

REALM PROJECT

REopening Archives, Libraries, and Museums

Connecting to Collections Care
10 March 2021

oclc.org/realm-project

#REALMproject



WHO IS PART OF THE REALM PROJECT?



- Project funder
- Consults on project goals and activities
- Convenes steering committee and working groups



- Collects and synthesizes stakeholder input to inform decisions
- Publishes and distributes research and information to the archives, libraries, and museums communities



- Conducts literature review
- Conducts research on materials

PROJECT ACTIVITIES

- Review and summarize relevant authoritative research
- Ongoing engagement with representatives and subject matter experts from archives, libraries, and museums
- Laboratory testing of materials
- Synthesize the above inputs into toolkit resources
- Share project information and toolkit resources
- Project began in May 2020 and continues through September 2021

PROJECT RESEARCH

REALM is providing data that helps us better understand the virus. Local institutions can use that data, along with local information about risk levels, to inform their practices and policies.

The project is NOT making recommendations. Every institution is different, and its team will need to develop policies that work for them and their community.





STATUS OF COVID-19 RESEARCH

LITERATURE RESEARCH QUESTIONS



How might the virus spread through general operations?



How long does the virus survive on material surfaces through environmental attenuation?



How effective are various prevention and decontamination measures available in the near term?

THE “KNOWN UNKNOWNNS”

Knowledge about the new coronavirus and COVID-19 is still emerging from the scientific community. Keep the following “known unknowns” in mind when interpreting and applying REALM data.

1



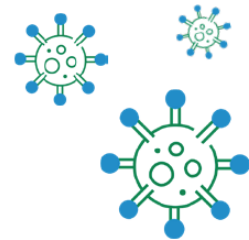
Unknown: How much virus an infected person will leave on an object

2



Unknown: How much virus someone can pick up from an object

3



Unknown: How much virus is needed to cause infection

HOW THE VIRUS SPREADS

Most likely:

- Direct contact between people
- Droplets passed between people

Possibly:

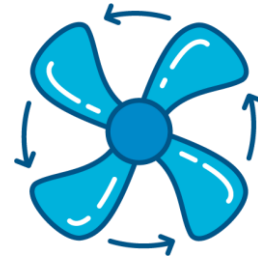
- Aerosol particles
- Contaminated objects (*fomites*)
- Other body fluids



ENVIRONMENTAL CONDITIONS ARE A FACTOR



- Temperature
- Relative humidity
- Air quality
- Air flow
- *BUT, more research is needed*



PREVENTION AND DECONTAMINATION TACTICS

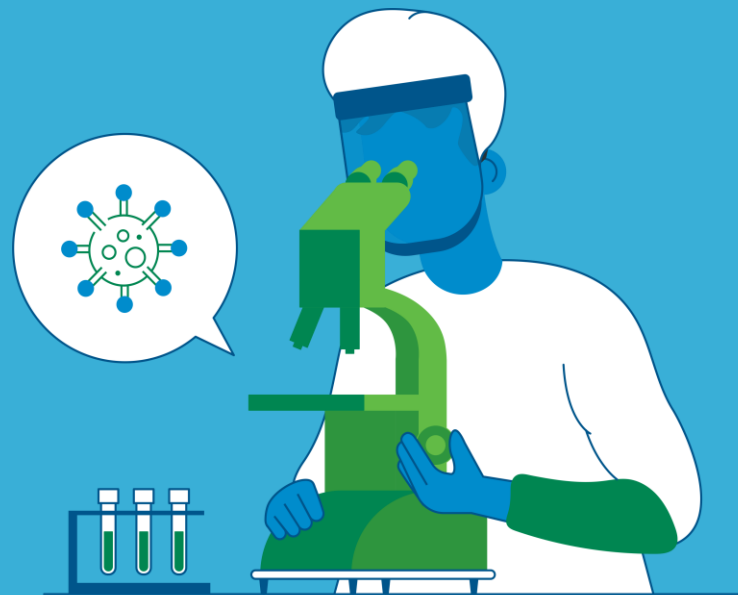


- Social distancing
- Hand washing and toilet hygiene
- Masks/PPE
- Fresh air and open spaces
- Surface cleaners and disinfectants*
- UVA/UVC treatment*



*These may not be appropriate for sensitive library, archive, and museum materials.

LAB TESTING



RESEARCH QUESTION

How long does the virus remain active on materials commonly found in archives, libraries, and museums?

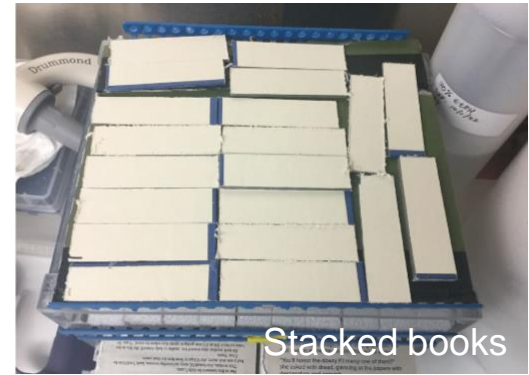
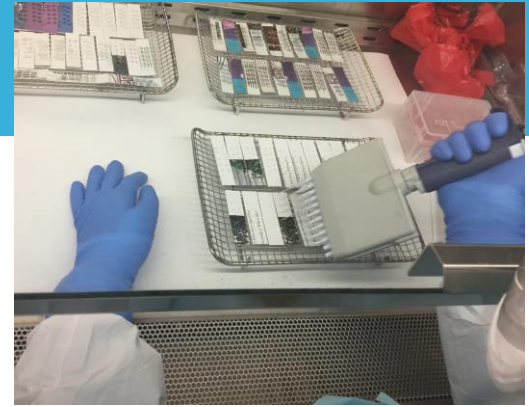
Active ... viable ... infectious ... “alive”







Photos courtesy of Battelle

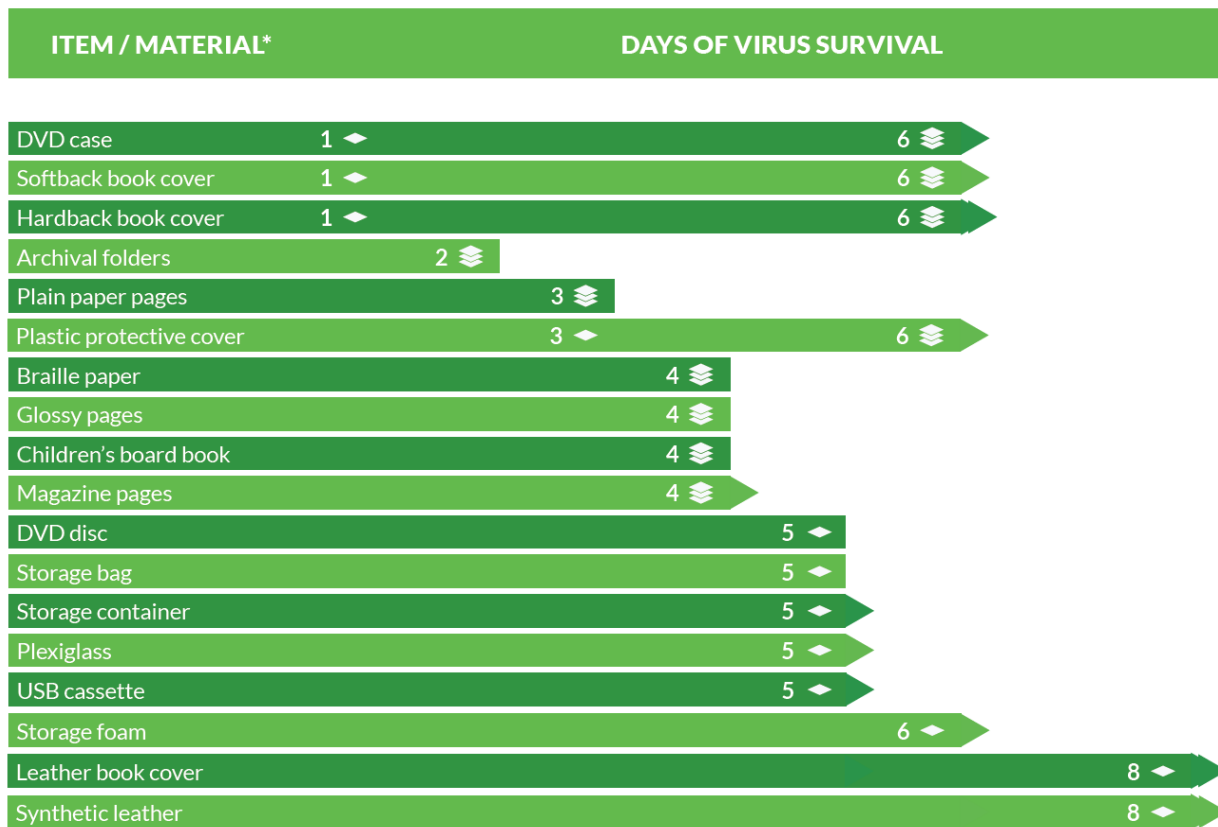
TESTING OVERVIEW

- Eight test rounds, up to five material types per round
- Droplets of live virus applied to material surface via ‘fake spit’
- Materials stored in stacked or unstacked configurations at standard room temperature and humidity
- TCID50 cell-based assay measures quantity of **infectious** virus at selected time points to capture the attenuation (drop) in total virus
- Virus may not completely die off during the time of the test
- Two tests at warm and cold temperatures





How long the virus survives on commonly used library, archive, and museum materials

-  Item tested in a **stacked** configuration.
-  Item tested in an **unstacked** configuration.
-  Item showed **trace amount** of virus after testing.
-  Item was **above LOQ** after testing.



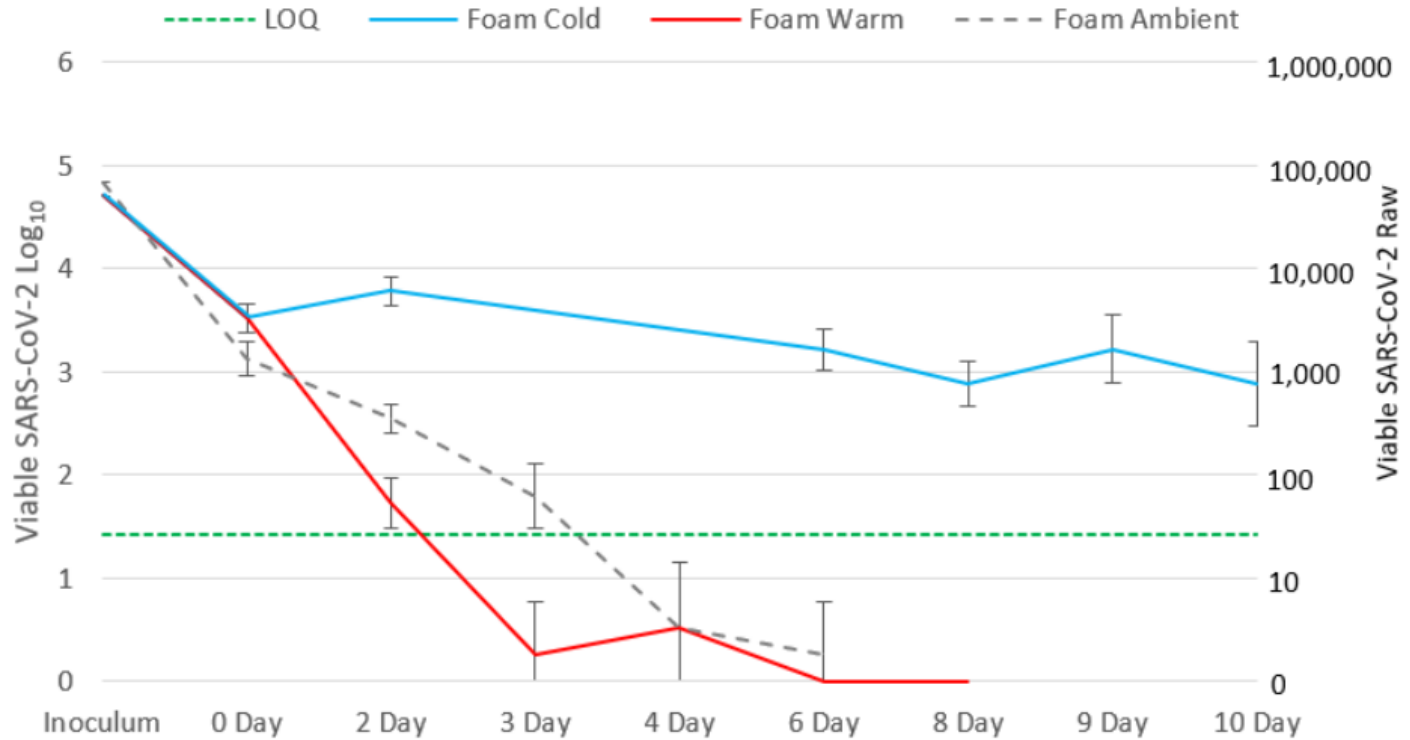
How long the virus survives on commonly used library, archive, and museum **surfaces**



MATERIAL	DAYS OF VIRUS SURVIVAL
Marble	2 days
Brass	2 days
Laminate	6 days
Glass	6 days
Powder-coated steel	6 days

* For more information about the items and materials tested, please visit oclc.org/realms-project.

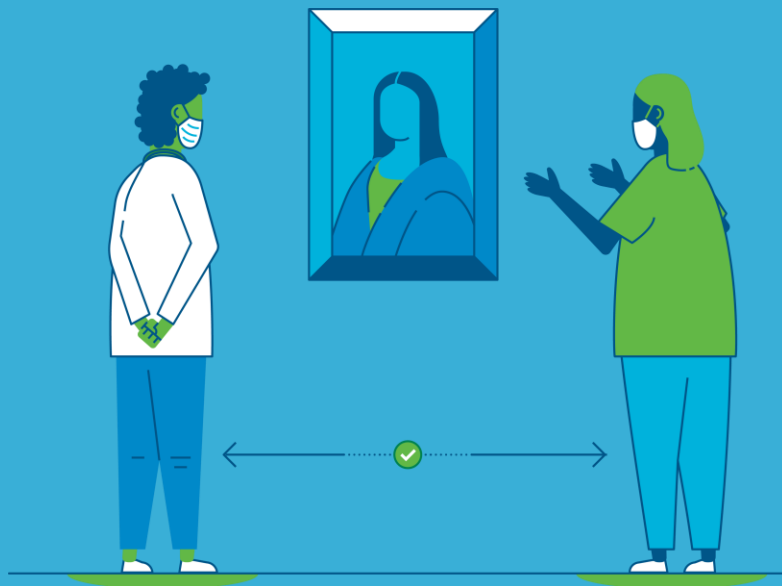
Foam: Warm vs. Cold vs. Ambient



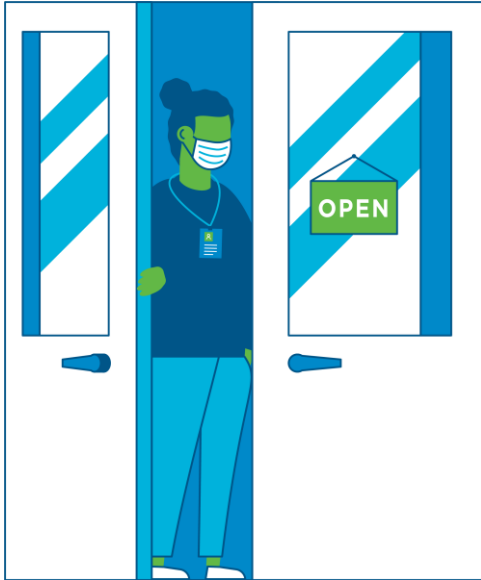
Items tested

- Hardcover book cover
- Softcover book cover
- Plastic protective cover
- Expanded polyethylene foam

MAKING POLICY DECISIONS



When making decisions about policies ...



✓ Stay informed of federal, state, and local guidelines

✓ Check CDC guidelines on PPE and hygiene practices

✓ Consider if your collection/resources can be sanitized without damage

✓ If quarantining, consider REALM results for the lifespan of the virus on relevant materials

✓ Ask your peer institutions for their policies

✓ Inform internal and external stakeholders of your policies

5 RULES TO HELP DECISION-MAKING



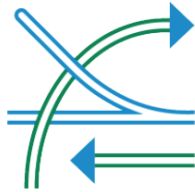
1

Most data will be flawed or incomplete. Be honest and transparent about this.



2

We may never have a “final answer” for many questions. Do you wait for certainty or act on the evidence you have?



3

Acknowledge the complexity, admit ignorance, and be open to exploring paradoxes.



4

Different people interpret data differently. Seek out outside perspectives for solutions.



5

Observing real-world interventions can complement the findings of controlled trials and other forms of evidence.

REALM

REopening
Archives, Libraries,
and Museums

PROJECT

TOOLKIT RESOURCES



REALM 101: A PROJECT OVERVIEW


REALM Reopening Archives, Libraries, and Museums
PROJECT

REALM 101

- About the project
- What we know about COVID-19
- The “known unknowns”
- The testing process

oclc.org/realm-project

This document synthesizes current studies and data, however, the scientific understanding regarding COVID-19 is continuously evolving. This material is being provided for informational purposes only, and readers are encouraged to consult federal, state, tribal, territorial, and local guidance. The authors, sponsors, and researchers are not liable for any damage resulting from use of this information, or any errors or omissions herein. CC BY-NC-SA 4.0



For libraries


REALM Reopening Archives, Libraries, and Museums
PROJECT

REALM 101

- About the project
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For museums

Figure 3. Test 3 attenuation of SARS-CoV-2 at days 0, 2, 3, 4, and 5, with \pm 95% confidence intervals indicated by the black vertical bars for each test date and item.

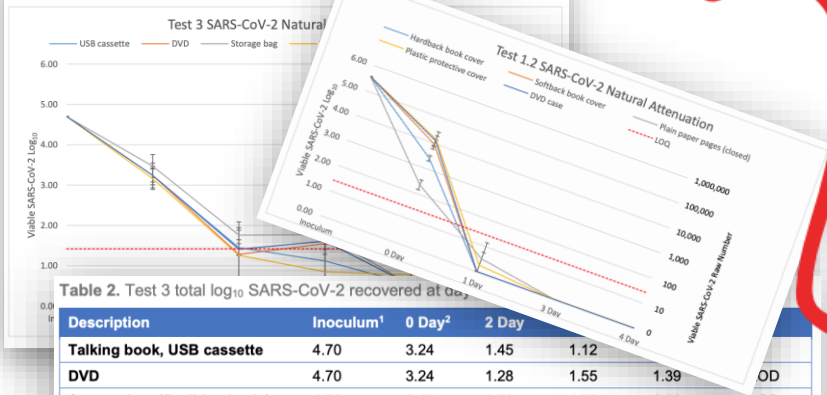


Table 2. Test 3 total log₁₀ SARS-CoV-2 recovered at Day 0, 1, 2, 3, 4, and 5.

Description	Inoculum ¹	0 Day ²	1 Day	2 Day	3 Day	4 Day	5 Day
Talking book, USB cassette	4.70	3.24	1.45	1.12	< LOD	< LOD	< LOD
DVD	4.70	3.24	1.28	1.55	1.39	< LOD	< LOD
Storage bag (flexible plastic)	4.70	3.47	1.76	1.77	0.52	< LOD	< LOD
Storage container (rigid plastic)	4.70	3.16	1.26	0.85	0.78	1.04	< LOD
Plexiglass	4.70	3.24	1.41	1.61	0.52	0.52	< LOD

¹ Total number (log₁₀) of virus applied to each material

² Total number (log₁₀) of virus recovered after ~1hr dry period

Total Log₁₀ SARS-CoV-2 Recovered

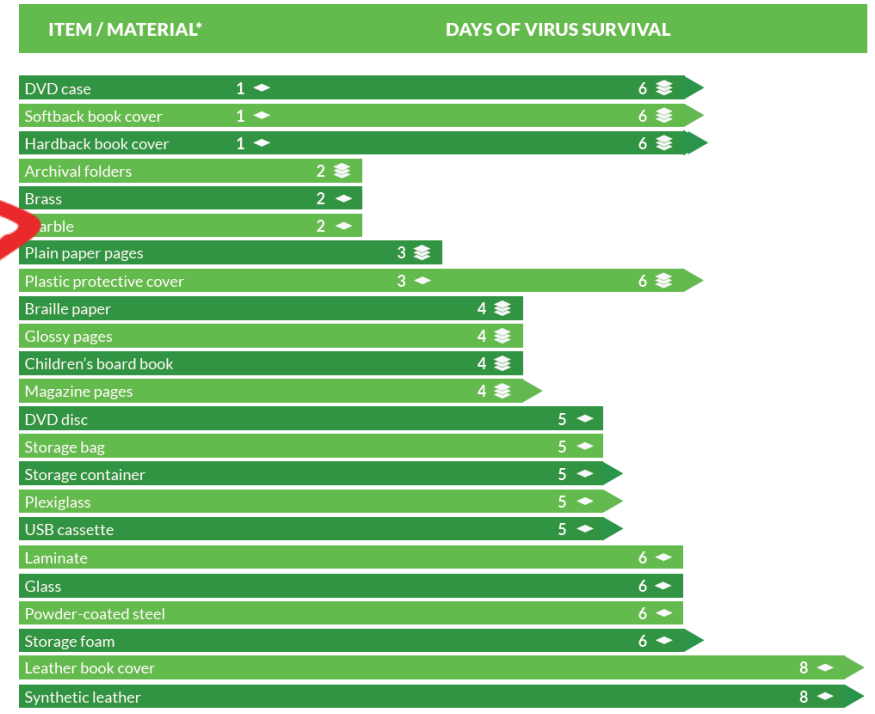
Description	Inoculum ¹	T0 ²	1 Day	2 Day	3 Day	4 Day
Children's board book	5.26	2.55	1.30	1.06	0.78	< LOD
Archival folders	5.26	1.30	0.52	< LOD	< LOD	< LOD
Braille pages	5.26	1.82	0.82	0.78	0.26	< LOD
Glossy pages	5.26	3.16	2.05	0.52	0.57	< LOD
Magazine pages	5.26	2.13	1.31	0.26	< LOD	0.26

¹ Total number of virus applied to each material

² Total number of virus recovered after ~1hr dry period

Figure 2: Total Log₁₀ SARS-CoV-2 Recovered at days 1, 2, 3 and 4

How long the virus survives on commonly used library, archive, and museum materials



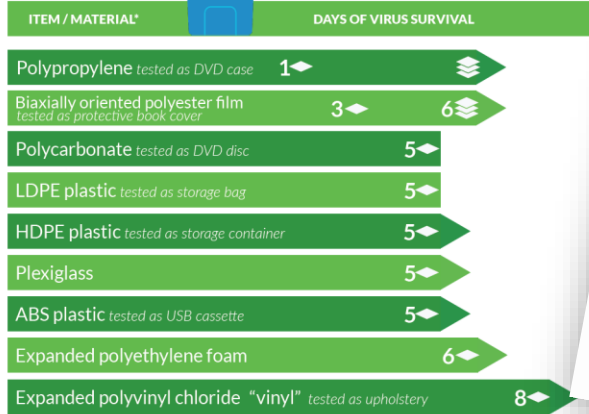
Item tested in a stacked configuration.
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 Item showed trace amount of virus after testing.
 Item was above LOQ ** after testing.

MATERIAL COMPARISONS

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VISUAL AID: PLASTICS

How long the virus survives on commonly used library, archive, and museum plastics



Item tested in a stacked configuration.
 Item tested in an unstacked configuration.
 Item showed trace amount of virus after testing.

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VISUAL AID: BOOKS & PAPER

How long the virus survives on books & paper

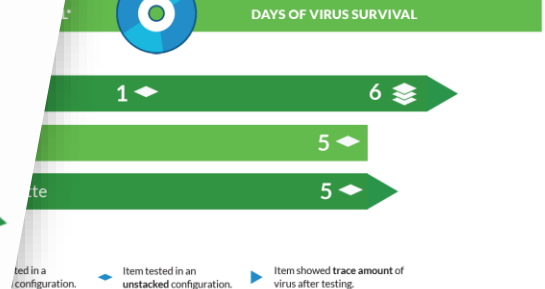


Item tested in a stacked configuration.
 Item tested in an unstacked configuration.
 Item showed trace amount of virus after testing.
 Item was above LOQ after testing.

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VISUAL AID: MEDIA

How long the virus survives on media



Item tested in a configuration.
 Item tested in an unstacked configuration.
 Item showed trace amount of virus after testing.

LIT REVIEW

- How the virus spreads
- Decontamination strategies
- Prevention strategies



TAKEAWAYS



Decontamination and prevention strategies

Researchers suggest several options for reducing the presence of SARS-CoV-2 in environments, which may help prevent transmission among people in those environments.

Strategy	Details
Cleaning hands	<ul style="list-style-type: none">• Wash hands for 20 seconds from fingertip to forearm with soap and warm water• Rub hands with 60–80% ethanol hand sanitizer for 30 seconds• Rub hands with 75% 2-propanol hand sanitizer for 30 seconds
Mask wearing	<ul style="list-style-type: none">• Wear face masks that cover the nose and mouth, such as medical and triple-layer cotton masks• Provide masks to all guests and staff
Social distancing	<ul style="list-style-type: none">• Maintain a physical distance of at least 5.2–9.8 ft• Implement intermittent occupancy• Schedule visits
Disinfecting	<ul style="list-style-type: none">• Refer to list of disinfectants and surface cleaners that meet the EPA's criteria for use against SARS-CoV-2
Heating and cooling systems	<ul style="list-style-type: none">• Use continuous air renewal from fresh outdoor air• Use UVC energy with HVAC systems• Use nickel filters with HVAC systems
Ventilation	<ul style="list-style-type: none">• Use local air exhaust• Use high-efficacy particulate air (HEPA) and MERV 14 filters• Mix fresh outdoor air with existing air• Ensure cool air enters the room at floor level and exhausts at ceiling level• Use stand-alone air purifiers
UV light *	<ul style="list-style-type: none">• Expose to combined UVA/UVC light for 9 minutes• Expose to pulsed-xenon UV for 1 minute

* UV light is known to cause damage to collections materials. For more information, view the REALM webinar [Collections and Facilities: Caring for Your Resources During COVID-19](#).

CHECKLISTS

- Decision-making considerations
- Cleaning considerations
- Reopening considerations

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Considerations for COVID-19 decision-making in libraries, archives, and museums

While working toward resuming operations and services to the public, many factors and resources (national, state, local) should inform your local decision-making. This list of considerations offers a starting point and includes links to guides and additional information.

STAY INFORMED

- Understand your current local COVID-19 situation and consult with local and state health departments. View the CDC's list of [State & Territorial Health Department Websites](#).
- Monitor federal, state, and local guidelines and data as conditions change. View the [CDC's COVID Data Tracker](#). Be prepared to be flexible and update policies and procedures as new information about COVID-19 becomes available.

PERSON-TO-PERSON TRANSMISSION

- Review guidelines for workplace safety as outlined in the AIHA's [Reopening: Guidance for Libraries and Reopening: Guidance for Museums](#).
- Familiarize yourself with personal hygiene practices outlined in the [CDC's guide on How to Protect Yourself and Others](#).



OBJECT-TO-PERSON TRANSMISSION

- Determine whether it is appropriate to quarantine or clean an object. Refer to the [NEDCC's guide on Disinfecting Books and Other Collections](#) for detailed considerations. If it's inadvisable to clean the object, consider quarantine.

This document summarizes scientific studies and data. However, the scientific understanding regarding COVID-19 is continuously evolving. This material is being provided for informational purposes only, and readers are encouraged to review federal, state, tribal, territorial, and local guidance. The authors, sponsors, and contributors are not liable for any damages resulting from use, misuse, or reliance upon this information, or any errors or omissions herein.

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1

CHECKLIST

Recommended cleaning agent.

inform the length of quarantine.

ing quarantine policies and duration. These include the public health guidelines (see 'Stay Informed' section), who community members), and where the materials are members' homes).

[Disinfecting Books and Other Collections](#) and learn about

information about virus lifespan on different materials.

external stakeholders and develop messaging for the different include a board, administration, staff, and public.

be communicated to stakeholders.

staff and provide training on new policies and procedures.

updates and revisions will be shared as more is learned about COVID-19.



[http://gateway.healthdirectories/healthdepartments.html](#)

[v4-data-tracker](#)

[2,digitaloceanspaces.com/AIHA/resources/Reopening-Guidance-for-Libraries_GuidanceDocument.pdf](#)

[to2,digitaloceanspaces.com/AIHA/resources/Reopening-Guidance-for-Museums-and-Collecting-Institutions_GuidanceDocument.pdf](#)

[coronavirus/2019-ncov/prevent-getting-sick/prevention-4.pdf](#)

[g/free-resources/preservation-leaflets/3-emergency-management/3.5-disinfecting-books](#)

[/pesticide-registration/list-n-disinfectants-coronavirus-covid-19](#)

[arg/realm/research.html](#)

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2

RESOURCE ROUNDUPS

VIRTUAL PROGRAMMING

Virtual programming: Resource roundup

While social distancing guidelines are in place, archives, libraries, and museums have the opportunity to meet people where they are: online. Below are examples and resources for conducting successful virtual programs.

Museums

"#MuseumsFromHome" from Mid-Atlantic Association of Museums
Explore examples of virtual programs from a variety of different museum types and sizes.

"Digital Tools for Pandemic Times," from AAM

This blog post covers digital solutions for connecting to guests at home, managing attendance, and modifying the in-gallery experience.

"Livestreaming and museums: making museums truly accessible," from MuseumNext
This article covers the pros and cons of livestreaming for museums.

"How to Keep Your Audience Engaged, Entertained, and Inspired in the Age of Coronavirus" from Cuseum
Whether you watch the webinar or read the highlights, there's lots to glean from this discussion on keeping your social media and digital events relevant and engaging.

"How museums are engaging with visitors during social distancing," from Blooloop
With a focus on social media campaigns, this article covers some playful approaches to audience engagement online.

"The Ultimate Guide to Virtual Museum Resources, E-Learning, and Online Collections," from MCN
This exhaustive record of museum digital experiences has been collected by museum technology professionals and fans.

Libraries

"Youth Programming Goes Virtual—Story Times, Crafts, Teen Activities, and More," from WebJunction
A list of resources and examples for virtual youth programming from public libraries around the U.S.

"Programming Through the Pandemic," from Library Journal
How public libraries are meeting the challenge by reimagining how to serve the public.

"Virtual Programming and Patron Privacy," from ALSC
Deborah Caldwell-Stone, director of the ALA Office for Intellectual Freedom, shares key thoughts for libraries to consider regarding virtual programs and patron privacy.

"Streaming story time resources," from the Massachusetts Library System
The Massachusetts Library System shares a collection of virtual story time resources.

"Library Programming for Teens Goes Virtual During Covid-19," from Publishers Weekly
Publishers Weekly compiled five approaches to teen programming.

"Virtual programming resource round-up," by Programming Librarian
Resources to help librarians create and sustain virtual programs.

Vaccines: Resource Roundup

For additional certified information and resources about vaccines can help to answer common COVID-19 related questions, such as, "How can I change my behavior after being vaccinated and what precautions should I continue to take?" "What's the context for and basis of COVID-19 vaccine reluctance?" and "Can LAMs require guests to be vaccinated?" Resources also include articles about public health communication efforts, and historical perspectives and comparisons.

For help understanding vaccine regulations and policies, contact local health authorities and legal resources.

Understanding the vaccine

"Answers to All Your Questions about Getting Vaccinated for Covid-19" from NYTimes, published January 27, 2021

"Coronavirus vaccines 101: What you need to know," from U.S. Health Today, published December 23, 2020

"Understanding mRNA COVID-19 Vaccines," from the Centers for Disease Control and Prevention, updated December 18, 2020

"How Do the New COVID-19 Vaccines Work?" from MedPage Today, published December 9, 2020

"How do vaccines work?" from the World Health Organization, published December 8, 2020



Vaccine acceptance and uptake

"COVID-19 Vaccine Monitor," from KFF, ongoing

"Surfacing reasons to increase vaccine acceptance," from PsyArXiv, published February 8, 2021

"Report on Vaccine Uptake," from the Museum of Science, Boston, video published December 16, 2020

"COVID-19: Can behavior insights address vaccine hesitancy and increase take-up?" from World Bank Blogs, published November 19, 2020

Vaccination and behavioral risk assessment

"I've had my COVID-19 vaccine—now what can I safely do? Your questions answered" from CNN, updated February 3, 2021

"What You Can Do Post-Vaccine, and When" from the NYTimes, updated February 3, 2021

"Why Vaccines Alone Will Not End the Pandemic," from the NYTimes, published January 24, 2021

On requiring the vaccine for staff

"An Employer Playbook for the COVID Vaccine Wars," from Gibson Dunn, published December 14, 2020

"When Employers Can Require COVID-19 Vaccination," from the Society for Human Resource Management, published December 8, 2020

"Mandatory COVID-19 Vaccination in Employment," from The National Law Review, published December 7, 2020

On requiring the vaccine for visitors

"What the COVID-19 vaccine could mean for the future of travel," from Insider.com, published January 13, 2021

"Sporting Events Look to Vaccination and COVID-19 Status Tracking as a Way to Bring Fans Back Soon," from Forbes, published November 18, 2020

"How Ticketmaster Plans to Check Your Vaccine Status for Concerts: Exclusive," from Billboard, published

SOCIAL DISTANCING

Social distancing: Resource roundup

Implementing and adhering to social distancing measures can be a challenge for archives, libraries, and museums (LAMs) when reopening their facilities. To create enough distance for visitors and staff, LAMs may have to modify or reimagine their spaces and the experiences offered within them. These resources can help to provide guidance on social distancing measures while serving the public and keeping staff safe.

Consider starting with the U.S. Centers for Disease Control and Prevention (CDC) [social distancing primer](#). The CDC also provides [specific guidance for employers](#) on how to establish and maintain social distancing practices in the workplace. For additional recommendations, check your state, county, and local retail guidelines, such as [these guidelines from Massachusetts](#). (Although many retail guidelines are written for stores, they can help you think about ways of achieving social distance among visitors and staff.)

These resources focus on social distancing. Find additional resources on LAM reopening considerations [here](#).

Libraries

"Reopening Guidance for Libraries," from the American Industrial Hygiene Association (AIHA): Includes recommendations for social distancing to help inform planning.

"Guidelines for Reopening Libraries During the COVID-19 Pandemic," from the American Library Association: Answers to FAQs libraries may have, such as "Can public libraries require temperature or health status checks before staff or patrons enter the building?" and "Can public libraries require staff or patrons to wear masks if they wish to enter the building?"

"Restoring In-Person Services in California's Libraries," from California.gov: Includes an appendix of the California Department of Public Health's Industry Guidance for Retail (begins on page 19).

"COVID-19 and the Global Library Field," from the International Federation of Library Associations and Institutions: A comprehensive guide and resource roundup on social distancing in libraries.

"Limiting Workplace Violence Associated with COVID-19 Prevention Policies in Retail and Services Businesses," from the CDC (created for businesses and employees): De-escalation techniques that can apply to public-facing, "front line" library staff who may encounter resistance from patrons regarding COVID-19 policies.



Museums

"Reopening: Guidance for Museums and Collecting Institutions," from the American Industrial Hygiene Association (AIHA): Includes recommendations for social distancing to help inform planning.

"Re-opening Cairloch Museum - A familiar journey," from Museums and Heritage Highland: This blog post outlines the social distancing measures taken by a smaller museum during its reopening.

"Museums and Social Distancing: A Planning Toolkit," from CCD x Smartify: This toolkit walks you through the visitor journey, from pre-visit to post-visit, and how to adapt the experience along each step of the way.

"Toolkit for Museum Reopening: Design Strategies and Considerations," from Isometric Studio: This toolkit includes diagrams for achieving one-way guest flow in different gallery layouts, ideas for maintaining interactivity safety, and other practical suggestions for balancing guest experience with safety measures.

"Italy's Museums Reopen with Vibrating Social-Distancing Necklaces, Limited Admission," from Smithsonian Magazine: This example combines the use of technology and staff resources to maintain distance between guests.

"D.C. museum rethinks visitor tech with social distancing in mind," from FCW: Using the Smithsonian's National Museum of African American History and Culture as an example, this article explores the use of apps on guests' own devices as a social distancing tool.

VIDEOS

- Library perspective interview
- Intro to REALM





March 10, 2021

AIC, Connecting to Collections Care

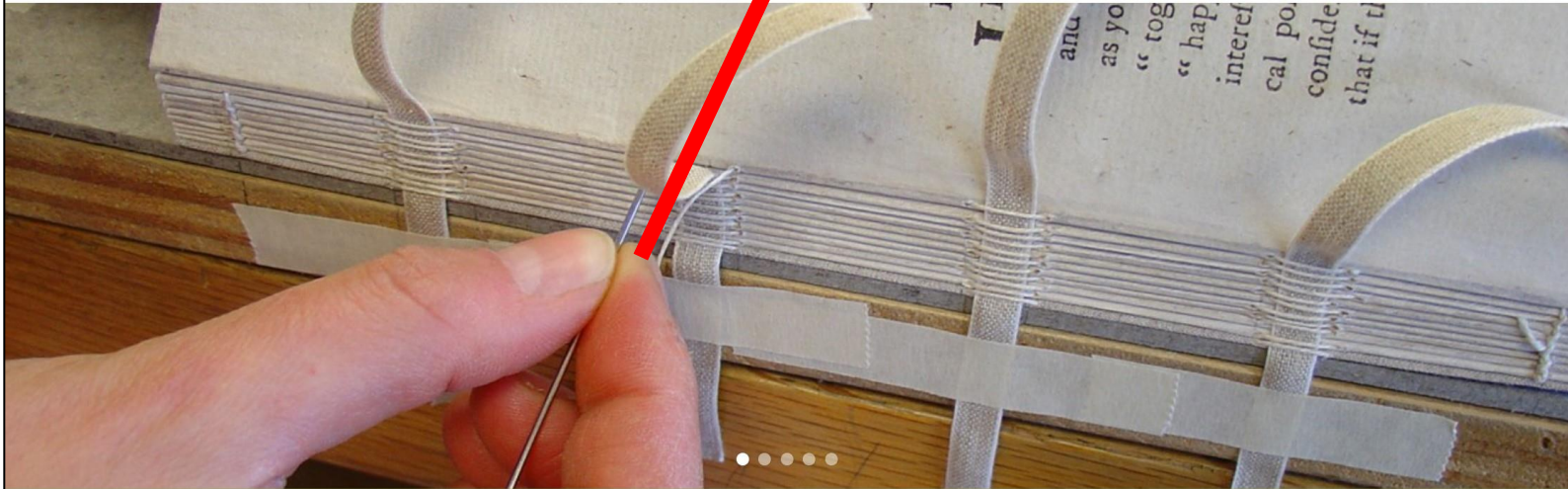
Caring for Your Resources During COVID-19

Bexx Caswell-Olson

Director of Book Conservation, Northeast Document Conservation Center

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Serving Clients Nationwide — Cultural Institutions, Government Agencies, Tribal Organizations, Municipal Clerks, Corporate Archives, Private and Family Collections

Founded in 1973, NEDCC was the first independent conservation laboratory in the nation to specialize exclusively in treating collections made of paper or parchment, such as works of art, photographs, books, documents, maps, and manuscripts. Today, the Center offers conservation treatment, digital imaging, and audio preservation services, as well as preservation training, assessments and consultations, and disaster advice on collections. NEDCC is a trusted resource worldwide for information on the preservation of paper-based collections.

2.6 Low Cost/No Cost Improvements in Climate Control 1999 HTML

NEDCC Publications

Back to Leaflet topic categories

Further Reading

3. Emergency Management

3.1 Protection from Loss: Water and Fire Damage, Biological Agents, Theft, and Vandalism 1999 HTML

3.2 An Introduction to Fire Detection, Alarm, and Automatic Fire Sprinklers 1999 HTML

3.3 Emergency Planning 2017 HTML PDF

3.4 Worksheet for Outlining an Emergency Response Plan 2020 UPDATED HTML PDF

3.5 Disinfecting Books and Other Collections 2020 UPDATED HTML PDF

3.6 Emergency Salvage of Wet Books and Records 1999 HTML

3.7 Emergency Salvage of Wet Photographs 2020 UPDATED HTML PDF

3.8 Emergency Salvage of Moldy Books and Paper 2012 HTML PDF

3.9 Protecting Collections During Renovation 1999 HTML

3.10 Integrated Pest Management 2015 HTML PDF

3.11 Collections Security: Planning and Prevention for Cultural Heritage Institutions 2020 UPDATED HTML PDF

3.12 Freezing and Drying Wet Books and Records 1999 HTML

Back to Leaflet topic categories

4. Storage and Handling

4.1 Storage Methods and Handling Practices 2012 HTML PDF

4.2 Storage Furniture: A Brief Review of Current Options 1999 HTML

4.3 Cleaning Books and Shelves 2012 HTML PDF

4.4 Storage Enclosures for Books and Artifacts on Paper 1999 HTML

4.5 Packing and Shipping Paper Artifacts 2020 NEW HTML PDF

4.6 Packing and Shipping Audio Media 2020 NEW HTML PDF

4.7 The Book Shoe: Description and Uses 1999 HTML

4.9 Storage Solutions for Oversized Paper Artifacts 1999 HTML

4.10 Matting and Framing for Works on Paper and Photographs 2019 UPDATED HTML PDF

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5. Photographs

5.1 A Short Guide to Film Base Photographic Materials: Identification, Care, and Duplication 2012 HTML PDF

Disinfection of Surfaces

- The role of fomites (surface transmission) is still unclear, but we do know that the virus can live on different surfaces for long periods of time.
- Regularly disinfect high-touch or shared surfaces, *i.e.* doorknobs, worktables, public computers, keypads.



[This Photo](#) by Unknown Author is licensed under [CC BY-SA](#)

Disinfection: Liquid Cleaning Products

- EPA's List N: Disinfectants for Coronavirus provides the contact time necessary for disinfection. Times range from 30 seconds – 10 minutes.
- Products on this this list are only recommend for use on hard, non-porous surfaces (*i.e.* tables, door handles).
- Many liquid cleaning products contain harsh chemicals including bleach, hydrogen peroxide, chlorine, ammonia, etc.
- These chemicals can:
 - cause moisture damage to covers and pages
 - accelerate aging and embrittlement of materials
 - weaken paper or cloth
 - cause staining, discoloration, or bleaching; may remove color from leather, cloth, and paper

EPA Registration Number	Active Ingredient(s)	Product Name	Company	Contact Time (in minutes)
90856-4	Quaternary ammonium	MonoFoil D	Apply Guard LLC	3
9804-5	Chlorine dioxide	Purogene Deodorizer and Sanitizer	Bio-Cide International Inc	10
90276-2	Sodium hypochlorite	Biosenta Antimicrobial 0.5%	Biosenta Inc	10
9480-4	Quaternary ammonium; Isopropanol (Isopropyl alcohol)	Super Sani-Cloth Germicidal Disposable Wipe	Professional Disposables International Inc	1
67619-30	Sodium hypochlorite	GNR	Clorox Professional Products Company	1
1677-129	Hydrogen peroxide; Peroxyacetic acid (Peracetic acid)	Oxonia Active	Ecolab Inc	10

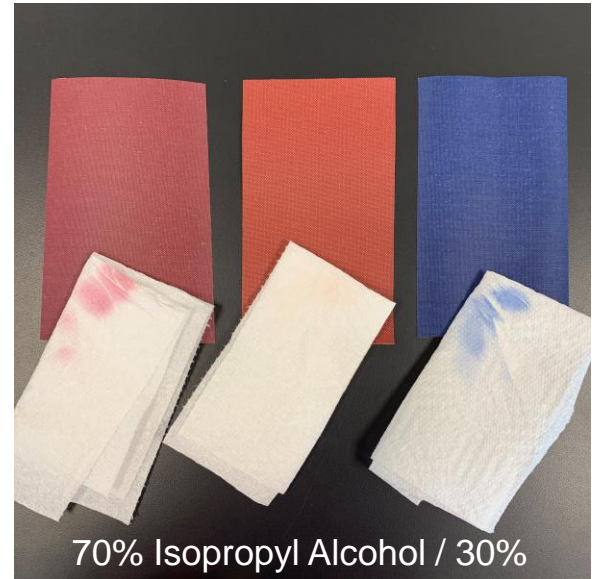
<https://www.epa.gov/pesticide-registration/list-n-advanced-search-page-disinfectants-coronavirus-covid-19>



Wet Paper Towel



Bleach-Free Disinfecting Wipe



70% Isopropyl Alcohol / 30%

- The bookcloths shown above meet the requirements of **ANSI/NISO/LBC Z39.78-2000 (R2018): Library Binding**, which dictates that covering material must be colorfast and water resistant.
- While a scrubbing with a wet paper towel did not remove color, the bleach-free disinfecting wipe (active ingredient ammonium chloride) and 70% isopropyl alcohol removed color from all 3 samples.

Fogging

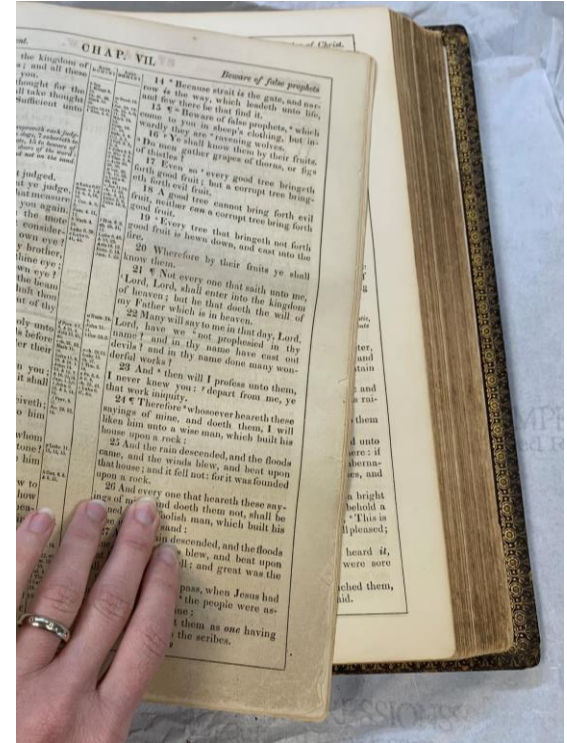
- Fogging of disinfectant to control the spread of COVID-19 is not currently approved by the EPA because more research is needed.
<https://www.epa.gov/coronavirus/can-i-use-fogging-fumigation-or-electrostatic-spraying-or-drones-help-control-covid-19>
- Fogging of disinfectant is only recommended for use on hard, non-porous surfaces (*i.e.* it should not be used on cloth, paper, upholstery, carpeting).
- Fogging will only apply disinfectant to exposed surfaces – stacked materials and hard to reach areas will not be sanitized.



Ultraviolet Light (UV)

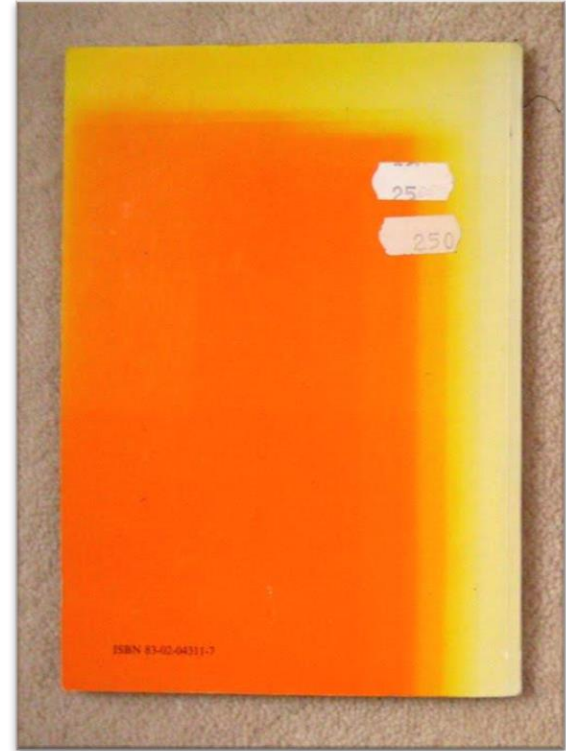
There are 3 types of UV: UVA, UVB, UVC:

- **UVC** - Most effective for disinfection, but direct exposure can burn your skin or eyes. UVC lamps may generate ozone; ozone is damaging to the respiratory, cardiovascular and central nervous system.
- **UVB** – B=Burning. Penetrates deep into skin/eyes and exposure increases your risk of developing skin cancer and cataracts.
- **UVA** – A=Aging. Exposure increases your risk of skin cancer, advanced aging. **1,000x less effective than UVC for disinfection.**
- Not all UV lamps are equal. Lamps sold for consumer use may be less effective.
- While UV *can be* an effective sanitation method, only surfaces in direct contact with light will be disinfected; a closed book or books in a stack will not be adequately sanitized.
- UV is known to cause damage to collections materials.



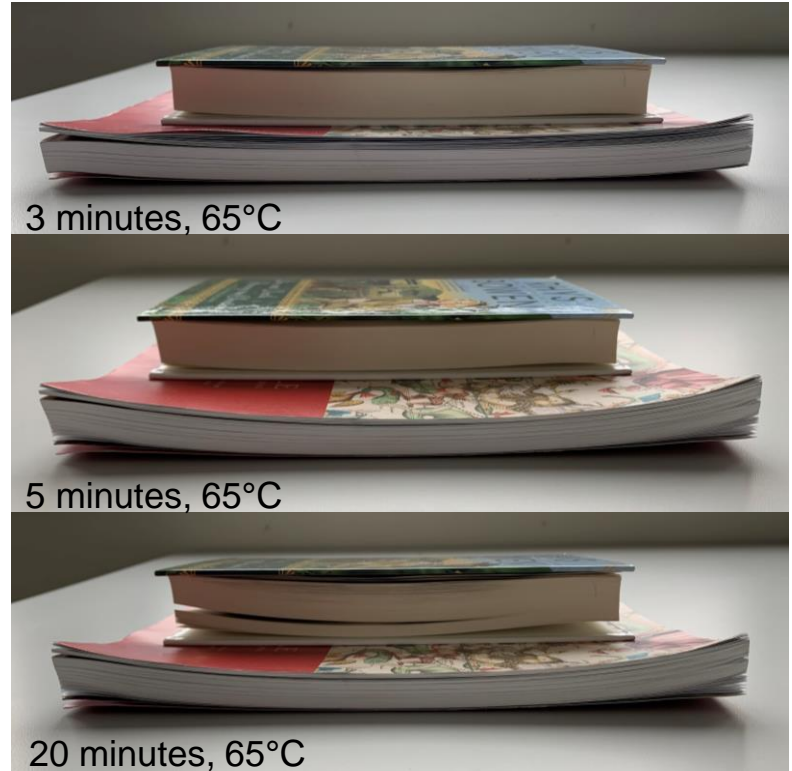
Ultraviolet Light (UV)

- All light is damaging, but UV is the most damaging; light damage is **cumulative** and **irreversible**.
- Light damage causes fading, discoloration, advanced aging, and embrittlement of paper, fabrics, plastics, etc.
- Best practices for collections care include **eliminating or minimizing as much UV light as possible** in areas where collections are present. See NEDCC Preservation Leaflet 2.4, “Protection from Light Damage”.



Heat

- Best practices for preservation of collections materials do not recommend exposure to high temperatures or extreme fluctuations in temperature.
- Increased temperature = increased rate of decay.
- Exposure to heat causes advanced aging, discoloration, distortion, and embrittlement of many materials.
- Adhesives, resins, varnishes, plastics, etc. may soften, melt, or shrink when exposed to high temperatures.



Hygiene Procedures

- NEDCC recommends implementing hygiene and quarantine procedures over disinfection of materials.
- Wear a mask and follow other CDC guidance to stop the spread of COVID-19.
- Practice good hand hygiene; always **wash your hands** before handling collections materials. Use hand sanitizer **only if soap and water are not available**.
- Disinfect shared tables, workstations, equipment, etc. after each use.
- For soft supports (book cradles, foam) that cannot be disinfected - use a disposable barrier layer that can be discarded after use.



Quarantine

When hygiene protocols can't be followed or if you suspect materials have been contaminated:

- quarantine materials to allow for natural attenuation (extinction) of the virus
- duration of quarantine will depend on the type of material and method of containment (*i.e.* stacked vs. unstacked)

Quarantining materials is a **safe, effective,** and **low-cost** way of mitigating risk for both staff and patrons.

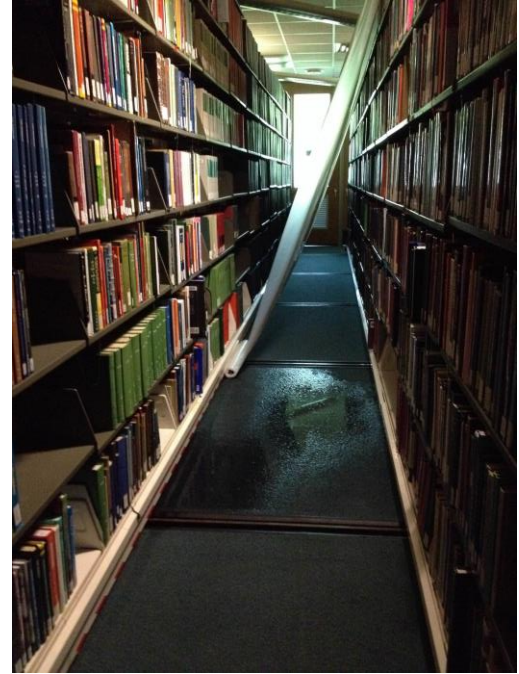


<https://wydaily.com/local-news/2020/05/13/williamsburg-regional-library-reopens-book-drops/>

Extended Closures

Have a plan to address:

- Who has access to the building when it is closed - include collections care staff if possible
- How collections will be monitored during an extended closure and who is responsible for gathering data
- Continuation of regular building maintenance
- A schedule for regular site visits and review of collections storage areas



Questions?

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Questions / Discussion

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