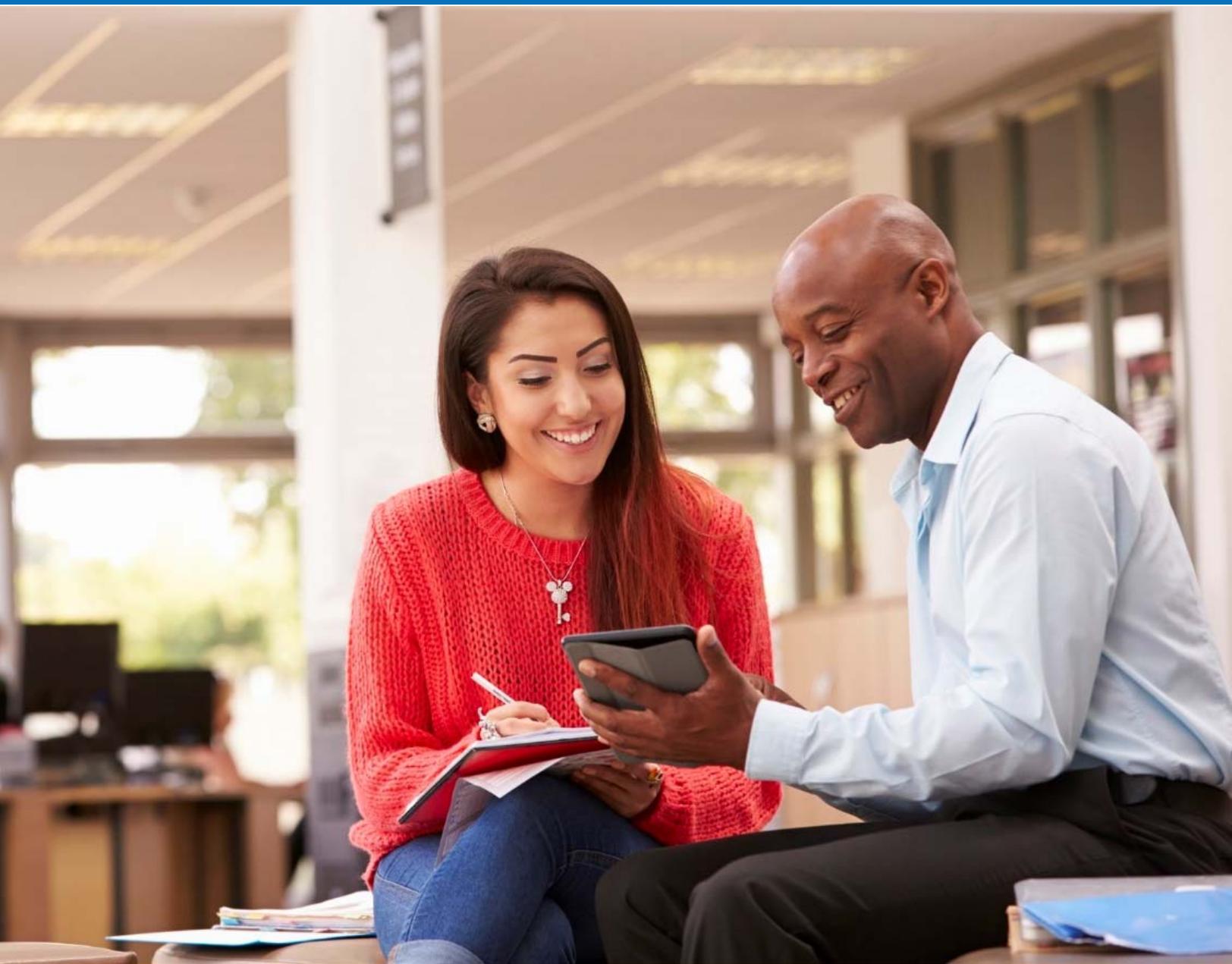


# Pilot Study of STEAM-Enhanced Coaching, FY 2017-18

April 2019



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## Introduction

### Background

As a partner in Quality Start Los Angeles (QSLA), a quality rating and improvement system in Los Angeles County, Child360 provides an array of support services to ECE providers. These services include on-site monthly coaching for ECE teachers and trainings designed specifically for ECE professionals. Individualized coaching, the most intensive support Child360 offers, has been shown to be an effective form of professional development for ECE teachers, and can significantly improve both instructional practice and student achievement (e.g., Kraft et al., 2018). However, the effectiveness of training as a professional development activity has been found to be more variable (e.g., Yoon, Duncan, Lee, Scarloss, & Shapley, 2007), and depends upon whether the training is sufficiently long in duration and provides opportunities for reflection and active learning (Darling-Hammond, Hyler, & Gardner, 2017). The goal of this pilot study was to explore whether participants' learning from a Child360 training would benefit from individualized coaching and support to help them implement the training content in their classrooms.

In 2016-17, as part of its training series for QSLA, Child360 began offering a STEAM (Science, Technology, Engineering, Arts, and Mathematics) Teacher Institute (TI). This was an intensive four-day, 18-hour training for ECE professionals, designed to help them immediately implement STEAM curriculum in their classrooms. Organizers scheduled training days once a month over the course of four months, thereby allowing teachers time to practice STEAM strategies in their classrooms between training days. In 2017-18, the STEAM TI provided teachers with optional assignments between trainings, which guided teachers in the development of a full STEAM lesson for their students.

Selected participants in the STEAM TI received enhanced STEAM coaching, which was delivered through individualized feedback on videos of their classroom practices. Prior research suggests that teachers benefit in multiple ways from observing videotapes of their instruction. In a large study involving over 300 teachers and 100 administrators, Kane, Gehlbach, Greenberg, Quinn, and Thal (2018) found that K-12 teachers who videotaped their classroom lessons were more self-evaluative with regard to their practice than teachers whose classroom observations with their administrators were conducted in person. In addition, teachers with videotaped lessons were more likely to describe a specific change in their practice post-observation with their administrator. Quinn, Kane, Greenberg, and Thal (2018) found that the use of a video-based teacher evaluation system increased K-12 teachers' sharing of videos with their colleagues for feedback and support. Additionally, in Child360's own work with preschool teachers, coaches reported that working with teachers via the online platform allowed them to be more intentional in their work (Barrett, 2017). Based on evidence of the benefits of online coaching for both teachers and coaches, we were interested in testing the use of video as a coaching tool to augment teachers' STEAM practices.

### Purpose

This pilot study was intended to evaluate the feasibility of using iPads to record videos of the classroom and review them for coaching purposes. The study also investigated whether teachers benefitted from coaching specific to the area of STEAM.

### Data Analyzed

In the spring of 2018, the Research and Evaluation Department recruited a convenience sample of coaches and teachers for this pilot study of enhanced coaching in STEAM. Teachers selected for participation were attending the STEAM TI and receiving individualized coaching from Child360. As shown in Appendix A, coaches filmed short videos of teachers' classrooms, reviewed the videos with the teachers, and provided them with STEAM-focused feedback. For additional information on participant selection, materials used in the study, and video recording procedures, please see Appendix B.

To capture information in these areas, the researchers invited two coaches and five teachers to be interviewed. Ultimately, one interview was conducted with a participating coach, and one observation was conducted with a different participating coach. Researchers interviewed two teachers, both Family Child Care center owners, and observed one classroom during a coaching session.

### Key Findings

The use of iPads was comfortable for teachers, but could be distracting for children. Teachers appreciated STEAM-focused coaching, and felt that it augmented their STEAM teaching skills.

### Recommendations

Suggestions for future practices are outlined in the Conclusions and Recommendations section of this report.

## Research Questions

The following research questions guided the study:

1. Is using an iPad to record, view, and review classroom activity a feasible feedback approach for coaches and teachers? Feasibility was defined as ease of using the iPad for engaging in conversations between coach and teacher, and the absence of technology issues that resulted in time away from coaching.
2. What are the experiences of coaches and teachers with STEAM-enhanced coaching?
3. To what extent is it feasible for video observations to become a regular part of coaching? Feasibility here is defined as ease of use, and perceived value by coach and teacher.

## Findings: Use of iPad for Classroom Recording

**iPads were comfortable for coach use, but they were a distraction for children at times.** The iPad recording function was easy to use, and sharing video footage was straightforward. The coach reported that opening the recording feature and positioning the iPad were not challenging. Using an iPad for the purposes of classroom recording was feasible, and did not require additional support. For example, during our observation, we noted that the coach positioned herself near activities and moved around with the iPad as needed, without disruption. However, at times the children asked to see the iPad or wanted to know what the coach was doing during filming. This created a brief distraction, and the coach made an accommodation to limit the interruption. In the end, the coach preferred to use her assigned laptop to record footage because of her familiarity with the device.

**Children and teachers appeared comfortable with the iPad.** Teachers demonstrated a general understanding of the iPad and its functions. Teachers instructed the children to behave normally while the iPad was in use by the coach and set clear behavioral expectations. Children were aware they were being recorded, and no disruptive behaviors were observed during the STEAM session.

## Findings: Experiences of Coaches and Teachers with STEAM-Enhanced Coaching

**STEAM coaching typically occurred in short intervals of 15 minutes or less; one coach and both teachers felt that this was an adequate amount of time for STEAM coaching.** The allotted time for enhanced coaching (roughly 30 to 45 minutes total) met the needs of both the coach and the teachers we interviewed. During the initial visit, the process took extra time because the teacher had questions about the purpose of the filming and her role in the process. In subsequent visits, the process was streamlined and allowed both coach and teacher enough time to discuss the STEAM video. STEAM coaching time occurred in short intervals (typically less than 15 minutes) in the morning and afternoon, as opposed to occurring in one 30- to 45-minute session. The coach felt the shorter intervals made the process more meaningful and captured more opportunities for STEAM coaching. She also felt that she was able to provide enough feedback in the time given, and was able to develop ideas for the integration of STEAM activities.

**STEAM conversations were observed between teacher and coach.** One teacher used scientific terms during circle time. For example, the word of the day was “recycle.” During circle time, the observed teacher made real-world connections between the lesson and the children’s home experiences by building structures made from common household recycled items. Children then explained how they had recycled old bottles and cans when they got home, and how they had often built towers with recycled materials. After reviewing video footage with her coach, one teacher explained how she could incorporate common classroom materials into the lesson, as well as help define STEAM terms to the children. In addition, the observed teacher described how she planned to introduce materials to the children and explain how they are used before conducting the lesson. One teacher stated that the video footage reinforced her confidence in explaining math concepts to her students, and she felt that her lesson plans were successfully and clearly communicated to the students.

## Findings: Feasibility of Video Observations for Coaching

**One coach viewed STEAM video coaching as an important strategy in a coach’s toolbox.** The coach we interviewed felt that the video enabled her to reflect and review classroom interactions that she might have not noticed before. She reported that the process was enjoyable and added more meaning to the interactions between coach and teacher, and stated that the video coaching would be a great addition to Child360’s coach toolbox. She felt the video footage led to a more intentional discussion around goals. In addition, one teacher stated, “I was refreshed with the activities shared at the training. It was something new, out of the box. My children are still looking for activities in the classroom and reminding me about the things they do at home that are related to what we are learning in the classroom. Also, the videos have supported me, I can see myself and I know what we are doing, it makes me reflect on my practice and keep learning.” Video coaching was embraced by both the coach and teachers as a reasonable, and important, addition to their normal coaching visits. One teacher reported, “This has helped me by putting labels to activities and the learning. I think there needs to be more of a focus on STEAM. More of this type of coaching.” The observer noted that the teacher appreciated the STEAM-focused feedback and the opportunity to reflect on her practice.

**Coaches may benefit from additional training on STEAM in order to more effectively support teachers on STEAM topics.** Coaches may be able to provide higher-quality feedback if they receive more STEAM-specific training. Our interviewed coach had opted to do research on her own to better prepare herself for her STEAM coaching visits. Training on day-to-day STEAM interactions might benefit coaches more than trainings focused on STEAM projects, which typically require specific materials and instruction.

*“I think there needs to be more of a focus on STEAM. More of this type of coaching.” – Preschool Teacher, Child360*

## Conclusions and Recommendations

**Child360’s coaching model may benefit from incorporating more video observations of classroom practice.** The limited feedback that we received suggested that the use of video observations is feasible for coaches and teachers; both the coach and teacher were able to utilize the iPad successfully to view and review video observations, as well as navigate the enhanced coaching process with minimal interruption. The use of video observations may provide teachers with the new and unique opportunity to observe themselves in their classrooms. Upon viewing her classroom video, one teacher commented that she had never realized she sat so far away from the children. For coaches, video observations allow them extra time to observe and reflect prior to providing feedback. Because all coaches now have tablet devices, video observations could become another tool in their coach toolbox.

**Coaches may need additional training in order to provide high-quality coaching on STEAM.** Program coaches provide support to teachers across a very wide range of topics. Like all professionals, however, they require ongoing training on specific topics to keep their information up to date and provide the highest quality of coaching. In the future, if Child360 offers enhanced coaching to teachers who participate in a given training, participating coaches should also be present at that training, or should attend a comparable one.

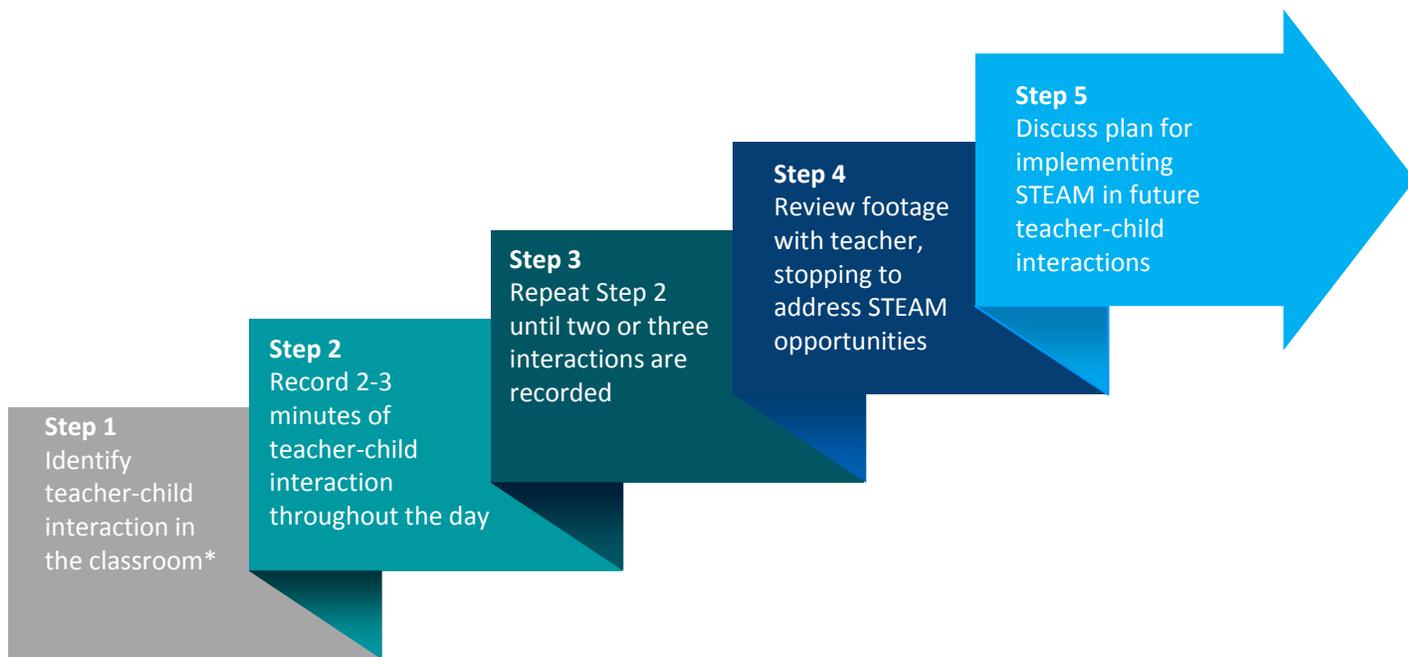
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## Appendix A. STEAM-Enhanced Coaching Visit Procedure



\*Teacher-child interactions could include the following: Circle time, outdoor time, small group, whole group, transitions, or lunch time.

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## Appendix B. Methodology

**Participants.** A total of 15 teachers and seven coaches participated in this pilot study. We first identified teachers who had attended the first day of the STEAM TI in February 2017. We then matched these teachers with their coaches, and identified the coaches who had the highest number of teachers attending the STEAM TI and whose supervisors were familiar with the online coaching platform used at Child360. The number of teachers per coach ranged from one to five.

**Materials.** Each coach supervisor sent an email to their coaches, informing them that they had been selected for the project. The email included the Enhanced Coaching Notification Form (Appendix C), which provided background information on the project for coaches, teachers, directors, and parents. The letter also asked the coaches to send notification letters to the directors and teachers using the templates provided in Appendices D and E. The letters instructed both directors and teachers to post copies of the Enhanced Coaching Notification Form in their classroom, and provide copies of the Opt-Out Form (Appendix F) to parents who requested it. Parents signed and completed the form to indicate that they did not want their child to participate in video recordings, in which case the coach would ensure that their child was not recorded.

**Procedures.** Coaches provided their teachers with STEAM-focused feedback during two or three of their regularly scheduled monthly coaching sessions. These coaching sessions followed a training day for the STEAM TI; the goal was to enable teachers to put into practice what they had learned in the workshop. During each session, coaches recorded up to five short videos (one to two minutes each) of teachers interacting with their students. Coaches sat with their teachers, reviewed each video, and focused on new ways to implement STEAM in the classroom. Coaches then deleted the video.

We developed interview protocols for the teachers and coaches, which are displayed in Appendix G and H, respectively. The interviews focused on whether coaching occurred, if teachers or coaches noticed anything different about the online coaching modality, and whether they felt additional training was needed in order to utilize the iPad for feedback.

## Appendix C. Enhanced Coaching Notification for Coaches and Teachers



### **STEAM Professional Development for QSLA Providers**

Child360 offers professional development designed to help early educators immediately implement STEAM as part of their regular curriculum. In 2017-18, Child360 is offering both a four-day Teacher Institute, as well as Enhanced Coaching in STEAM for selected participating teachers.

### **Teacher Institute**

All QSLA providers are eligible to participate in a four-day STEAM Teacher Institute (TI). The STEAM TI is designed to help teachers immediately implement STEAM curriculum in their classrooms. Providers may send as many teachers as they wish to participate in the TI sessions, which are held at four locations throughout Los Angeles County:

Group 1: Metro LA  
Los Angeles Chamber of Commerce  
Wednesday Sessions | Feb 7, Mar 7, Apr 11

Group 2: South  
First Congregational Church of Long Beach  
Thursday Sessions | Feb 8, Mar 8, Apr 12

Group 3: West  
Veterans Memorial Building  
Friday Sessions | Feb 9, Mar 9, Apr 13

Group 4: San Gabriel Valley  
Lake Avenue Church  
Saturday Sessions | Feb 10, Mar 10, Apr 14

### **Enhanced Coaching**

Selected participants in the Teacher Institute will receive enhanced coaching, with targeted support to help them immediately implement what they learned in the TI. During the two coaching visits following the second and third days of the TI, coaches will use video to record teachers conducting one of their regular lessons. Coaches will then provide the coach with feedback, to identify ways that teachers could have integrated STEAM into their instruction. Once the coach has reviewed the video with the teacher, it will be permanently deleted.

Child360 is particularly interested in partnering with school districts, to help as many teachers as possible benefit from enhanced coaching. Prior to their enhanced coaching sessions, teachers will be asked to distribute an informational sheet to all of their parents, notifying them of the videotaping and providing them with the opportunity to not have their child videotaped.

Enhanced coaching will include:

- 2-3 individualized coaching sessions (during regularly scheduled coaching visits) that will take place between STEAM TI days.
- 5 videos per session (1-2 minutes in length each).
- Coach will sit with teacher and review each video and focus on new ways to implement STEAM, ideally specific topics that were covered in the previous STEAM TI day.
- Each coaching session should last about 45 minutes.

## Appendix D. Enhanced Coaching Notification Letter to Directors



Dear *Director*,

We were pleased to see that at least one of the teachers at your site attended the STEAM Teacher Institute this year! Your site's program coach will be providing attendees with enhanced coaching specifically related to STEAM content from the training. This is an ideal opportunity for teachers to incorporate what they learned into their everyday instruction.

Teachers attending the STEAM TI will receive enhanced coaching during the next two visits to your site. The Program Coach will create a series of very short videotapes, typically 1-2 minutes in length, of the teachers' classroom instruction. The Program Coach will then review each videotape with the teacher to highlight specific ways that STEAM can be incorporated into everyday instruction.

No one else but the Program Coach and the teacher will see the video. Once they have reviewed the videotape, it will be deleted forever.

In order for the Program Coach to videotape your classroom, we will be asking your STEAM TI attendees to print out and post a copy of the attached "Enhanced Coaching Notification" in their classrooms by **March 6<sup>th</sup>**. If parents do not want their child to be videotaped, they may request a copy of the attached "Opt Out Form." Teachers should have returned "Opt Out Forms" available for the Program Coach at the next visit, so that s/he may ensure that these children are not videotaped.

Please do not hesitate to contact me if you have any questions.

Kind regards,

*Coach*

## Appendix E. Enhanced Coaching Notification Letter to Teachers



Dear *Teacher*,

I was pleased to hear that you're participating in our STEAM Teacher Institute this year! As a result of your participation, I'll be providing you with enhanced coaching specifically related to STEAM. This is an ideal opportunity for you to incorporate what you learned in the STEAM TI into your everyday instruction.

During our next two visits, I'll be creating a series of very short videotapes, typically 1-2 minutes in length, of your classroom. After I've recorded each videotape and reviewed it, I'll review it with you to highlight specific ways that you can incorporate STEAM into your existing curriculum.

Once we've reviewed the videotape, it will be deleted forever. No one else but you and I will see the video.

In order for me to videotape your classroom, please print out and post a copy of the attached "Enhanced Coaching Notification" in your classroom by **March 6<sup>th</sup>**. If parents do not want their child to be videotaped, they may request a copy of the attached "Opt Out Form." Please ask your parents to return a signed copy of this form to you, and have the forms available for me when I arrive for your next visit, so that I may ensure that their children are not videotaped.

I look forward to meeting with you next month. I hope you enjoy Day 2 of the STEAM TI!

Kind regards,

*Coach*



### Opt-Out Information for STEAM Video Coaching

Dear Parent or Guardian:

**Your child's classroom has been selected to take part in a new video coaching program. We want to make your child's classroom even better.**

Your child's teacher is asked to videotape 1-2-minute segments of classroom and outdoor activities for a total of about 30 minutes between now and the end of the school year. These videotapes will be used only with your classroom's Child360 coach to provide feedback on strategies designed to improve daily STEAM interactions with children. Once the videos are complete, they will be reviewed with your child's teacher and immediately deleted once the session is over. The video will not be stored, sent, or shared with any individual. Your child's teacher will ensure the video is deleted by the end of the coaching session. The purpose of the video is to highlight specific STEAM concepts and improve the quality of the classroom.

### **What does it mean to participate?**

Your child will not be asked to do anything extra or different. They will just do what they usually do every day at school. They will not have to take extra tests or do any extra work.

Every 4 weeks your child's classroom will be videotaped during normal classroom activities for about 10 minutes. During videotaping, your child may be captured on film.

This information will help improve the quality of instruction at your child's preschool program.

**Child360 will not collect any information that can identify your child during the online coaching program. Your child's teacher will know your child's name, but we will not. We do not need this information to conduct video coaching.**

## Appendix F. Enhanced Coaching Opt-Out Letter Form for Parents (cont.)

You, on behalf of your child, can, at any time, opt out by filling out and submitting the opt-out form that is part of this document.

### **What does it mean to opt out?**

#### **For your child:**

If you choose to opt out your child, this means that accommodations will be made to ensure your child will not be captured on film. Your child will still be able to fully participate in their normal activities.

If you have any questions, you can call Drew Barrett at (213) 416-1287, or email him at [dbarrett@laup.net](mailto:dbarrett@laup.net).

If you don't want to opt out, you don't have to do anything. Just keep these forms in case you have questions later.

If you **DO NOT** want to allow your child to participate, please fill out this form and return it to your child's teacher.

## STEAM Video Coaching Opt-Out Form (Parent/Guardian)

I have received information about the STEAM Video Coaching. The process is clear to me and my questions have been answered satisfactorily.

As a parent or legal guardian, I **do NOT** give permission for Child360 to videotape \_\_\_\_\_ for the purposes of the STEAM Video Coaching.  
*(Name of child)*

PRINT NAME OF PARENT/Legal Guardian:

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SIGNATURE OF PARENT/Legal Guardian:

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DATE: \_\_\_\_\_

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