Confident Buying in Turbulent Times

A Quick-Read School Guide to Improve PPE Quality and Pricing

By Ken Olan
CEO-ExactMade LLC

©Copyright 2020 ExactMade LLC
Acknowledgements

This guide is dedicated to curious, persistent, inquisitive, independent-thinking children everywhere and to all the teachers and school administrators who try to protect them while working so hard to provide a quality education.

The Essence of this Guide

An ounce of prevention is worth a pound of cure.
- Benjamin Franklin

A penny saved is a penny earned.
- Benjamin Franklin

Short Cut for Busy People!

If you’re too busy to dig into all of the enclosed details right now, we understand. That’s why we added something called the “TOP LINE” for each section. Just read those notes and you’ll get the gist of the section. If you want to details and the “why’s” behind the recommendations, it’s there for you as well.
Confident Buying Guide

Foreword

As a sensible administrator, and educator, you want to ensure the safety of your students and those who make learning possible. However, the world has delivered us an unprecedented challenge forever changing the way we approach learning environments and disrupting how school budgets are typically used.

This guide will provide you with an additional tool to help evaluate to the safety needs of everyone under your umbrella of responsibility and will help your team make better buying decisions relative to PPE.

Our specific focuses will be:
1. How to make sure you’re buying the right product; quality, features, etc.
2. How to make that purchase as economically as possible without trading price for risk

Introduction

I wrote this guide to help school systems more effectively and efficiently navigate as they go through the process of readying schools for reopening, increasing the likelihood they can remain open. It’s a quick read that covers some of the most important things you’ll want to know or consider when buying PPE and safety products.

If you’d like to learn more, please email me at ken.olan@exactmade.com, and I’d be happy to call you to discuss your specific situation.

Since COVID-19 raised its ugly head schools, businesses and individuals have done their best to prepare for the risks posed by this unsettling virus event. Each is trying to proactively resolve the related issues in the best way they know how.

Even with the best of intentions, unprecedented events like a pandemic of this nature can inadvertently cause well-meaning people to make hasty or underinformed decisions about what they need to do about it. I’d like to help level the playing field for you, as I’ve been a student and practitioner of making environments safer since the 1980s.
Buying Right

TOP LINE: Buy smart and from a trusted source.

Needing to purchase seemingly expeditious solutions for COVID-19 is lit by a confirmed need, while the flame is at least partially fanned by the sheer number of companies, each reaching out to schools touting why their PPE is the best there is. It’s a “gold rush” of opportunity, but some companies have getter intentions than others.

So, I’d like to help you take a more informed approach to preparation. One which you won’t have to go back and retrofit or second guess when you actually see things in action.

While I don’t fault companies for believing in the products or services they offer, I don’t think you should be led to buy something that:

- Isn’t necessary, or at least at the scale it is being sold
- Doesn’t meet the quality standards we want for our kids, teachers and their respective families. *Quick fixes do not equal correct fixes.*
- May be necessary but the product being sold isn’t the ideal solution for the need.
- Is being promoted as a great solution when in fact you’ll never even be need half the features.
- Is overpriced. Driven by supply and demand and by companies wanting to maximize profits versus working with the school system to optimize the right solution that is affordable for as many districts (and ergo human safety) as possible. Instead you need coverage and safety first.

What’ Inside

This is a short list of just some of the things my company has learned in researching and selling PPE and safety products and hopefully provide you with just a few more ideas, and a few more things you can ask would-be suppliers, to help you make the best possible purchase; one that works as it should and doesn’t unnecessarily gouge your budget.

Note: I chose to focus on some of the most common products where I’ve seen purchasing mishaps occur.

My company does offer some, but not all, of the products I’ll cover here. Nonetheless, I am sharing my insights on each product and about the needs we’ve heard about to help you make the best decisions possible. I don’t hold myself out to be a certified expert on everything nor the highest authority on anything. But I am trying to tell you what I’ve seen and learned.
What I can tell you is that I care. My wife is an educator, my father-in-law was Editor in Chief of World Book Encyclopedia and Childcraft, and we have other educators in our family who are experiencing the pain you are…that we all are. So, I’ve taken the time to help get this right for strapped school systems whether or not we participate in supplying the goods.

Here are a few of the products solutions I’ll provide insight on at this time. *We will continue to add information over time or upon request.*

- Acrylic sneeze-guards and other space dividers
- Face Shields
- Face Masks
- Infrared thermometers
- UVC Disinfecting Wands
- Disinfectable chairback storage pouches

Let’s get to it.

---

**Acrylic Sneeze-Guards**

These products are needed on so many levels; desktops, cafeteria lines and tables, reception areas and so on. Here are a few tips to ensure you make the right purchase.

**TOP LINE:** *Buy sizes and shapes designed to protect from direct transmission in both directions. This is shield, not a magic all-covering wall. Bigger can be overdone; don’t get sold on too big. Pay attention to thickness, durability and stability. Buy pre-assembled or with minimal assembly needed. Ask about the warranty. Pool your buying power if you can with other districts for better pricing.*

**What is an acrylic sneeze guard intended to do?**

- A “localized” guard or shield is meant to intercept incoming droplets projected directly from the person on the other side of it during a cough, sneeze or other projecting event.
- A localized guard is generally not intended to be large enough to cover one’s entire body or workspace. It should be large enough to block and deflect the direct transmission around or away from the person(s) on the other side of the device.
Confident Buying Guide

What features should I consider when selecting the specific kind of shield I buy?

- Think about the use and buy something designed for that use. Examples may include a flat panel with “feet” that hold it up; a trifold for three-sided protection, also called a U-Shape; four, six or eight section shield configurations can divide kids/adults who have to sit at the same table, and so on.
- A quality shield company can make nearly any size, shape or configuration you want and will not push you to order a standard size unless it is the best solution for your needs.

![Some Popular Shapes Include:](image)

How large should the guard be?

- Some of this answer is subjective, but here are some simple guidelines:
- If you’re at a desk say, with one person across from you, the width would not naturally not need to be as wide as if you had two people sitting across from you. But both can be handled by flat shields.
- **Buy a shield that will cover 12-18” on either side of those seated and at least 12” higher than one’s head.**
- Keep in mind, the taller the shield, the less stable it will be. So, don’t overdo it and don’t allow someone to sell you a “picture window” when all you need is a 24”x24” square
- If there will be people coming to your sides (i.e., students), you should consider a hinged shield, also known as a U-Shape. This will provide some additional coverage.
- The shield should be **matched to the likely face-to-face interaction.** If most people coming up to you are little, the shield needn’t be as high. If you’ll have mostly adults walking up to you, make it accordingly taller or ask them to take a seat.

Will the shield or guard block everything?

- Remember that a shield is not intended to ensure nothing reaches you. It is intended to block directly projected contaminants and to push mist to the sides away from you.
Confident Buying Guide

Should we buy no-assembly-required or buy and assemble?
- **Groove-in-groove shields will involve some sort of assembly** that should be doable without any tools. The most common design is that a slit cut into one panel simply slides into the slit cut into another to create a secure cross-section. These panels are usually thicker for added stability. *The assembly of this kind of sneeze guard is an easy trade for higher shipping costs and the ability to disassemble for storage.*
- **If you are buying a folding shield, get one that is preassembled with hinges already holding it together.** You needn’t spend your time assembling these shields nor should you have to risk breaking them in the process. These shields usually feature a thinner acrylic making them lighter and easy to move around.
- Don’t allow fancy bells and whistles to lure you into buying something more complicated than what you’ll need. Upgraded hinges, unneeded cut shapes, etc. This is a simple product solution.

What should I pay?
- Shop a few vendors to find out.
- There’s not a flat price given the different sizes and features you may want. **What you should pay is the best price you can get for the specific product you need by the time you need it.** If you get quoted a really cheap price for an unassembled product, your maintenance team will make up the difference in cost by the time needed to assemble them.

One district we talked to purchased 1,400 trifold shields at a “good” price. What they did not take into account that assembling the 1400 items would take 233 “man hours” or about six weeks of work for one person or one week of work for six people. Their price also revealed to us that they were told it would take four to six weeks to receive the products, likely after school started. So, this purchase was sold to them and not carefully thought through. This is new territory for everyone, so nobody was wrong here. However this example is one of the stories I’ve heard that made me decide to write this guide.

So how thick should the acrylic be?
- Ask about the thickness of the acrylic and the quality. You want it to be **thick enough, so it doesn’t crack under stress.** Better quality acrylics can be thinner than more brittle thick ones. **Get samples.**
- Generally something should be **at least 3mm thick** to have any real strength. Some may go as thick as ¼” or more. Note: The thicker the acrylic the physically heavier it becomes.
Confident Buying Guide

- Ask your vendor how often they see or hear of their product breaking. If they tell you the product never breaks, use your common sense in looking at a sample to decide if you think that can be true.
- Some designs may use rings (think key ring) to attach the panels using small holes in the panel. Keep in mind that and holes drilled into acrylic create weak points, especially if something is meant to go through them.

What’s the best design for a folding shield?
- If the product is meant to fold, go with hinges rather than ring connectors.
- A good hinge system keeps the product stable and is less likely to cause cracking than simply joining two holes with a ring. There are good plastic hinges that stick onto the acrylic and there are metal hinges that screw through; the latter breaches the material and can create a weak point for it to crack.
- Keep it simple and you will have a quality product at the right price.

What tips can you provide on getting the best price on these products?
- First, shop around a bit and get at least two different bids.
- Shop as early as possible for acrylics. They typically have to be made, and many are imported.
- Speed of delivery will impact the price. You’ll pay the price it takes to get the product when you need it, so ask the vendor, “when can you get them to me?”
- Paying a super low price for a product that comes in days or weeks after school starts is obviously worse than spending a couple of dollars extra to have what you need as you need to deploy it. Safety doesn’t wait.
- Our company is more concerned with getting the product to you when you need it. We’ll take less profit to ensure you’re safe and because it’s good business. Find a company that will work with you like that.
- You will generally pay more for thicker material, larger pieces of material or more complex designs.

Is there anything else we should consider when shopping for sneeze guards/shields?
- Rounded corners are a must. Acrylic/plexiglass is hard and can be sharp. Insist on rounded corners, at least ¼ to 3/8 in arch. This will soften the corners by removing sharp points and reducing the risk of someone being scratched.
- Consider using two products for a wider space rather than buying one really wide piece. There are a couple of advantages to doing this.
- If you have a say 7’ width of need, two 3.5’ wide guards put directly next to each other will create the same level of protection. And you will likely pay less.
**Confident Buying Guide**

- Secondly, if one part of the shield cracks, you won’t have to replace the whole thing, just the part that broke.

**What about storage?**
- A quality shield can be disassembled and **laid flat for storage**, or fold up, for storage.
- Storage space is at a premium. So, **buy something that will collapse flat** if storage is important.

**Ask about warranty or replacement.**
- What’s the seller’s policy if something breaks or is otherwise **damaged and it’s not your fault**. I.e., the product was faulty to begin with, constructed poorly, etc.

**Is the material the product made of recyclable?**
- This is a personal preference.

Okay, if I forgot anything, please feel free to email me your tips to ken olan@exactmade.com

**Floor-Standing Space Dividers**

If you need full height dividers to sit on the floor, acrylic is probably going to be too heavy. There are room dividers with acoustic properties to dampen sound, and there are other space dividers that convenient in other ways. These devices are commonly used in waiting areas (nurses office), between chairs, between sinks, between urinals or to separate the standing sections of a walk-up counter (think reception).

**TOP LINE:** Buy sizes and shapes designed to block direct transmission in both directions. This is essentially a divider wall. Know your objective; blocking transmission may enable you to purchase something less expensive that blocking sound (acoustical). Buy something that is easily stored and portable. Ask about the warranty. Pool your buying power if you can with other districts for better pricing.

**Should I buy products that stand free or that attach to something?**
- **Don’t physically install things unless you have to.** There’s no sense in permanently damaging furniture, walls or flooring if you can find an alternative that doesn’t.

**What is best for limited storage?**
• Obviously, **something that collapses to the smallest possible size while still providing full protection when deployed**. There are wheeled room dividers that don’t collapse but are easy to move around. They tend to be heavier and don’t collapse down. If storage space and ease of movement are important. Look for alternatives. For example, we created a clear, **marine vinyl barrier that retracts into its housing** like a window shade and is stored in a carrying bag to make sure it reduces to its smallest possible space for storage whenever possible. The two solutions do the same job of dividing the space, but one is bulkier, heavier and more expensive and the other is lighter, portable and about half the cost.

**How thick should a floor standing divider be?**

• Keep in mind that thickness of the material is not what is important but rather “will the material do the job I need it to?” A window grade vinyl floor standing divider between sinks will do just as good a job as a piece of plexiglass in keeping air flow contained in close quarters.

• But if you are looking for an acoustical room divider that closes like an according, that’s a different animal. Buy something with a **good reputation**, but still keep storage needs in mind. My company doesn’t make these, but again consider function and price. You can always find modular alternatives.

The retractable barrier on the left will protect just as well as the framed barriers on the right, and will cost less than half as much.

---

**Retractable Clear Vinyl**  
**Non-Collapsible Divider**
Confident Buying Guide

Face Protection

There are three primary kinds of face protection. Face shields, face masks and goggles. We won’t cover goggles here, as they are more typically only used in healthcare settings or laboratories.

Face Shields

Face shields are sometimes confused with face masks, which we will cover in a moment.

Face shields are the sneeze guard for your face. They are important PPE, because while a face mask covers your nose and mouth, it doesn’t protect your eyes. Your eyes are connected to your nasal cavity indirectly through the tear ducts.

Face shields are becoming a solution of choice, either in combination with or instead of masks. The tips below will help you decide which may be best for you.

There are many articles on the importance of face shields. At the time of this writing, this is most current point of view of Dr. Anthony Fauci. https://www.google.com/amp/s/abcnews.go.com/amp/US/dr-fauci-wear-goggles-eye-shields-prevent-spread/story%3Fid%3D72059055

**TOP LINE:** Look for clarity, adjustable fit, comfort features, antifog coating, recovers it shape, doesn’t dent and distort, easily cleaned and if you want, the ability to put a school or district logo on each one.

How is a face shield different from a face mask?

- A face shield is another form of directional sneeze guard; a product designed to block incoming droplets and mist. It is not a filter, but rather a “blockade” of sorts. Face masks act more like filters. More about those in a moment.

Why would we want to use face shields?

- For schools, face shields are particularly important for the lower grades and special education students. A shield reveals the entire face (and one’s smile). They are far less intimidating to look at than a face mask, and they do a good job of blocking both incoming and outgoing matter.

Confident Buying Guide

- Face shields block the entire face. Some studies have shown that two people just wearing face shields are about as safe with one another as two people just wearing face masks.
- A combination of the two is the most robust protection, but shields offer the added advantage of blocking the ability to easily touch one’s face or eyes.

Is there a certain size we should buy or fit we should look for?
- First make sure the shield is long enough to go beneath the chin and wide enough to curve around to the sides of the face. It doesn’t need to go way beneath the chin; just enough to block a direct hit to your face.
- There are different sizes of face shields. In fact, there are a lot of different sizes and shapes. Don’t let unusual designs throw you off. The key is coverage.
- To give you a sense of the possibilities, our company makes a longer version (10.5” long) used most in the medical fields, a shorter one which is 8.2” long, and a child sheet which is just over 7”, and is most appropriate for children 10 years of age or under.
- A flat shield or one that flares sideways at the bottom leaves too much room for air passing around it. A good shield deflects the incoming matter away from the face, either sideways or backward around the head.
- Make sure the shield has a foam pad or is otherwise hugged against the forehead to eliminate a top-down entry point for contaminants.

Should I get a sample first before I buy them?
- Always get a sample of the shield you are considering ordering to ensure it fits as it should.

How should it fit properly to do its job?
- A face shield is made of plastic and should curve around to the sides of the face when worn. See photos below.
- The shield portion should extend below the chin especially if you are not also wearing a face mask.
- A thicker foam pad (1” thick or more) will allow for eyeglasses to be worn behind the shield.
- The band should ideally be adjustable for comfort changes throughout the day.
- You may see upside down shields out there that look like a funnel. They’re open at the top and attach around the neck rather than around the head. Need I say more than the word funnel?

What should I expect for clarity of vision?
- If the shield is a quality product, vision clarity will be very good. Like any curved plastic or glass, see through visibility. But because it is made of curved plastic and is not an optical lens, expect some minor optical distortion. That is, manage your
Confident Buying Guide

expectations. 99% of the time visibility will be just fine. Just don’t expect something like a high-quality glass pane.

- Shields can be made of different plastics materials including PET, polycarbonate and clear vinyl. Each is slightly different, but the softer vinyl tends to be able to take more of a beating and still retains is visual properties.

What kind of shield will last the longest?

- PET and polycarbonate are stiffer materials. While they are light weight, if they are creased, bent or pocked they cannot be repaired into their original condition. And they do pock easily. So, they tend to be cheaper in both price and quality.
- Vinyl is a softer material. The best vinyl for face shields is extruded or polished marine-grade window vinyl. This material can fully recover if bent or rolled and is very hard to scar. It tends to be a little more expensive than polycarbonate, but it will last far longer than the lesser alternatives, making its value much better.

How much should I pay for face shields? What’s a fair price?

- Again, a fair price is the best price for a quality product you can have when you need it. Both factors are important.
- Like any product, getting a good price is important, but having a product that lasts is what you want. Pay a little extra if you want your shields to last. A quality vinyl shield will be anywhere from $7.00 to $10.00 or each (Note: AASA price for our vinyl shield is lower). More than that is a waste of your money.
- A PET plastic shield shouldn’t cost you more than $2.50 - $3.00 max, and that is high.

What other features are going to be important?

- **Cushion**: A good face shield should include a soft foam cushion on the forehead. The cushion not only creates comfort, if it is at least 1” deep is should push the shield far away enough from the face to accommodate wearing eyeglasses. It also creates a seal on the forehead.

- **Band**: There are several different kinds of face shield bands you may consider. The most common is an elastic band that is riveted to the shield. These are “one size fits many”, as there is no way to adjust the size or comfort level if the elastic is too short or too long. Not all head sizes are the same.
- Elastic also collects contaminates and is more difficult to clean and disinfect than the shield part.
- Some shields may connect and be adjustable using a notched band. These are only adjustable to the increments of the notches.
- A third design is a Velcro attachment in the back making the shield band fully adjustable to one’s head size and comfort throughout the day. This added comfort can be important during a long day in school.
**Confident Buying Guide**

- **Anti-Fog**: Make sure the shield you buy has an antifog coating on its interior. Antifog doesn’t mean it won’t fog (human breath always causes fog). Anti-fog simply accelerates the dissipation of the moisture.

- **Logo or Whimsical Design**: Consider ordering shields where you can control the look/design of the forehead band, particularly for young students and special ed students. Something with a school logo or a whimsical design and be far more valuable in normalizing the experience than a generic band that says, “Face Shield.” Our company can create decorative bands at no additional charge for AASA members.

![Shield Images]

If I forgot anything you think is important, please feel free to email me your ideas to ken.olan@exactmade.com

**Face Masks**

A face mask covers the nose and mouth and is designed to trap or block contaminants in both directions. It does not provide eye protection. Used in combinations with a face shield will provide full protection.

**TOP LINE:** Higher density fabric/material filters more, fit is very important, three-ply or better filters more, comfort is important, reusability and wash ability, cotton is an excellent material, as it a tightly knit polyester.
**Confident Buying Guide**

How should a face mask fit?
- Ideally, snugly over the mouth and nose down to beneath the chin.
- Too tight is uncomfortable, and too loose is impractical.
- Filtering quality and fit are the most important features.

What is a good face mask made of?
- Face masks are usually made of some form of woven cloth, or paper when disposable.

I’ve heard about N95 Masks, KN95 Masks, pleated masks and others. Which kind do we want to buy?
- An N95 mask is the cone type of mask you see people wearing. A real N95 mask is best for preventing incoming contaminants, as it is designed to filter 95% or more of contaminants. You’ll often see these in medical settings.
- A quality KN95 mask will work much the same way. KN95s are made overseas; usually China. The supply can be good, if the source is well vetted by your supplier.
- Face masks that pull back onto your ears are the most popular. They don’t have the same filtration quality of an N95 but a good one will filter larger contaminants in both directions.
- Be on the lookout for counterfeits. Many are being sold that do not meet the standards required of a KN95/N95. Be certain your source is good when buying either type.

What’s the main difference between the N95/KN95 and other face masks?
- The main drawback for cone shaped masks that, while they fit tightly, they can be uncomfortable to wear and will muffle speech a bit.
- Procedural, surgical and cloth face masks don’t have a tight seal and are made of different types of materials. They typically pull back and attach to the ears.

What should I look for in a quality face mask?
- The tightness of the weave is really important. That's the first thing you should look at. To check the fabric density, hold it up to a light: If you can easily see the outline of the individual fibers, it's not going to make a great filter.
- We’ve read that a tight-weave 100% cotton is a good bet. Three-ply cotton (three layers is the minimum I would recommend. Each layer builds on the protection of the next.
- A mask's ability to filter out particles depends on not just what it's made out of but how well it seals to your face. When it comes to cloth masks, those that cup tightly to your face are best, but they may not be the friendliest looking or most comfortable.
Confident Buying Guide

- Masks with pleats or folds are also a good choice: The folds expand so that you have more air flowing through the fabric itself instead of leaking out through gaps at the sides of the mask. Masks with a flat front design are less effective.
- Avoid masks with exhalation valves. Some cloth and disposable masks come with an exhalation valve at the front. The valve makes it easier to breathe out, but it also releases unfiltered air, so it doesn't protect others if you're contagious. And protecting others is the primary reason to wear a mask.
- **Washable and reusable.** Each washable mask will suggest how many times it can be reused, as the fabric breaks down during each wash. Just compare the product quality to the cost and you’ll be able to figure out the cost per individual use.
- Face masks are varied in size and not one-size-fits-all. Ensure that when you buy your masks, the mask can be adjusted or that it comes in different sizes to accommodate different ages/head sizes.

If I forgot anything you think is important, please feel free to email me your ideas to ken.olan@exactmade.com

UVC Lights and Wands

UVC (ultraviolet C) is the wavelength that kills germs. A good UVC want can disinfect flat surfaces without the use of cleaning materials. Here’s how to choose one.

**TOP LINE:** The right wavelength, enough disinfecting power, rechargeable, long charge, automatic shutoff, child resistant lock, warranty, easy to store.

- Look for something with a wavelength of **260-280 nanometers.**
- It should be **UV-C light,** not UV-B or UV-A.
- **LED lights** provide the most energy efficient ands and will last longer than bulbs.
- **Don’t short-sell yourself on power.** A light with a single LED will not disinfect as strongly or as quickly as something with 10 or even 20 LEDs.
- You really do get what you pay for. **Power is speed, and speed is time saved.** Don’t go cheap. Since you can’t see something disinfected, buy something you know will work. The alternative makes the whole point mute.
- As UVC will kill any living material, you don’t want to shine it on your body. For that reason, find a wand that **automatically shuts off** if rotated away from the target surface.
- For the same reason, find a wand that has a **child resistant feature** making it difficult or impossible for a young person to turn it on.
Confident Buying Guide

- Buy something with a rechargeable battery. See how long it will stay charged. We recommend that it stays charged, under ordinary use, for at least 10-12 days.
- Find a wand that has a warranty. Most are made overseas, so that warranty should be covered by your local supplier.
- Make sure there is enough.
- Find something that is handy and easy to store.
- Something folds up to protect the lights will helps ensure the product lasts longer.
- Disinfects wherever the light can reach.
- While most of us are not traveling right now, it’s good to have something that is air-travel approved.

Please feel free to email me your ideas to ken.olan@exactmade.com

Infrared Touchless Thermometers

This tool is indispensable in being able to get a temperature reading without using an oral or rectal thermometer. The device uses infrared (heat sensing) technology to accurately read the temperature of what is being pointed at. Here are some hints on what to look for.

**TOP LINE:** Easy to read under any level of room light, fast response time, digital readout, disinfectable, easy operation-one touch button, durable, storage of earlier readings, accurate, forehead and ear readings, warranty.

- Make sure you buy something with a visible, digital readout that is bright enough to see clearly in a well-lit area.
- Make sure the digital display is large enough to be clearly read.
- Even better, the readout is color coded (i.e., red, yellow, green) you get an immediate visual of temperature status.
- Look for something with a fast response time. We like products that will measure in a second or less. Remember, two seconds may not seem that long to wait, but if you have a line of people it will take you twice as much time to get through.
Confident Buying Guide

- Make sure the housing is **disinfect able** without compromising the electronics with disinfectants, unless you have a UVC wand, of course.
- Make sure the housing is **rugged and durable**. Housings made with ABS and other hard plastics are especially strong.
- If you can find something that has an antibacterial component as part of the plastic, you should consider that as well.
- Buy something that is **easy to store**.
- Usage design is important. Don’t get anything with multiple buttons on it. **A single, one button design** will do what you need it to.
- Make sure the thermometer is accurate with both forehead and ear readings.
- Make sure the thermometer can **store** at least 10-20 recent readings in case you want to go back and look.
- Ask about a **warranty**.
- Don’t let unneeded bells and whistles make you to spend more than you need. In all likelihood all you need this device to do is check one’s temperature.

Please feel free to email me your ideas to ken.olan@exactmade.com

Cleaning Solutions

Obviously, the ability to disinfect an array of surfaces in this environment is critical. Here are a few things to ask before you buy these supplies.

**TOP LINE:** Non-toxic whenever possible, won’t discolor things, has either sufficient rubbing alcohol agent, bleach, or another disinfecting agent, fast drying, easy to use.

- We don’t sell cleaning solutions, please make sure your vendor is reputable and that the solution has **proven** disinfecting/cleaning properties.
- **Stay away from anything with ammonia**, particularly when cleaning plastic items. Ammonia can yellow them.
- Consider a UVC light or lamp for cleaning items where the **light can directly reach the surface**.
- Use liquid solutions, including detergent, when scrubbing is required, or you need to penetrate nooks and crannies UVC can’t reach.
**Confident Buying Guide**

**Storage Devices**

If you use seat-back storage pouches, or containers to store items, consider an alternative to cloth at this time

**TOP LINE:** Quality construction, durable, easily disinfected without laundering, ample storage space, warranty.

I hope this short guide has been helpful and wish you the best of health, happiness and back-to-normalcy.

**PPE Action Plan**

Use this checklist to help keep track of your completed safety activities. We recommend first doing a walk-through of your school and listing the potential hazards as a child might see them and then list what kind of solution you may want to use to fix the situation. Then check them off as you address each one.

<table>
<thead>
<tr>
<th>Situation Hazard</th>
<th>Location(s)</th>
<th>Product Solution And Quantity Needed</th>
<th>Solution Completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Example: Disinfecting</td>
<td>All Classrooms</td>
<td>UVC Wands- 25</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>