



Draft Guidance for Cleaning and Maintaining Educational Materials

Disclaimer

This document is intended to offer guidance to Chewonki personnel and other educators as they manage their educational materials. The information compiled is based on the best resources available at the time it was prepared. It is possible that the strategies and concepts outlined here may change as understanding evolves regarding the challenges that the novel coronavirus poses. These guidelines are not intended to be rigid or to replace professional judgement.

Introduction

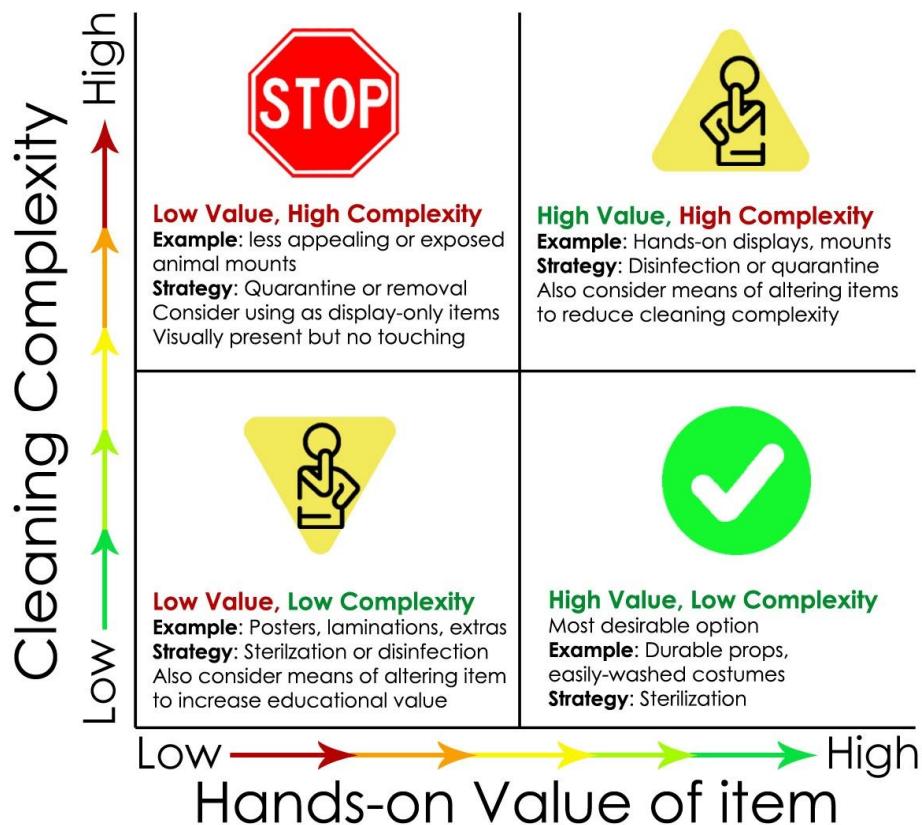
In a world of increasing awareness and concern over the potential transmission of disease we need to maintain best practices before, during, and after a program when handling our educational materials. We know that a feeling of relative safety is required to facilitate learning. We can expect the public to hold varying levels of tolerance for exposure to germs but after the COVID-19 crisis there will likely be a lasting desire to understand the risks. There is no one universal method for cleaning our educational materials so a multi-faceted approach must be taken. We must adhere to guidelines, prioritize teaching tools, engage the audience in mitigation practices, and use effective cleaning strategies.

Adhere to Guidelines

Many government bodies and school officials are following a phased approach to resuming in-person programming. These phases may dictate the role of visiting educators, the use of props and educational materials, and the proximity between educators and participants. The guidelines outlined in each phase may also include explicit cleaning and disinfecting procedures. An educator has the responsibility to monitor publicly available information and to follow federal, state and local health agency guidance and government mandates.

Prioritize Teaching Tools

All of our teaching tools have value but we need to recognize that cleaning processes can be time intensive, lack practicality, and degrade our materials over time. So it's important to balance the value of touching items with effective cleaning strategies.



We operate under the assumption that all items included in a presentation bring educational value - the above chart is specifically referring to the hands-on value of the item, the benefit the audience gains by experiencing the item in a tactile manner. For experiential education, this could include many animal artifacts as well as live animals. Live animal ambassadors would be considered a high-value, high complexity teaching tool. Until scientists have a better understanding of how the novel coronavirus impacts various wildlife species, it may be advisable to prohibit public contact with live animal ambassadors.

Engage the Audience

Inform: Share that the threat of contagion/contact comes from one another, as materials are passed from one person to the next. Best practices such as washing hands minimizes risk and reinforces healthy habits. Let the audience know about disinfection measures used on our educational resources, assuring that items are arriving to the program clean and ready to handle.

Instruct: When inviting the audience to handle specimens, provide instruction on how to properly interact with educational materials. This includes minimizing the touching of other objects and their face. Depending on the age of the participants, this may include how and when to properly use the provided hand sanitizer. Encourage washing hands with soap and water for 20 seconds after the lesson.

Model: Showcase the use of hand sanitizer after touching communal items. At the end of a lesson, let the audience know that you too will be washing your hands. If required, wear personal protective equipment and explain its use.

Use Effective Cleaning Strategies

Depending on the durability of the teaching tool or specimen you may select from the following four cleaning strategies:

Sanitation: Removing unpleasant features through cleaning. This includes scrubbing an object with soap and water to remove organic components. This method of sanitation is good practice for reducing obstructions that might harbor or protect microbes before using other disinfection methods.

Disinfection: Reducing the number of pathogenic organisms. This is different from sterilization in that harmless types or a harmless number of microbes may persist after the treatment. (i.e. hand-sanitizer 'Kills 99.9% of germs')

Sterilization: This requires the destruction of all organisms on an object, usually by treating the object with sufficient chemicals, high heat, or radiation. These methods vary in effectiveness and can be destructive to the material being sterilized.

Quarantine: Placing items exposed to pathogenic organisms into isolation in open airy places for an extended period of time to reduce the number of microbes.

Cleaning Option	Concentration	Effective Exposure
Rubbing Alcohol (Ethanol) ^{6,7}	95%	30 seconds
Rubbing Alcohol (Ethanol) ^{6,7}	70%	10 minutes
Rubbing Alcohol (Isopropyl) ^{6,7}	95%	30 seconds

Rubbing Alcohol (Isopropyl) ^{6,7}	70%	30 seconds
Sodium hypochlorite (Bleach solution) ^{6,7}	0.21%	30 seconds
Hydrogen Peroxide ^{6,7}	0.5%	1 minute
Lysol Wipes (Phenol) ^{6,9}	As directed	As directed
Dry Heat Sterilization (Hot air oven) ^{2,3}	340 F	30 minutes
Dry Heat Sterilization (Hot air oven) ^{2,3}	320 F	60 minutes
Dry Heat Sterilization (Hot air oven) ^{2,3}	300 F	150 minutes
Moist Heat Sterilization (Autoclave) ^{4,6}	250 F (200 kPa pressure)	15 minutes
Wet Heat Sterilization ⁶ (Boiling water)	212 F	15 minutes
Isolation / Quarantine ^{7,10,11}	N/A	7 days

References:

(last reviewed 05-05-2020)

1. <https://www.cdc.gov/infectioncontrol/guidelines/disinfection/>
2. <https://microbeonline.com/dry-heat-sterilization-principle-advantages-disadvantages/>
3. <https://laboratoryinfo.com/dry-heat-sterilization/>
4. <https://microbeonline.com/moist-heat-sterilization-definition-principle-advantages-disadvantages/>
5. <https://www.cdc.gov/infectioncontrol/guidelines/disinfection/disinfection-methods/chemical.html>
6. <https://microbeonline.com/disinfection-methods-and-uses/>
7. <https://www.ncptt.nps.gov/blog/covid-19-basics-disinfecting-cultural-resources/>
8. <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/cleaning-disinfection.html>
9. <https://www.epa.gov/pesticide-registration/list-n-disinfectants-use-against-sars-cov-2>
10. <https://americanlibrariesmagazine.org/blogs/the-scoop/how-to-sanitize-collections-covid-19/>
11. <https://www.cdc.gov/coronavirus/2019-ncov/community/reopen-guidance.html>