.

Estrin, too, believes that treating people as equals is essential to representing them truthfully. "People are not symbols," he says, "even for important social concerns."

Evaluating published photographs

When looking at photographs, viewers can employ some of the same methods of evaluation used by photojournalists and photo editors. Like Johnson's strategy when on assignment, viewers should ask what a source has to gain by publishing a photograph or sharing it on social media.

Similarly, Haviv recommends that viewers consider a photograph's source first and foremost. He says that viewers need to "understand what sources they trust. What are the political agendas of that source, if you're looking at Fox versus MSNBC? While I wouldn't expect the average viewer to know, 'Oh, I can trust Magnum or VII,' because we're so small in the bigger picture. But know that if our work comes through the New York Times, then the photographer and the distributor of the image can be trusted."

Kalifa advises that the most important questions one can ask of a situation or of a photograph are the five whys: "why, why, why, why, why?" He implies that photographers and viewers need to be more critical of everything they see. Asking deep, searching questions about an image is central to evaluating its truthfulness. Why was the photograph made? Why was it published? Why tell the story in this way? Why tell it at this moment? Why does it move you, if it does?

When encountering an unfamiliar source, viewers can research the image just like a photojournalist, photo editor, or professional fact-checker would by using a strategy of **lateral reading**. Most people read a website vertically, starting with the URL, then the masthead, the text of the article, and perhaps, finally, studying other information that the website publishes about itself.

But professional fact-checkers spend very little time on the website itself, where it's difficult to investigate the organization's underlying aims without encountering bias. Instead, fact-checkers open new browser tabs and research the organization or the site from the outside. They try to find out who owns the site and what their motives might be for publishing a particular image or story.

Fact-checkers look for references to the site on other trusted sources. This strategy is called lateral reading because one moves horizontally across browser tabs, rather than vertically down a single website. The old strategies of looking only at domain names or the professionalism of a

site no longer apply, since .org domains can be purchased and professional-looking website templates are now widely available.

Individual images can be researched in a similar way by using Google reverse image search. Fact-checkers and savvy viewers use image search to see where else the photograph has appeared. If it appeared first on a little-known site, they research that site using the techniques of lateral reading. Next, viewers can use the 'time' tool in reverse image search to help identify the first publication of the photograph, revealing whether it has been reused or linked with other events, which might invalidate its current claims. Google reverse image search can also uncover variants of a photograph, which might prove that it has been visibly altered and therefore cannot be trusted.

The Content Authenticity Initiative will offer some answers to these questions. By clicking on the CAI information button that accompanies the published image, viewers will be able to confirm who made the photograph, where and when it was made, and how it was edited. Viewers will also be able to track any changes to the content of the descriptive caption information.

The assertion of truth isn't only a product of the photograph itself. Photographs always exist in a larger context, whether they're illustrations in a newspaper article, a Facebook post, an advertisement, or even a family album. The intended audience, surrounding images, and explanatory text or captions all influence the conclusions that viewers make about photographs.

The accompanying text may tell viewers that the picture was made in a particular place and time or that the image represents a particular person or event. We then look to the photograph to verify what we've read in the text. Being aware of the expectations that viewers bring to these varied contexts helps them learn to be more critical of images, just as photojournalists are cautious about believing what they see in the field.

The five whys

Why was the photograph made?
Why was it published?
Why tell the story in this way?
Why tell it at this moment?
Why does it move you, if it does?

The past and the future of image integrity

Expectations for photography's standards of truth have all changed historically. When the process was first invented, viewers and critics repeatedly praised the medium for its realism and truth. However, many of the situations that seemed most authentic in the mid-nineteenth century would be judged highly suspicious, if not entirely false, by viewers today. Famous war photographs from the nineteenth century were staged in order to create more convincing pictures. Color was added by hand to monochrome images.



But these interventions didn't seem unreal to nineteenth-century viewers. When contrasted with earlier visual representations, such as drawings or paintings, the simple fact of the mechanically-produced image promised that the camera was indeed there at the scene. Whether that scene was constructed or shaped for the camera was of lesser importance for early viewers of photography.

Standards for photographic integrity have even shifted over the past few decades. Some iconic photographs by revered twentieth-century photographers, such as W. Eugene Smith, would not be considered entirely truthful today.

Haviv says: "When you delve deeper into the conversation, [people] don't realize how much manipulation went on in a traditional darkroom. I always find this kind of amusing that the epitome of ethical journalism is Eugene Smith, who was the most manipulative person in post [processing]. There's this constant conflict going back and forth between what is legitimate and what isn't."

Through an understanding of the techniques of professional photojournalists and photo editors, and eventually using the tools provided by the Content Authenticity Initiative, viewers will be able to make their own decisions about the integrity of the images they see online.

This supplemental information will help to uphold the higher standards for image integrity that contemporary viewers expect from photographs, which, since the nineteenth century, have claimed to hold a mirror up to the world and its people.

Case study: New York Times R&D

"A simple principle drives our efforts to combat misinformation: people have the right to know the real source of what they see and read online.

Responsible news organizations adhere to standards for attributing information, including the proper captioning and crediting of photos...

...Secure sourcing allows news professionals — photographers, editors and publishers — to 'sign' their work at each stage of the reporting and publishing process, creating an end-to-end chain of trust for the photo's metadata. This codifies information such as the location and time the photo was taken, toning and cropping edits and the organization responsible for publication.

If those signatures are genuine, a confirmed photograph icon can appear on the image. This icon conveys trust, much in the same way a lock icon next to a URL in a browser declares a secure connection. Readers can click on the icon to verify those signatures and learn more about the image.

The goal of our efforts with working groups like the Content Authenticity Initiative and Project Origin is to bring this signing process to every step of the journalistic workflow. Eventually, the tools that publishers use to capture, edit and publish journalism would all work seamlessly with secure sourcing data" (Lowenstein, 2021, [Using Secure Sourcing to Combat Misinformation](#)).

Project ideas for your classroom

Below you will find a set of assignments which you can assign directly to your students. These projects have been tailor-made to help you and your students explore the issue of content authenticity. Feel free to adapt or repurpose any of these projects for your own classroom.

Assignment example 1 | Avoiding stereotypes

Ryan Christopher Jones decided that he didn't want to photograph people using intravenous drugs. He discovered that images like these were far too prevalent and that they stereotyped people, rather than representing their full humanity.

This assignment encourages students to reject sensationalism in their journalism; creating images that refute stereotypes rather than reinforce them.

To complete this assignment:

1. Watch [Ryan Christopher Jones' video discussion](#) on his coverage of the opioid crisis
2. Read [Jones' opinion essay in the New York Times](#) that further details this experience
3. Choose a contemporary topic on which to conduct visual research, and run a Google image search
4. Describe in 2-3 words the types of images that come up most often
5. Identify at least 3 different types of images and describe their content (e.g. photos of needles) or their visual style (e.g. black-and-white, grainy, high-angle, etc)
6. List 5 things that are left out
7. Describe in just 2-3 words how you could better show the humanity of the people or situation being photographed
8. Include screenshots of the most common images in a slideshow in either [Adobe Spark Page](#), including captions

Assignment example 2 | Reframing the facts

All photographs put a frame around a scene. They cannot include everything, but photojournalists work to include all the salient details in their images. Removing these details by cropping can radically change the intended meaning of an image.

To complete this assignment and see the effect of cropping for yourself:

1. Practice cropping one image in at least three different ways, to tell three different stories (feel free to use the [public domain images available here](#))
2. Note that these photographs all have descriptive titles
3. Try to tell a different story when cropping these images
4. Give each cropped photograph a new title which directs the reader's understanding of the image
5. Make your three cropped images into a slideshow using either [Adobe Spark Page](#) or [Adobe Acrobat](#)
6. Be sure to include your new titles
7. Include the original, uncropped image at the end, along with its original title

Assignment example 3 | *The five whys*

Following the 2019 El Paso Walmart shooting, Tamir Kalifa was permitted to document a family's journey of survival and recovery. The experience required him to reflect on the moral implications of his role in such situations; balancing his obligation to share the effects of this unspeakable tragedy against remaining respectful towards the family.

Kalifa set boundaries for himself that would empower the family to control the level of coverage the story received, which also allowed Kalifa to minimize the effect his presence had on the situation.

To complete this assignment:

1. Watch [Tamir Kalifa's video discussion](#) on his coverage of a family who survived the 2019 El Paso shooting
2. Read [Kalifa's essay in the New York Times](#) describing his experience of photographing this story
3. Apply Kalifa's strategy of asking "the five whys" to each of his photographs
4. Craft a questions that investigate your response to each photograph, Kalifa's motivations in photographing it, and the family's rationale for participating
5. Number the photographs as they appear in the article, then write a list of questions to accompany each photograph and save it as a PDF using [Adobe Acrobat](#)

Assignment example 4 | If, then: selection and sequence in photo stories

Photo editors work closely with photographers and writers to tell a complete and accurate story. The selection, ordering, and layout of photographs on a page has a powerful impact on a reader's interpretation of a story.

To complete this assignment:

1. Read [a short essay about the photographer Dorothea Lange](#)
2. Practice selecting and ordering a series of photographs from [this group of images](#) created by Lange
3. Create three different selections of five images each
4. Title each group and explain how the story may be understood differently in each case
5. Present your stories as a sequence of slides in [Adobe Spark Page](#) or [Adobe Acrobat](#)

How experts approach authenticity

You can also assign this series of video interviews directly to your students. In this series, you will see an outline of how the CAI works, and hear from professional photographers and photojournalists as they explore the nature of their work. Students also learn how these professionals approach authenticity and integrity when creating digital images.

1. [Overview: What is the Adobe-led Content Authenticity Initiative?](#)
2. [Photographing people with empathy and compassion](#)
3. [Expectations for photojournalists](#)
4. [Conducting research and assessing the credibility of sources](#)
5. [Editing and toning](#)
6. [Evaluating the integrity of published photographs](#)