

## Webinar 1: Bee Informed

### Introduction Slide.

### Housekeeping Slide.

Before we get started, I'd like to go over a few housekeeping items.

1. Within the application, you will be able to type your questions along the way. We will address these at the end of the webinar.
2. This presentation and the questions we received prior to the webinar will both be available in our "Handouts" section.
3. This webinar will be recorded and will be shared via email and our websites: [thebeecause.org](http://thebeecause.org) and [wholekidsfoundation.org](http://wholekidsfoundation.org)

### What to Expect Today.

"Bee Informed" is a webinar series created especially for our Honey Bee Grant recipients.

This series will provide an opportunity to answer your questions early in the year, so you can reach your individual program goals and take your honey bee journey to the next level.

Be sure to sign up for the 2nd webinar this month "Bee Informed: Maintaining the Buzz with your Educational Bee Hive" on March 27 at 6pm EST.

### Agenda.

In our webinar today, we will focus on your questions on

1. hive and bee installation,
2. program safety,
3. beekeeper partnerships,
4. hive inspections and maintenance
5. and project rollout.
6. We will also provide a general overview of project rollout and best practices. This session is intended for new grant recipients or grant recipients who have not yet implemented their honey bee hive program.

We have also incorporated the questions we received from you over the last few weeks into the session.

### All Grants.

As you are aware, there are three grant types. Everyone on this call has either been awarded an observation hive, a Langstroth or Top Bar hive, OR a monetary grant. Each equipment grant is awarded with a \$300 starter bee fund and the monetary grant is \$1500. All recipients also

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receive an Educator's Experience box (a photo of this box is to the right). We also provide assistance during the application process with selecting a beekeeper (or bee mentor). It is required that all of our schools assign a Bee Advocate or someone who is responsible for ensuring the project's success.

Please note, we also provide teacher curriculum primers and a few other goodies on our website. So, I recommend you take a look at our website if you haven't done so already.

If you have not received your materials OR need assistance after this webinar with finding a Bee Keeper or Bee Advocate, please reach out to [info@thebeecause.org](mailto:info@thebeecause.org).

### Map.

**We have a map on our website that is there to help you find other honey bee grant recipients in your area.**

We have a huge community across the US and CAN and hope you all leverage each other. Please sign up for our newsletters and follow us on social media. Your experience will be a richer one for sure.

### Beehive/Bees Installation.

Based on the responses we received from you, we've decided to categorize this webinar in a manner that coincides with the life cycle of the project. So, the first area of interest is your beehive and bee installation.

1. Your beehive should be facing south or southeast. We have received questions about whether it can face another direction. YES. It can. However, we've found they do better when the entrance is facing the early morning sun. There are many factors that contribute to a healthy hive, and this is one of them. Consult with your beekeeper and make an informed decision on where to place the bees. Another consideration when picking your install site is safety. The bee flight path is usually around 10 feet from the hive. When a bee leaves the hive, she flies parallel to the ground for about 5-7 feet and then ascends overhead. If you have a 2nd floor entrance for an observation hive OR if you have a beehive on the perimeter of campus, then your bees' flight path is away from traffic and pedestrians and is optimal. You definitely don't want your bees near the bus stop or the canteen. There is more information on hive location in our Grant Overview document on our website. One note: If your bees are near an air conditioner vent or unit, then you may get extreme temperature changes that result in condensation inside your hive. If this happens, please fix this problem asap. Covering the bees with an insulated blanket, redirecting the vent, moving the hive are all good options.
2. It's important to notify all parties involved when scheduling your bee installation/delivery. A best practice is to send a letter home to parents and teachers letting them know what is about to happen. Schedule the installation after school or on the weekends, unless you have total buy-in from your community. If that is the case, you can make the event a celebration and allow folks to watch from the sidelines. Just remember that honey bees have free will. Even though they are mostly docile creatures, inclement weather, noise, or excess activity can make their moods unpredictable. Bee smart and keep everyone informed and safe.
3. We received several questions specifically around the observation hive installation. The base that attaches to the wall must be able to hold 200 pounds. Therefore, it is very important that it is installed on the wall properly. Please make sure you hire a trained

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carpenter to do this. We are committed to ensuring your hive is installed properly and we are happy to connect your installer with our hive maker at any point in the installation process to answer questions. Just reach out to me for that contact information. The observation hive tube that goes to the outside is provided at a standard 18 inches. You are welcome to cut this tube or replace it with a see through tube or a flexible tube. If you do any replacement of parts, please make sure you watch our Hive Installation video on our website and feel free to talk with our hive maker as well.

4. Regardless of the hive type, make a checklist of materials beforehand, ensure everyone has been notified, and do frequent checks on your bees to ensure they have settled into their new home. ALSO, please make sure all of your equipment is in good condition and that there are no missing parts PRIOR to your installing bees.
5. A colony of bees comes in many shapes and sizes. Feel free to experiment on whether you use a “package of bees,” a nucleus of bees, a swarm or a full colony. I suggest you talk with your beekeeper and lean in the direction that he/she is more comfortable. There is no right way. The main point is to ensure you are installing a healthy colony of bees that is from a reputable source.
6. There was a question about the best way to release the queen in an observation hive. This situation only pertains to those who choose to install a new package of bees. I have schools that will just leave the cage inside the hive and let the bees release the queen on their own. If you’d like to make sure the bees release her sooner rather than later, you can help them out by loosening the sugar candy plug with a toothpick). You can also ask your beekeeper to allow the bees to accept the queen in a Langstroth hive if your beekeeper or the local club has an extra hive to lend. And, once the queen is released and the bees are happy, you can install them into the observation hive.
7. Another question was around installing the bees into the observation hive. I would recommend trying to install the bees as close to the observation hive entrance as possible. That way the straggler bees that are left behind when you close the hive and install inside on the wall can find their way back into the hive. It is important for you to check all bolts are tightened and that no extra bees are on the outside of the hive before you bring it inside.

### Safety Protocol.

Communication is key to not only creating a safe environment but also to creating a successful program.

1. Create and post your safety protocols near the hive and at the entrance of the school. These can include how to work the observation hive, how far to stay from the outdoor hives, highlights on bee flight paths to ensure no one walks in front of the hive, what to do if someone gets stung, etc.

Most likely, a stinging protocol already exists because there are already bees on every campus. Some places have a general epi-pen on hand that a certified person can administer and others don’t. Ensure you understand how you and others should comply with the already established procedures.

Make sure you install all signage that we provided in our educator kits. Place one near the hive and one at the office. Call yourselves a “Bee Friendly” school. Turn any fear of bees into a positive learning experience.

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2. Send a letter home to the parents highlighting your new educational efforts. Explain the benefits of having bee education and provide an opportunity for parents to ask questions or to visit the hive once it is installed. You may want to Personally reach out to the parents of children with specific allergies. And, offer parents/students an opportunity to OPT OUT of a bee lesson if they are uncomfortable.
3. Discuss with students how to keep themselves safe and give them a 5 question quiz before they are allowed to visit the bees. OR do one of our Getting to know your Bee lessons.
4. See if there is interest in a Bee Club and ask those students to lead informational meetings with others. Students can explain the purpose of having bees on campus. Raising awareness is linked to a decrease in stinging incidents and other risks kids experience in the natural world.
5. I suggest also keeping track of any “stinging incidents” that occur on campus. And, you should break down the incidents by Bee Type. You may end up finding the number of incidents year over year starts to go down and that the stinging insects are actually NOT even honey bees.
6. And, most importantly, help your bees remain disease free and comfortable in their new home. Regular hive inspection is a best practice and can help you keep your bees happy and most importantly healthy.

### Community Partnerships are a key to a successful Honey Bee program.

1. If you don't already have a beekeeper, please go find one today. Every town has a beekeeping association. You can simply google “Beekeeping Association” close to me. If you have tried to find a beekeeper and haven't yet, don't get discouraged. Spring is a very busy time of year for all beekeepers and for the bees. I would suggest that you take the initiative and attend one of the beekeeping association's monthly meetings. They are always well-attended, have great conversation, and usually have good food. Beekeepers like to talk about bees, so you should be able to find someone at that meeting who is interested in helping your cause.
2. Ask your beekeeper to come into the classroom. Most kids have never met a beekeeper. So, this is a great first step to connecting kids with the natural world and a dying profession.
3. Plan a trip for your students to a local farm or apiary - or better yet...see if you can take your kids to visit your own beekeeper's beehives. Building a bridge between this younger generation and the bees is essential to your program's success.
4. Find other educators in your school who are doing complementary programs and bring them into the fold. I think you'll find the more touch points your bees have within your organization the more successful your program will be. This could be a STEM curriculum coordinator, an AG teacher, a 4H leader, a recycling or green team member, etc.
5. Invite your Bee Team or others in your school to attend or participate in your hive inspections. You'll find that people care more about something that they are taking care of. Try to attend the hive inspections yourself. The more you know about bees, the more you and your students will want to know.

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Hive Inspections are critical to a program's success and can be a great learning opportunity for all.

1. There are many ways to inspect a hive. And, everyone has an opinion on the best way to go about managing and inspecting your bees. The best advice I can provide is to create a schedule that is manageable and stick to it. Bees are fragile and the health of a hive can change very quickly. So, a visual inspection daily is a good idea. Walk by the hive, make note of the activity levels, do you see any signs of stress or disease? Look for sufficient honey stores. There are tasks that should be completed by the bee advocate and the bee mentor. Some are daily, weekly or just monthly. Some are more invasive than others. Make sure you have a schedule that changes seasonally and that you stick with it.
2. Write down your observations or ask the students to do that for you. We included a journal in your experience box for this reason. If there are any marked differences within a short amount of time, I would suggest you reach out to your beekeeper and ask if he/she will come off-cycle.  
Your beekeeper should be coming Monthly to do a deeper inspection but may need to come on demand as well. We do have a hive inspection list in our Honey Bee Lessons guide on our website. Your beekeeper may also have a list he or she would like to use.
3. You will need a pest management plan. There are natural ways to deter pests (essential oils, cinnamon bark, etc.) and there are also medicinal methods used. Every beekeeper has a preferred method for treatment. I would discuss overall goals and try to align your pest management practices along those same lines. There were several questions around pests, so I'd like to add a few comments.
  1. Regarding small hive beetles. There are hive beetle traps on all our observation hives. You should fill a little oil inside so that the beetles get trapped when they are corralled into the dark container. Make sure you clear out this container regularly.  
You can also have a beetle bottom board in your Langstroth hive or beetle trays that fit in between your frames.  
It is important to note that the presence of A LOT of hive beetles is a sign that the bees are struggling in another way. Bees typically will succumb to a virus or a mite infestation first and then the beetles come into that weak hive and begin to take over.
  2. Another pest issue is the varroa mite. Many beekeepers are struggling with how to treat the hives to reduce high mite loads. I would work with your beekeeper on how you'd like to proceed here. If you have an observation hive, I would suggest removing the bees when you are ready to treat and put them in a langstroth hive temporarily. There are ways to treat the bees while inside the observation hive however. If this is of interest, please email me directly and I'll walk you through those suggestions.
4. Consider having a second hive. If you only have one colony of bees, I would suggest thinking about getting a second hive at some point OR leveraging your beekeeper's hive as a second one. Bees struggle or thrive at different rates and at different times. If you have a strong hive and a weak hive, then you can leverage the resources from the strong hive to help boost your weak hive back to health. This is a conversation to have with your beekeeper.
5. Bees cost money. Each of our grant awards money to help you with your efforts in year 1. But, it is important that you also plan to continue your Bee Fund in year 2 and beyond. With bees dying at a 30-40% rate nationally, you could find yourself at some point in the year with a sick or dying honey bee colony. A bee fund would allow you to purchase additional

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frames of bees or another colony from a local bee club.

6. **Cleaning Your Hive.** Healthy bees are clean bees. So, if your hive starts to look “dirty” or is starting to fill up with dead bees or other debris, then that may be a sign that your bees are not healthy. You will need to let your beekeeper know immediately. You should not have to clean your hive per se. You may need to reseal or check for any damage from the outside elements. But, the bees should keep the hive in good order in general.

### Project Rollout and Troubleshooting.

1. Bees are usually ordered in January. If you haven't ordered bees, please contact your beekeeper or bee association to see if there are any bee packages or colonies still available.
2. You can usually buy a nuc through the summer, so that would be an option. Your beekeeper may also help you track down a few frames or be able to split a hive to give you a new colony. If you lose your bees, this can be a learning opportunity as well. Even if you do everything right, you may still lose your bees. That is one of the reasons we are doing what we do - to bring awareness to the plight of the honey bee. Discuss options for getting replacement bees off-season.
3. Making connections with others in your school and the community will help ensure your project is not reliant on one person's commitment. This is an important piece of the program's sustainability.
4. If your bees run out of food, you can feed them. You can give them additional frames of honey from another hive OR you can literally feed them like you would a hummingbird. Each grant came with a feeder top for a Boardman Feeder. These can go inside a top bar hive, on the entrance of the langstroth hive or on top of the observation hive. There is a section on Feeding Your Bees in our BeeWise guide that shows how much sugar and water to include in your simple syrup recipe based on time of year.
5. If your bees swarm, then that can be a lesson as well. Please notify the folks on campus that bees are swarming or have swarmed to keep everyone on notice. You should call your beekeeper to see if he/she can catch the swarm. And I would suggest finding ways to explain to the kids why the bees swarmed and what that means. If you decide you do not want your bees to swarm, you can try to deter swarming using hive management techniques. You should discuss this with your beekeeper.
6. If your observation hive needs more room, then your beekeeper will need to close the hive. There are two metal sliders: one closes the actual hive and the other closes the entrance to the outside. Your beekeeper can then remove the hive from the wall, and take it outside to remove the frames. This should be done after hours the first few times in order to ensure the process goes smoothly. If your bees inside the traditional hive need more room, you will need to ensure you have extra frames and/or boxes on hand to add. You can order more equipment from the two suppliers we partner with: Bee Built or Back Yard Hive. They will take a call anytime to help you decide what you need and when.
7. If someone gets stung, you need to follow your posted protocol. You should assess what happened, determine if the stinging incident was from your honey bee hive and if there are any additional safety measures that need to be implemented.

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8. An equipment check should be done quarterly to ensure the hives are all in proper working order and that everything is ready for the upcoming season. Contact your beehive provider if you have questions or concerns or think you may need a replacement part.

### Share the Buzz.

Just wanted to end with a few bulleted points that I feel are most important. You will figure out over time what works and what is most valuable for you and your students. If you can remember we have best practices in all of the areas noted here, then I think you'll have a very pleasant and productive first year with your honey bee hive.

### Next Steps.

Signup for our next webinar.

Please Review or Share this Webinar with your beekeeper or others in your community.

