

## Field Trips to MakerSpace

Thank you for contacting NKY MakerSpace! You have taken the first step in scheduling a field trip that will have a tremendous impact on both you and your students!

The MakerSpace is designed to be an extension of your classroom, and the field trip should provide authentic experiences for your students. Several options exist regarding how to best plan your field trip. Please read carefully when deciding how to best move forward.

### Option #1 – Expert – You are already familiar with the MakerSpace and have a lesson of your own prepared.

- You are already familiar with the space and technology available at the MakerSpace, and require minimal support.
- Just send in your information in order to schedule the space and necessary materials! This includes date, time, number of students, and what you would like to teach!

### Option #2 – Newbie – You would like to schedule a field trip, but would like to use an existing/recommended lesson plan.

- If you are new to MakerSpace, we have beginner lesson plans to introduce you and your students to the space and technology! Check with Emily Greene to review some of the options for various grade levels.

### Option #3 – Content Specific – You feel comfortable with creating a lesson, but would like to collaborate on how to best incorporate the technology available at the MakerSpace.

- This option is perfect for the teacher that is looking to extend specific content instruction through an authentic experience. You may or may not be familiar with the Makerspace, but have an idea in mind and want to explore the options! Email Emily Greene to schedule a time for collaboration.

## Frequently Asked Questions (FAQ)

### How much will it cost?

We are a non-profit regional program. There is no cost for field trips for schools in northern Kentucky. If you will use consumables during your field trip, such as 3D printing filament, batteries, LED's, tape, PVC, wood, etc., there will be a consumables charge but you will know this prior to your field trip, based on the lessons/activities you and your students make. (Examples: Conductive materials for MakeyMakey lessons, markers and paper for Ozobots, filament for 3D printers, etc.)

### How many students can I bring and what would our schedule look like?

The number of students you can bring depends on how many teachers you have and the rooms/lessons you schedule. The most common field trip is 36-40 students in two rooms with two of your teachers for 2 hours, includes in room tour and 3D print takeaways.

### What if I have a larger number of students?

If a single field trip visit is larger than 40 students, we can sometimes spread into more rooms but it becomes difficult to give a tour. We recommend multiple field trips in one day (e.g. morning/afternoon) or on multiple days.

### **Does NKY Makerspace have instructors to teach lessons?**

The MakerSpace is managed by Emily Greene, the Expanded Learning Opportunities Coordinator for Boone County Schools. Emily will provide a tour and provide guidance and support during your field trip, but must be available to move from room to room. NKY MakerSpace does not employ instructors, but does have several knowledgeable interns that are available to assist in the afternoon.

Emily will schedule collaboration time with you if requested, in order to prepare lessons best suited for your class. Please remember that this must be scheduled in advance of your field trip in order to provide the best experience for your students!

Additionally, we offer workshops and teacher exploration times during and after school hours throughout the year. This time will allow you to become more familiar and explore the technology available at the MakerSpace. If you are interested in exploring the space, but do not see an upcoming time scheduled, please email Emily Greene to ask!

### **How many teachers and chaperones do I need?**

We request one teacher for each room/activity you schedule. For instance, if you plan a two-hour field trip in the Engineering room and Make Your Own room with 36 students (18 in each room), we ask that you have two teachers to lead activities. Additional adults/chaperones are recommended but not required. Successful making activities typically require a lower student to teacher ratio so the more adult leaders you have, the more successful your visit will be.

### **Where can we eat lunch?**

NKY MakerSpace is a no food/no drink facility. However, we do have a covered outdoor picnic area nearby at Boone County Fairgrounds that can be reserved ahead of time and will accommodate any size field trip (I can do this for you through the Fairground manager if I know in advance). There are also a number of nearby restaurants in Burlington and Florence where you can take students by bus. Most field trips are scheduled in the morning or afternoon, before or after lunch.

### **Will our field trip include a tour?**

Field trips can begin with a tour from Emily Greene, which typically takes about 20 - 25 minutes. If you bring 36-40 or fewer students, Emily can give you a personal tour inside all six rooms of our MakerSpace.

### **Can we 3D print during a field trip?**

Students will receive a tour of the 3D printing idea/design room, where Emily will begin a 3D print that will complete before the end of your field trip. This will allow for each student to have a “take-away” from this experience. To personalize, you/your students may select an item from

Thingiverse.com (free models/files for 3D printing) and email it to Emily at least one week before your field trip. If you have your students design an STL file using a program like Tinkercad or Google Sketchup and you are able to send an STL file in advance, an intern will test print your file. If you do not send a file or create one, Emily will be happy to select and print one from a library of popular items such. Examples of pre-selected items include a note holder, chip clip, etc. To cover the cost of 3D printing during your field trip, a \$5 charge will be applied.

### **How can we get the most out of our field trip?**

Attend a free teacher exploration during or after school prior to your field trip so you can become familiar with the technology you'll be exploring with students. Plan Maker lessons in your classroom leading up to your field trip. For instance, introduce your students to MakeyMakey and build controllers that you bring with you and test on your field trip. Take old broken electronics apart with your students, such as calculators, VCRs, phones, printers, computers, etc. and label parts as power, inputs, outputs and wires (e.g. sensors, gears, motors...) before exploring with Little Bits on your field trip. Explore coding with Scratch (online and free) in your classroom before exploring Ozobots or MakeyMakey. Lastly, plan post field trip lessons to review what students learned, identify how and where you can have a MakerSpace in your school and decide next steps.

### **I'm ready to schedule a field trip! Now what?!**

After reviewing all field trip information, complete the field trip form found on our website OR email Emily Greene directly answering the following questions:

1. What is your name? Grade level/subject that you teach? School where you teach?
2. Which option are you interested in pursuing? (or indicate which rooms/lessons/specific technology you are interested in)
3. Would you like a tour included in your field trip?
4. Would you like to have something 3D printed for your class during your trip?
5. How many students will you be bringing? How many teachers/chaperones?
6. Will you be wanting to bring student lunches with you to eat at the fairgrounds?
7. Provide any additional, relevant information.

I will respond by email with any questions and a proposed date and time.

*Thank you for your interest in the NKY MakerSpace! I look forward to assisting with an authentic experience for you and your students!*

Best regards,

### **Emily Greene**

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