

Installation Guide to Handwashing Nudges

INTERNATIONAL VERSION

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Handwashing Nudges Installation Guide

User Note

Handwashing with soap is one of the most effective practices¹ for reducing a variety of respiratory, gastrointestinal, and infectious diseases—including COVID-19.² In order to maintain safe learning environments and prevent the spread of COVID-19, it's critical that schools build hand hygiene habits among their students; however, as any educator knows, it can be difficult to get students, especially younger students, to build healthy habits.


Handwashing is a particularly tricky behavior to shift, because we are trying to build a daily habit where the costs (inconvenience) are clear and immediate, but the benefits (avoidance of disease) only accrue later, in a diffused way that is difficult to perceive. Children specifically find it difficult weigh decisions that affect their future.³

Luckily, behavioral economics has provided an additional tool: **Behavioral Nudges**.

Nudges are a change (often environmental) to choices presented “that alters people’s behavior in a predictable way”.⁴ For example, a school cafeteria may place fruit at eye-level in order to encourage, or “nudge,” students to consume healthier snacks.

Previous research has shown we can apply the power of nudges towards handwashing as well. In studies in the United State⁵, Bangladesh⁶, and Vietnam⁷, handwashing nudges meaningfully increased handwashing rates among children and adults.

UNICEF and IDinsight recently tested handwashing nudges in public elementary schools in the Philippines—and we found impressive results:



Nudges improved handwashing rates by 17.3 percentage points (pp) In grades 1-6 classrooms without nudges, pupils washed their hands with soap 11.7 percent of the time after using the toilet. In classrooms with nudges, pupils washed their hands after toilet use 29.0 percent of the time after toilet-use.

Nudges increased availability of water and soap at handwashing stations near toilets by 38 percent. In many of these classrooms, students washed their hands with water from a bucket and soap that teachers were responsible for replenishing. Because of this mechanism for providing water and soap, this suggests that nudges most likely increased soap and water availability by **reminding teachers to replenish water and soap more consistently in their classrooms**. The nudges were well-liked by interviewed principals, teachers, and students at schools where they were installed.

Best of all, the handwashing nudges were relatively **inexpensive** (we estimate in the Philippines it would cost PHP 561 or USD 11.07 per classroom)⁸ and **easy** to install.

Given these positive results and the urgency of the current public health situation, we are providing this installation guide—complete with all necessary templates—for self-installing our tested package of handwashing nudges to school officials and teachers around the world. We hope this will be useful as they consider installing nudges in school bathrooms with consistent water and soap access.⁹

Please note, however, that these nudges were designed for relatively low-resource elementary school classrooms in the Philippines, and evaluated positively within that context. Your classrooms may have different layouts and resources; your students may have different cultural backgrounds and habits. We have provided some guidance in this guide for adapting the nudges to better suit your needs, but we cannot guarantee the exact impact the nudges may have in your classrooms. Nonetheless, the evidence is strong enough that we wish to provide you with the option of installing handwashing nudges.

We hope that this guide will help ensure safer learning environments for students everywhere. Please share your installations with us, as we would love to see them! You can reach us through social media or email.

Contact Us

✉ inquire@idinsight.org

🐦 [@idinsight](https://twitter.com/idinsight)

🌐 [IDinsight](https://www.idinsight.org)





1 Aiello, A. E., et al. 2008. Effect of Hand Hygiene on Infectious Disease Risk in the Community Setting: A Meta-Analysis. *American Journal of Public Health*, 98(8), 1372–1381.
2 Pogrebná, G. & Kharlamov, A. (2020). The Impact of Cross-Cultural Differences in Handwashing Patterns on the COVID-19 Outbreak Magnitude. 10.13140/RG.2.2.23764.96649.
3 Yurgelun-Todd D. Emotional and cognitive changes during adolescence. *Current opinion in neurobiology*. 2007;17(2):251–7. Available at: <http://www.ncbi.nlm.nih.gov/pubmed/17383865>. Accessed June 11, 2011.
4 Thaler & Sunstein, 2008. *Nudge Theory*. Yale University Press.
5 Blackwell, Calvin, Daniela Goya-Tocchetto, and Zack Sturman. "Nudges in the restroom: How handwashing can be impacted by environmental cues." *Journal of Behavioral Economics for Policy* 2.2 (2018): 41-47.
6 Grover, Elise, et al. "Comparing the behavioural impact of a nudge-based handwashing intervention to high-intensity hygiene education: a cluster-randomised trial in rural Bangladesh." *Tropical Medicine and International Health* 23.1 (2018): 10-25.
7 Ljung, P. & Ha, H. (2017). Nudging a Handwashing Habit.
8 The conversion rate here and throughout this policy brief is PHP 50.7 = USD 1.
9 This is the minimum requirement for bathrooms to be suitable for the handwashing nudges. For a complete list of recommended characteristics the bathroom should have, please see the Guide to Adapting Nudges.

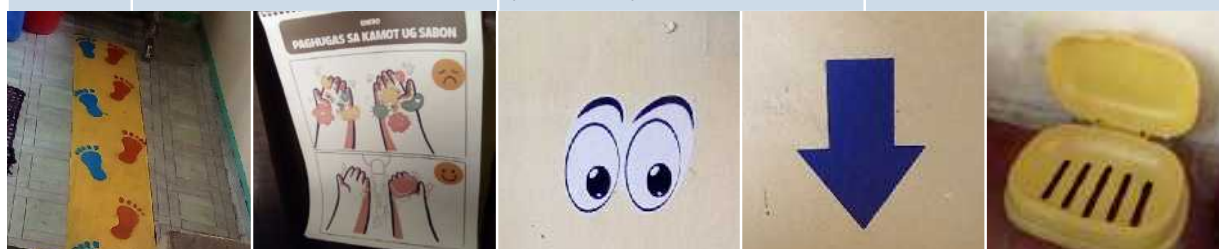
Handwashing Nudges Installation Guide

Guide to Adapting Nudges to Local Context

Nudge Package

We strongly recommend for all nudges to be installed as a package to maximize their impact. Since we have no evidence on which individual nudges drive the increase in handwashing rates, selective installation of the nudges may decrease the effective of the nudge package.

Nudge		Purpose	Interaction
	Painted footpath with spray-painted footprints from toilet stall to handwashing area	To prompt students to head to handwashing station rather than straight back to their seat after toilet use	Students walk on footpath
	Set of handwashing posters, which are changed monthly, at the back of the toilet stall door	To remind students to wash hands with soap <i>immediately</i> after toilet use, combatting forgetfulness and delivering simple motivating messages about cleanliness and fitting in with peers	Students read posters. Multiple posters provide variety and surprise, encouraging students to read the poster each time it is changed
	"Watching eye" sticker above water source of handwashing area	To simulate the feeling of being watched, which research indicates can create social pressure and encourage people to wash hands	N/A (subconscious)
	Arrow sticker pointing to soap dish by handwashing area	To carve out a visual space for handwashing, reminding students to wash hands with soap and reminding teachers to provide soap	Student reaches for the soap beneath arrow Teachers replenish soap



Recommended Installation Requirements

The nudges are best suited for locations that have the following characteristics:¹

School-Level	Classroom-Level
<ul style="list-style-type: none"> Pupil-to-toilet ratio of under 100, to ensure there are enough toilets per pupil Daily water availability at least some hours of the school day, to ensure there is water for washing hands At least one handwashing station (individual or group) 	<ul style="list-style-type: none"> Grades K-6 Functional handwashing station (with either running water regularly available or stored water regularly replenished) Functional toilet stall near handwashing station Clear, unobstructed, paved path from the toilet stall to the handwashing station Budget for soap at handwashing station²

Guidance for Adapting the Nudges

We recommend that the nudges be adapted to local context. Testing the nudges, gathering feedback, and adapting them to suit your classrooms and students will maximize their impact.

Below is a step-by-step guide for adapt the nudges. Remember you are testing for feasibility (of installation and use), appropriateness and appeal. If the set of nudges works ‘as is’ without adaptation, that’s great and there is no need to change the nudges! If you have any questions or clarifications regarding the nudges or the process of adapting them, please reach out to inquire@idinsight.org.

It is best to complete each step below once chronologically. Afterwards, however, you should feel free to repeat each step as necessary, until you are satisfied the nudges will work in your classrooms. For example, if you decide to change the color of the arrow sticker due to student feedback, you can repeat Step 2 and solicit feedback from students again.

1. Print out test materials and do pilot installations.

As much as possible, test what is feasible, attractive, suitable, and long-lasting in your setting. You may want to print out the footprints and posters, and take them into the bathroom to see if they are the appropriate size. You may want to print stickers and see how well they adhere to the surface where they’ll be placed. You may want to spray-paint or paint a tester of the same flooring material you have in your classroom, or paint an inconspicuous part of your classroom. This would help you see how long your paint takes to dry, and how well it adheres. The pilot installation is intended to make sure you know the nudges will be successfully installed, before you install them.

2. For each nudge in the package, ask yourself and other key informants the following list of questions to assess the nudge’s suitability:

- Will each nudge be able to do what it is meant to do? What are some reasons it might not? Is there anything I can do to make it more likely for the nudge to work as intended?
- Will the nudge be appropriate and suitable to the religious or cultural context of my classroom? If not contextually appropriate, is there anything I can do to make it so, or would it be best not to use it?³ (Ex: Is the imagery of the arrow, eye, or footprints associated with a particular political party?)
- Will I be able to install the nudge as directed? What are some reasons I might not be able to? If I cannot install them as instructed, how else can I install them while still preserving their original intention and function? (Ex: Is my floor made of a material that can’t be painted? Will stickers adhere to my wall?)
- Is the nudge noticeable and appealing in my classroom? How I can make it more attractive and distinct in my classroom? (Ex: Can I change the size, color, material, location, etc.?)
- Is the nudge understandable to my students? It is necessary for the purpose of the nudge for students to understand it? (For example, students need to understand the posters, but not the eye sticker). If yes, how might I make them understand?⁴

3. Solicit Feedback.

Share the nudge ideas, the nudge materials, and any plans for alteration of the nudge design with other decision-makers. This may be other teachers, principals, school staff, and/or students! Their feedback can help you brainstorm ideas and/or make decisions. However, do not take up suggestions that alter how the nudges function, as this may decrease the impact of the nudges. For example, the suggestion to turn the eye sticker into a face sticker should not be adopted, because the eyes were specifically designed to make students feel social pressure to wash hands.

In the box below, we provide concrete examples of changes you might make in your own classrooms.

It's important to consider your physical space when making decisions about the nudges to install. Is the handwashing station far from the toilet stall? Does the classroom lay out make it easier for students to return to their seat, rather than head to the sink to wash their hands? You can see an example of a classroom like this in the photo below. In this case, you may want to invest more time in installing the footpath, as we had in this classroom.





Consider also the location of the handwashing station in relation to the toilet when deciding where to place the posters. It's important for students to see the posters at the exact moment they are deciding whether or not to wash their hands.

In most school bathrooms in the Philippines, the handwashing station was outside the toilet stall. Therefore, it made sense to install the posters in the back of the toilet stall door, because students had look there after toilet use but before passing by the sink. In other locations, however, (like in the photo below), the handwashing station may be inside the toilet. Posters at the back of the door would be ineffective, as students would only see the poster once they are exiting the bathroom, when it would be too late to nudge them to wash hands. Instead, you should place the posters between the toilet and the handwashing station, or any other place students would naturally look as they're exiting the bathroom.



List of Additional Nudge Ideas

In the course of selecting and refining our package of nudges, we collated a variety of nudge ideas. We describe them below, and also provide a link to either research on their impact or more information on them. It is worth considering if these nudge ideas may be suitable in your school. These may be added to, but should not replace, the original set of nudges.

Nudge Idea	Purpose	Source
 Mirror by Sink	Attracts people who want to look at their reflection in the mirror towards the sink, making it more likely they will wash their hands	http://www.washplus.org/sites/default/files/resource_files/habits-neal2015.pdf
 (Citrus) Timed Scent Spray near Sink	Creates pleasant feelings when handwashing through appealing clean scent, which build handwashing habits by creating positive associations to it	https://psycnet.apa.org/doiLanding?doi=10.1037%2Fhea0000239
 Paper Towels (or hand towels)	Makes handwashing more pleasant and appealing, leading more people to want to wash hands	https://www.ncbi.nlm.nih.gov/pubmed/23621052
 Pump Soap Dispenser	Makes it easier and more convenient than to wash hands (in comparison to a bar of soap), increasing the number of people who wash hands by lowering the effort required	https://bmcpublichealth.biomedcentral.com/track/pdf/10.1186/1471-2458-13-877

- These criteria are meant to ensure that schools or classrooms where nudges are installed have the infrastructure required for the nudges to work as intended. For example, nudges should be installed in handwashing areas with water access because the nudges will be effective only if students have the opportunity to handwash. A pupil-to-toilet ratio under 100 pupils per toilet ensures students likely have a toilet available to them in school when they wish to use them. These criteria are adapted from the eligibility criteria used in handwashing nudges study.
- Regular soap availability is important for the nudges to work as intended, because it enables students to practice handwashing with soap. Schools should thus have budget to purchase soap.
- For example, posters depicting eyes have been used in anti-corruption campaigns in some countries. If students in these countries already associate eye imagery with other concepts (and potentially have negative feelings towards eye imagery), then the eye sticker nudge would not be suitable for use in classrooms in these countries.
- We strongly recommend you utilize the posters we provide in the Resources file, rather than utilizing other designs or creating your own. The posters we provide have been professionally designed and field-tested to ensure that they are simple enough for younger pupils to understand, and to ensure that they appeal to emotional motivators for handwashing like the desire to feel clean or to fit in with classmates. However, you may wish to make changes that would not affect the poster's messaging, such as translating the text, or changing the clothes and appearance of the students in the posters to more closely match your students.

Handwashing Nudges Installation Guide

Step-by-Step Instructions

Please provide these instructions for all four nudges (footpath, calendar of posters, arrow sticker, and eye sticker) to those installing the nudges, such as custodial staff, hired contractors, or school volunteers. As previously noted, the nudges should be installed as a package.

1. Footpath with Footprints

Location

Leading from the toilet or toilet stall to the handwashing area.



Instructions

1. Ensure no students are in classrooms; explain the paint fumes will not be good for pupil's health.
2. Put on protective mask and latex gloves. For safety & neatness, please do not skip this!
3. **Prep paint.** Use stick to stir it up to ensure pigment is evenly distributed. If paint has gotten thick, pour in some thinner.

Materials



Rubberized (Waterproof) Floor Paint

To paint footpath



Spray-paint

To spraypaint footprints on footpath (multiple colors)



Sandpaper

To roughen up surface and ensure paint sticks better, if painting



Footprint Stencil*

To paint or spraypaint footprints on footpath (from plastic or cardboard)



Old Newspapers

To wipe accidental paint drips if needed



Paint Thinner

To dilute paint if painting footpath



Masking Tape

To mark out footpath before painting, to ensure straight lines



Stick

To stir paint



Protective Mask

To protect from paint fumes while painting



Pair of Gloves

To protect from stains while painting

*Template provided in Resources

4. **Ensure the path from the toilet door to the handwashing sink is clear, and the floor surface is dry and dust-free.** This may require you to move items out of the way or to clean the floor surface.
5. **Vigorously sandpaper footpath area.** This will help the paint adhere better to floor.
6. **Use masking tape to lay down both sides of pathway from toilet door to handwashing sink.** Fix lines until it is neat and straight. At minimum, path should fit one pair of footprints. Lay down footprint stencils to help determine appropriate width.
7. **Carefully paint in pathway.** Use generous amount of paint and downward strokes, to ensure the sides of the pathway are sharp and inside paint is evenly filled.
8. **Wait for the footpath to dry completely.** (This is very important to ensure the spray-painted footprints on top adhere well. Otherwise, the spray paint will smear, fade very quickly, or encourage the floor paint beneath to flake off).
9. **Select two spray paint bottles of two different colors.** Ideally, they should contrast with the colors of the footpath, as well as the bathroom or classroom. This will make the footprints more eye-catching. One spray paint color will be the left foot, the other for the right foot.
10. **Lay footprint stencils out carefully on top of footpath (see Resources).** Please note the footpath should be fully dry at this stage. Each left and right footprint should be offset from each other, to mimic a student walking.
11. **Spray paint in stencils.** Repeat steps 9-10 until footprints stretch the entire length of the footpath.

Alternative Design

If the floor cannot be painted or spray-painted on (for example, the floor is tile or wood), we recommend utilizing only **water-proof footprints** to guide students. We utilized waterproof vinyl stickers, but you may also want to use laminated footprints, whichever method is cheaper. The template for footprints in Resources can be used to print the footprint stickers.



2. Calendar of Posters

Location

A vertical surface where students **must** see it immediately after using the toilet

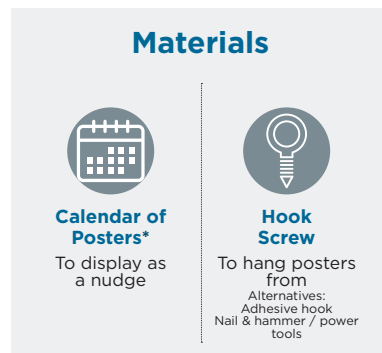
- If handwashing station is outside the door, place the posters at the back of the toilet stall door.
- If the handwashing station is inside the toilet stall, place the posters on a wall facing the toilet bowl where both boys and girls would look after using the toilet.

Instructions

1. **Determine where the posters will be hung.** This can be the back of the toilet stall, directly opposite the toilet bowl, to the left or right of the toilet bowl, etc. It should be in the area between the toilet and the handwashing area that students are most likely to look as they exit.
2. **Decide at what height to hang the poster.** Mark space with **masking tape if helpful**. It should be roughly at eye-level for the average student for each relevant grade.
3. **Carefully screw hook into the wall.** This can be done by hand if the surface is plywood. For all other surfaces, consider the following methods instead.
 - **Alternate method:** use adhesive hook
 - Spray alcohol and wipe with cloth to clean area you marked with chalk.
 - Remove adhesive on one side, stick to back of hook.
 - Remove adhesive on other side, stick to wall.
 - Leave alone until end of installation to put hang up posters (this allows adhesive to stick better. Weighing it down before it has the chance to “stick” will make hook likelier to fall.
 - **Alternate method:** Use conventional nail and hammer (or power tools, as appropriate)
4. **Hang poster calendar on hook.**
5. **Flip to the poster with the correct calendar month.** On the first of every month, flip the calendar so the right month poster is displayed.

Alternative Design

You could instead use **laminated posters** or **posters printed on tarp**. These alternatives may be more durable than posters printed on weighted waterproof paper.



*Templates are provided in Resources



3. Eye Sticker & Arrow Sticker (with Soapdish)

Eye Location

Where students **must** look when trying to wash their hands.

- On top of the water source (faucet, bucket of water), at roughly eye-level of the student.







Arrow Location

On top of the designated place for soap (i.e., soap dish), at eye-level of the average student.



Instructions

1. Observe if there is soap dish or other designated location for handwashing soap (i.e., tray, basket) by water source of the sink (i.e., faucet or bucket of water). If so, you're good to go!
 - If YES there is a soap holder but it is not beside water source, move soap holder the right or left of water source. This makes washing hands with soap as easy as possible for student.
 - If NO there is no soap holder or location, procure and place soap dish by sink.
2. Determine where the stickers will be placed.
3. Spray alcohol on wall surface and wipe with cloth. This ensures the space above sink/water basin for both the eye and arrow sticker is clean and dry.
4. Unpeel and place eyes sticker to point directly above sink/water basin in one movement. If you make a mistake, we recommend you use a new sticker rather than re-peeling and place it back, as it may cause the sticker to fall more easily.
 - **Alternate method:** If eye sticker does not adhere well to surface, use the strongest clear tape you can obtain to secure sticker. For example, wide packing tape is stronger than scotch tape. Tape over the sticker, leaving at least 1 inch beyond each side of the sticker, to ensure the hold is secure.
5. Unpeel and place arrow sticker to point straight at soap dish in one movement. Again, we recommend using a new sticker if you make a mistake.
 - **Alternate method:** Again, clear tape can be used to secure sticker to the wall instead. See details in bullet point of Step 4.

Materials	
 Cloth To wipe surface where stickers will be adhered	 Alcohol Spray To wipe surface where stickers will be adhered
 Eye Sticker* To display as a nudge	 Arrow Sticker* To display as a nudge
 Clear Tape To secure sticker to surface (optional)	 Soapdish To place by handwashing station, if it does not have one already (optional)

*Template is provided in the Resources section.

Alternative Design

You could instead use **laminated stickers**, which are more difficult to tear.

Handwashing Nudges Installation Guide

Resources

Below, we provide all specifications for creating the nudge materials required to install the nudges, followed by the image templates themselves.



Footprint Stencils

Size: 8.3 inches x 11.7 inches (A4)*

* You may wish to adjust to match the average feet size of students in the relevant grade

Instructions: Print out template. Use template to trace the shape of the footprints on a sheet of plastic or cardboard. Use paper cutter to cut out the interior of the footprint shapes from the sheet. Repeat twice for stencils for one pair of feet.



Calendar of Posters

Size: 11.75 inches x 16.5 inches (A3)*

* You may wish to enlarge or minimize to comfortably fit the available surface area for posters

Material: C2S 300 GSM paper (waterproof and greaseproof), matte printing*

* To increase durability of posters, you may wish to laminate posters or to print on vinyl instead

Instructions: If necessary, translate the provided posters and alter the labeled month at the top of each poster. Print all provided poster designs as a set, and bind using a spiral binding.



Eye Sticker

Size: 4 inches x 4 inches *

* You may wish to adjust to match the available surface area for the sticker

Material: Vinyl sticker paper (waterproof)

Instructions: Print out template, and trim extra white space around eye.



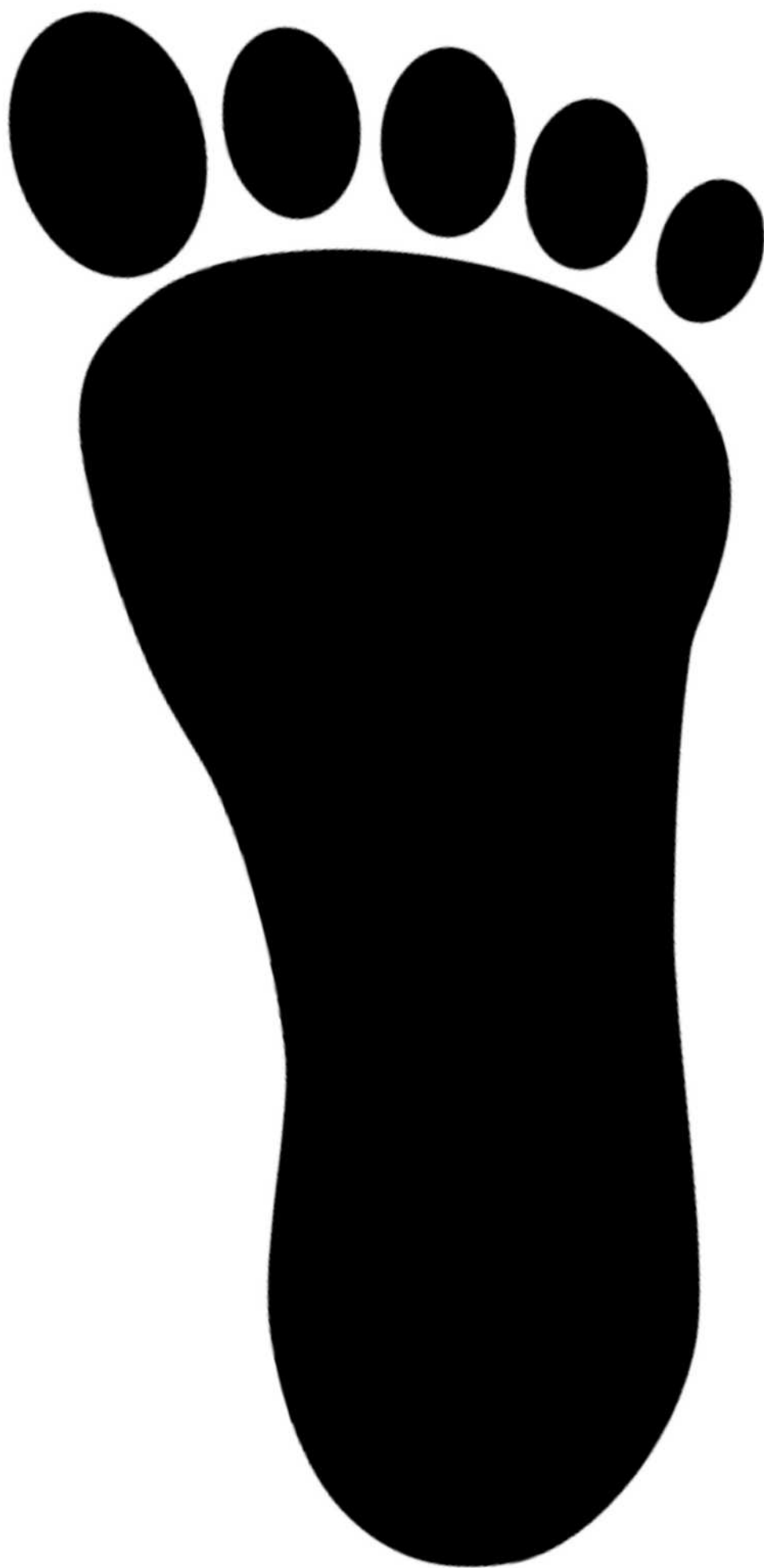
Arrow Sticker

Size: 3 inches x 4 inches *

* You may wish to adjust to match the available surface area for the sticker

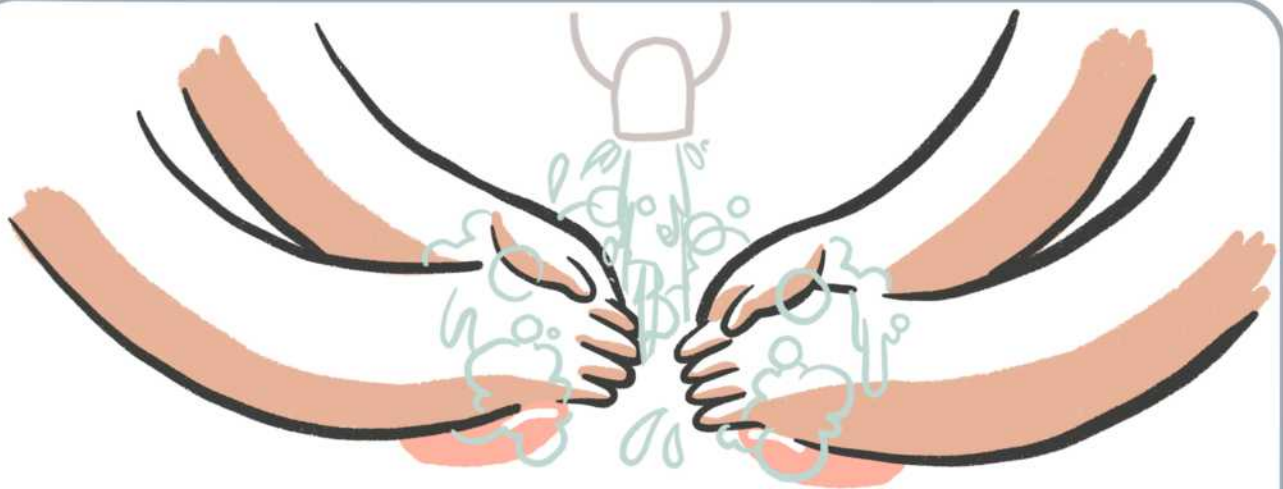
Material: Vinyl sticker paper (waterproof)

Instructions: Print out template, and trim extra white space around arrow.



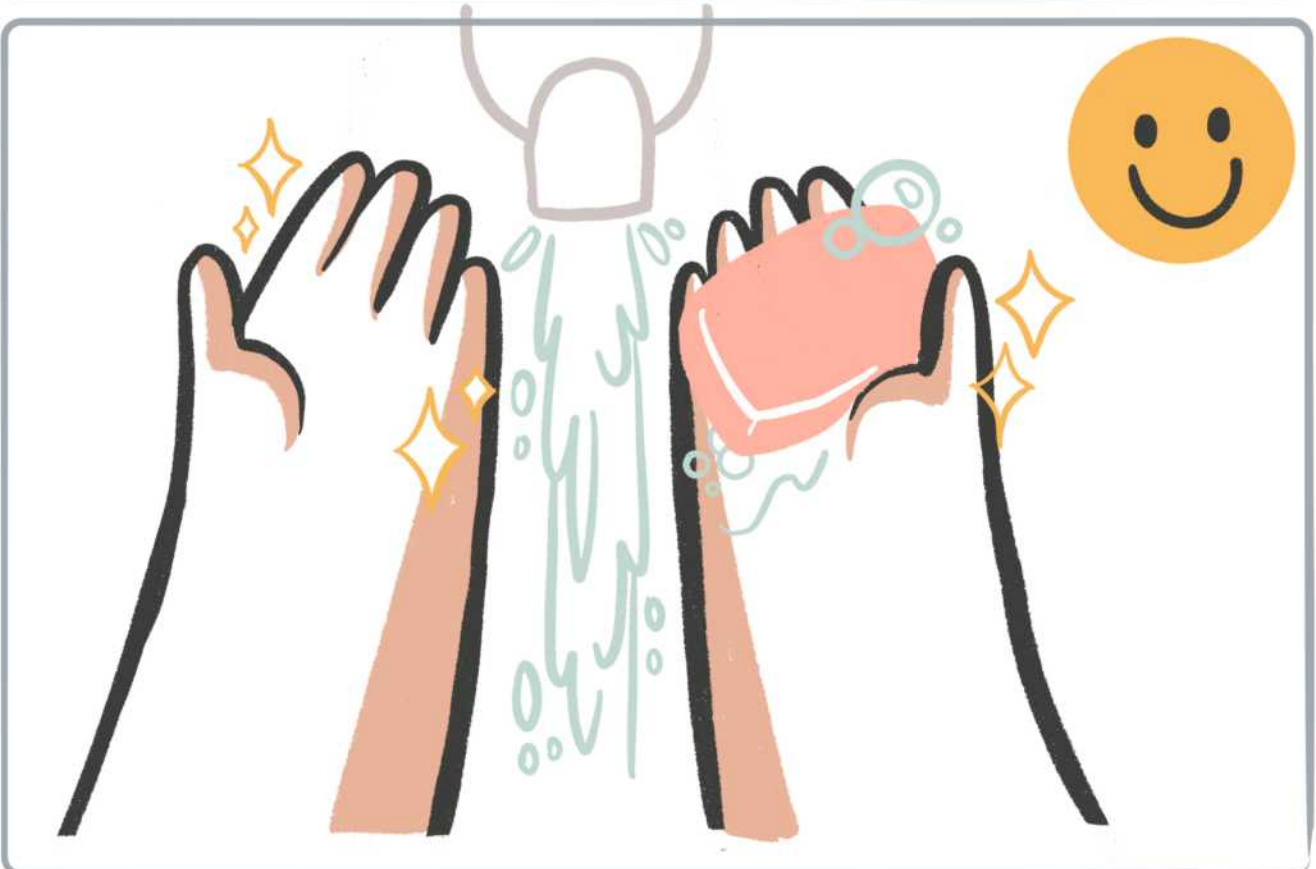
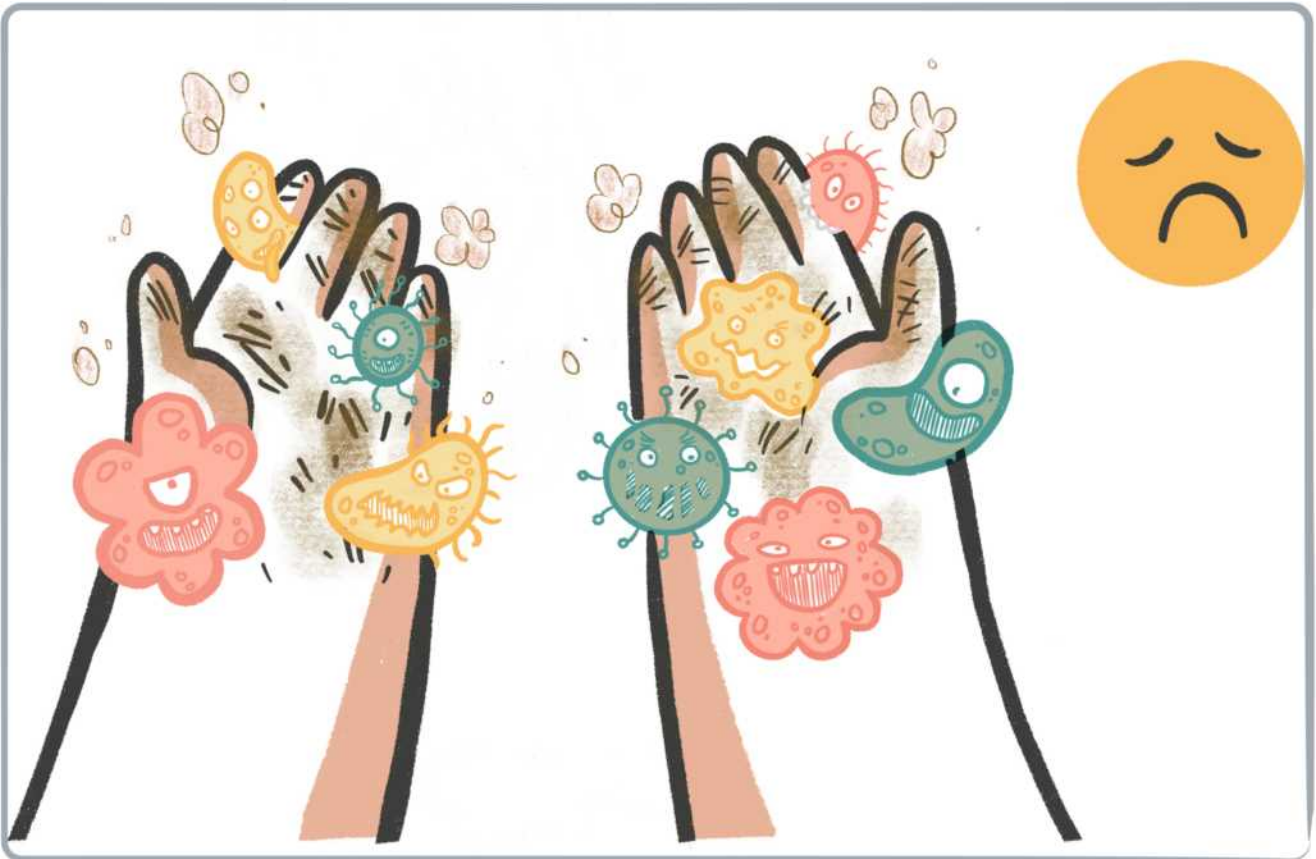
JANUARY

WASH HANDS WITH SOAP!



FEBRUARY

WASH HANDS WITH SOAP!



MARCH

WASH HANDS WITH SOAP!



APRIL

WASH HANDS WITH SOAP!



MAY

WASH HANDS WITH SOAP!



