



Kids Healthy Outdoors Challenge (KHOC)

2015–2016 School Year Report

KHOC is funded by:



The Snyder Family Foundation

KHOC 2015–2016 School Year Report

Table of Contents

<u>Section</u>	<u>Page</u>
I. Executive Summary	3
II. 2014-15 Program Changes and Participant Attrition	7
III. 2014-15 Participant Attrition	9
IV. “Completer” Teachers & How They Conducted KHOC.....	11
V. Outcomes	16
VI. Teacher Feedback on Project Processes.....	29
VII. Notable Differences Between Survey Results - Years 1, 2 and 3	33
VIII. Lessons Learned & Recommendations for the Future	34
Addendum: KHOC Student Letters and Artwork.....	38

Credit: Photos from Garin Park and Crab Cove by KHOC teacher Delight Evans-Vasquez of James Graham Elementary School in Newark.

I. Executive Summary

Purpose of the Project: *Kids Healthy Outdoor Challenge (KHOC)* was first designed and implemented in 2012 with a goal of promoting outdoor education while also supporting third grade curriculum content standards, including the new Common Core Standards which have now been implemented in Alameda and Contra Costa County school districts. KHOC was designed as a tool to support, but not supplant, the teaching of required content in a new way—outdoors, with teachers leading activities on their own.

The EBRPD Master Plan 2013 highlights the importance of connecting youth to nature and building future environmental stewards. Also, there is significant data that supports the value of parks and nature in improving health. Spending time outdoors contributes positively to student achievement, learning, and development. The master plan priorities include expanding efforts to attract young people to parks. KHOC is an exciting program that directly supports this plan.

KHOC is comprised of ten sections, each aligned with the *California Children's Outdoor Bill Of Rights*¹ which states that every child in California, by the completion of their 14th year, should have the opportunity to experience 10 key outdoors activities: e.g., Connect to the Past, Explore Nature, Follow a Trail, Plant a Seed, Ride a Bike, Learn to Swim.

Outdoors was foreign to some students. The smells and insects were something they had to get used to. The lessons around the school were varied enough to give all students the opportunity to discover their piece of the world in their way.

~A KHOC Teacher

About half of the ten chapters are designed to support classroom learning at school and in parks, while the other half are ideal for students and families to explore outside of class. Each chapter contains fun, interactive lesson activities that relate to the chapter topic. For example, in *Connect to the Past*, lessons explore Ohlone Native American culture and games. In *Explore Nature*, students participate in hands-on experimentation with different types of bird beaks, and their adaptation to different environments.

School year 2015-16 was the fourth year EBRPD conducted KHOC, funded with support from: Kaiser Permanente, the San Francisco Foundation, the Contra Costa County Fish and Wildlife Committee, the Tesoro Foundation, the Snyder Family Foundation, and the Alameda County Fish & Game Advisory Commission.

During the school year, each teacher was asked to complete at least three lesson activities in the KHOC booklet with their class, and to go on one class trip to an EBRPD park. Anticipated **outcomes** for the teachers participating included:

- Increased comfort and skills teaching outdoors.
- Diverse teachers supported in meeting third grade curriculum content standards.
- Increased use of EBRPD resources to support learning.
- Increasing level of physical activity outdoors, promoting health and well-being, and life-long parks use, both for teachers and their diverse students.

¹ Developed by the CA Roundtable on Recreation, Parks and Tourism, http://www.parks.ca.gov/?page_id=24952

Changes in the Project: School Year 2015-16 saw a major expansion in the number of classrooms invited to participate in KHOC, nearly doubling invitations from the prior year to include a total of **123** teachers and classrooms. (As in school year 2014-15, all teachers who applied were invited to participate in KHOC, including **36** teachers who were previous participants.)

Number of Invited Classrooms			
Year 1: 2012-13	Year 2: 2013-14	Year 3: 2014-15	Year 4: 2015-16
33	32	63	123

Increased funding due to the increasing popularity of the program helped make this expansion possible. But since KHOC is now being offered in many more schools (and becoming institutionalized in some), essential changes and streamlined requirements were required this school year, including a reduction in required teacher paperwork. These changes are explored in Section II.

This school year was also the second that teachers could request a park naturalist to help guide their field trip. These applications were due by early December, and were decided by lottery. Almost every teacher who applied for a trip was able to get a naturalist. Additional, optional self-guided park trip materials were also made available this year.

I am more clear how to turn the outdoor environment of EBRPD into my classroom. I had done a Wetlands program years ago, and this has renewed my interest! It also is giving me some focus on my retirement which is just one year away.

~A KHOC teacher

School Year 2015-2016 KHOC Participants: As noted, in fall 2015, 123 classrooms were invited to participate in KHOC. They represented 46 public schools in Alameda (63%) and Contra Costa (37%) Counties. In all, 13 school districts were represented.

There was wide variation in these schools and students, with 63% applicants reporting they came from an urban school, and 37% from a suburban school. As was true the prior year, average class size was **24** children.

There were also wide variations in socio-economic class (i.e., low-income status measured by the percent of students eligible for Free and Reduced Price Meals or FRPM), from 2% at one school to 100% at others.

	Average	Range
Class size	24	[15, 28]
% students eligible for FRPM	68%	[2, 100]
% English as a Second Language (ESL) students	34%	English, Spanish, Cantonese, Mandarin, Vietnamese, Tagalog commonly spoken

Overall, students in classrooms invited to participate were **38% Latino, 20% Caucasian (non-Latino), 24% Asian, 13% African American, 1.5% Pacific Islander** and **3.5% Other or More than One Race.**

There was also variation in invited teachers. Overall, teachers averaged 15 years of experience in the classroom, but some were brand new, and others had 30+ years of experience (one teacher was in her 39th year).

Comfort level teaching outdoors also varied at time of application, although the vast majority felt at least somewhat comfortable (as noted, 36 teachers, or 29%, were prior KHOC participants):

Very Comfortable	46%
Somewhat Comfortable	37%
Neutral	12%
Somewhat Uncomfortable	5%
Very Uncomfortable	0

Overall, there were **at least 89** park trips taken during the year, and **at least 3,741** students and other passengers on park trips during the school year. This includes classes who took more than one trip, teachers, parents and chaperones, etc.

Survey Process & Results: To determine whether project outcomes were met and to gain valuable program feedback, teachers who completed KHOC – that is, they attended orientation (or had previously participated) *and* had a recorded park trip – were asked to take a year-end survey in May/June 2016; 58% took this the survey.



Overall, 89 teachers were KHOC “completers” in 2015-16.

Ninety percent (**90%**) of survey respondents indicated that they attended orientation, took a trip to an EBRPD park, *and* completed at least three KHOC lessons with their class.

Four teachers (**8%**) indicated they did not use KHOC lessons in the classroom, but did go on the park trip. One teacher (**2%**) had been misidentified as a completer, and indicated she had *not* taken a park trip.

One of the major goals of KHOC is to increase educator comfort and skills teaching outdoors. For the third year in a row, teachers indicate that it helps meet this goal: **85%** Agreed or Strongly Agreed that KHOC increased their *comfort* with leading classroom activities outdoors; **71%** Agreed or Strongly Agreed that participating in the project increased their *skills* teaching outdoors.

It was also critically important that teachers not feel like KHOC was taking time away from meeting mandated state curriculum standards, particularly given that all participating schools had switched to Common Core; **73%** Agreed or Strongly Agreed that KHOC helped them to meet new curriculum standards.

During the school year, EBRPD sought to increase student (and educator) enthusiasm for activity and learning outdoors, particularly in natural park settings. Survey results show that this outcome was successfully met:

- **93% (N=38)** of teachers responding Agreed or Strongly Agreed that participating in KHOC made their class want to spend more time being active outdoors.
- **98% (N=40)** Agreed or Strongly Agreed that lessons were engaging and fun for students.
- **73% (N=30)** Agreed or Strongly Agreed they spent more time teaching outdoors this school year than they did the last school year.

Most importantly, **95%** of respondents said they intend to continue teaching lessons that **get kids active outdoors** in the future.

Finally, information was collected from educators on how KHOC could be improved in future years. Section VI of this report details their challenges and suggestions (most particularly this year, more clarity and follow-through in scheduling park trips).

I saw the awe as the smells of nature, the creatures in nature, and the hands on work made learners' interest peak, and students asked many more questions!
~A KHOC Teacher

Conclusion: Wrapping up a year of significant growth, EBRPD can point to both encouraging achievements (such as a growing number of schools joining the KHOC family), as well as additional areas where KHOC processes can be improved.

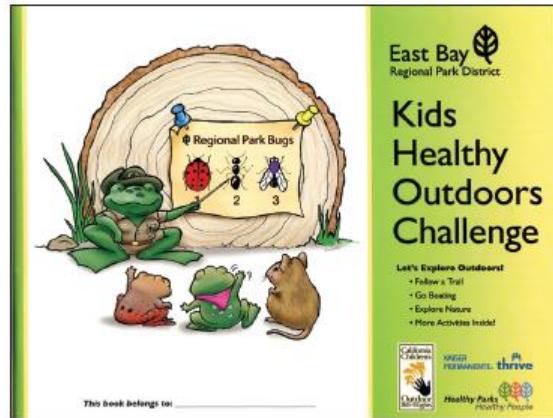
KHOC continues to support the outdoors educational experiences of teachers and students alike, helping to instill respect and awe for natural spaces throughout the East Bay, and beyond.

EBRPD is committed to continuing to expand outdoor education opportunities to improve health and well-being in our East Bay schools.

II. 2015-16 Program Changes

School Year 2015-16 saw a major expansion in the number of classrooms invited to participate in KHOC; this year we nearly doubled invitations from the prior year to include a total of 123 teachers and classrooms. (All teachers who applied were invited to participate in KHOC this year, including 36 teachers who had participated before.)

Increased funding due to the popularity of the program helped make this expansion possible. But since KHOC is now being offered in many more schools (and becoming institutionalized in some), essential changes were required this school year.



We also paid close attention to suggestions and feedback from past KHOC teachers.

Resulting changes in the program included:

- Redesigning the KHOC curriculum to even better align with Common Core Standards. (Suggested changes, provided by KHOC teachers over the past three years, were made in the summer of 2015, and the curriculum was re-printed at the beginning of school year 2015-16).
- Developing a greatly simplified on-line application to participate, accessed through the KHOC website in Fall 2015.
- Dividing the participating teachers into five different training cohorts (each led by an EBRPD naturalist), so that each teacher had a central point of contact for questions and more personalized trouble-shooting.
- Following prior year teacher suggestions for more flexibility and fewer requirements to participate. Teachers were asked only to complete three lesson activities, and no longer had to submit a year-end Activity Log (in the past, they had been asked to submit a completed classroom activity log before they could request a park trip). This year, teachers could request their park trip and submit a Transportation Application up until March 1, and had to complete their park trip by May 15, as in prior years.
- Shortening the KHOC orientation from three to two hours, and making it optional for returning KHOC teachers (e.g., only new teachers had to attend).
- Developing self-guided field trip options at four parks, with teaching materials and naturalist support, which the naturalists presented as an option at each of the KHOC orientations in the fall. Materials were also available on the KHOC page of the EBRPD website.

As in prior years, teachers were instructed to submit Transportation Applications through EBRPD's Parks Express department (the department responsible for booking park trips). Since this involves communication with another EBRPD Department, this process has been a common stumbling block over the years. We discuss transportation challenges below in Section III.

Finally, this school year was the second that teachers could request a park naturalist to help guide their field trip. These applications were due by early December, and were decided by lottery, although almost every teacher who applied for a trip was able to get a naturalist. This change was made directly as a result of teacher feedback; it has become a very popular part of the program.

III. 2015-16 Participant Attrition

Attrition and Non-Completer Survey: Each year, KHOC experiences some attrition, that is, teachers who do not complete the basic program requirements (i.e., attending the orientation and taking the park trip). Attrition can be due to competing demands for classroom time, and many other factors. (In 2014-15, before the program was streamlined, the attrition rate was 33%).

This year, teachers who had not previously participated in KHOC were asked to attend one of five two-hour orientations in October and November 2015. Seventeen (17) of the original 123 invitees did not attend, and so were immediately considered program non-completers.

By the end of the year, an additional 23 teachers did not have park trip applications recorded, resulting in an *assumed* non-completer pool of 40 teachers (33%).

In May/June 2016, EBRPD asked these 40 teachers to complete a short on-line survey to learn why they had not been able to complete the program.

However, at least 7 of these 13 teachers had been misidentified as non-completers; they *had* taken a park trip, attended an orientation, *and had in fact completed KHOC*.

During this process, it was found that their trips had not been recorded by Parks Express due to significant challenges in that department during the year. First, all three Parks Express Staff members (including the long-time Supervisor, and the program Coordinator) left EBRPD during the year. Record-keeping fell off during this period. Moreover, there was a significant bus shortage that challenged operations in that department.

As a result, only 21 documented “non-completers” out of 123 teachers have been identified to date, although there may be more. Due to these challenges, the actual level of attrition is difficult to determine.

Non-Completer Survey Results: As has been true in past years, few teachers who were *true* non-completers responded to our request to take a non-completer survey, which limits the usefulness of survey data.

However, over **73%** of overall respondents said that exposure to KHOC had positive impact on their desire or intention to spend more time with their class outdoors in the future, and **64%** said exposure to KHOC improved their comfort level with teaching lessons outdoors.

As in past years, the biggest challenge to completion identified had to do with challenges securing a bus and scheduling the park trip. Comments about this topic included:

- *The deadlines crept up without realizing it and securing the site and bus was confusing.²*
- *I applied for a field trip but nobody got back to me to let me know if they even received my application. I think teachers who attend the workshop should have first priority in getting a field trip.*
- *Well it is great but I do need to say coordination with the district for a bus is hard to do, but we are getting better at it. Also I do not like the cutoff date to complete the trips. We missed the date with our last trip to Garin.*
- *We had some difficulty securing the Parks Express bus . But they were patient and helpful.*
- *We had difficulty scheduling a bus, so if that was made easier, we would be more likely to participate.*

Many of these issues were due to the bus shortage mentioned above. During the year, Parks Express staff noticed that fewer buses were available from the three main contract companies, and were told this had to do with driver shortages, as many are shifting over to driving for tech companies or school districts for better pay and benefits. This past February, the shortage of buses hit a crisis point, and a number of approved groups found no buses available for their planned trips. It took several weeks to complete the contracting process with a new bus company. Unfortunately, the KHOC teachers who had the greatest difficulty had trips planned in the middle of the shortage. In one case, these challenges resulted in a teacher not receiving a trip after requesting it.

Training has now taken place for new Parks Express staff, and the addition of an additional bus contractor are anticipated to reduce challenges this coming year.

One teacher also suggested that it would be easier to participate if orientations could be held during the summer. And another said, “*It would be nice if East Bay Park allows teachers to enroll as early as August so that we will have better planning for the whole year.*”

Note: The seven teachers initially identified as “non-completers” in error did not take the educator survey discussed in the next sections.

² Teachers received several “reminder” emails about the bus/program deadlines. These were sent by the Naturalists who conducted their orientations.

IV. “Completer” Teachers & How They Conducted KHOC

EBRPD can document that at least **89** teachers completed KHOC in 2015-16.³ These teachers had, at minimum, attended orientation (or been previous KHOC participants) *and* had a recorded park trip. It was also an expectation that teachers would use the KHOC curriculum in their classrooms, completing three lesson activities. However, with the elimination of the year-end Teacher Activity Log, we relied on survey results to determine whether teachers met this requirement.

Eighty three (**83**) of these **89** teachers were invited to take a year-end survey to determine whether project outcomes were met and to provide program feedback, and **48** (or **58%**) provided at least partial survey responses.⁴

The teachers responding to the survey were experienced educators, having taught for an average of **17** years. The range of experience was from **one** to **36** years.

Their average class size was **24** students. On average, the students of these respondents were **46%** Latino, **19%** Asian/Pacific Islander, **12%** African American, **12%** Caucasian, and **11%** Mixed Race/Other.

Ninety percent (**90%**) of survey respondents indicated that they were able to *fully* complete the project—that is, attend orientation, take a trip to an EBRPD park, *and* complete at least three KHOC lessons with their class.

Four teachers (**8%**) indicated they did not use KHOC lessons in the classroom, but did go on the park trip. One teacher (**2%**) had been misidentified as a completer, indicating she had *not* taken a park trip.

According to best available records, at least **89** trips to EBRPD parks were taken during the year (the true number is likely slightly higher, given that some teachers took more than one trip). At least **3,741** total bus passengers attended these trips, including students, teachers and chaperones.

As was true last year, the **most popular park destinations** were: Coyote Hills (30% of trips – relics at this location tie in very closely to Social Science standards) and Black Diamond Mines (21% – a site with a lot of local history).

2016 EBRPD Parks Visited

Ardenwood	4%
Big Break	7%
Black Diamond Mines	21%
Coyote Hills	30%
Crab Cove	8%
Del Valle Regional Park	9%

³ This number includes 83 teachers initially identified as completers and asked to take the year-end completer survey, less one teacher who during the completer survey indicated she had *not* taken a park trip, plus the seven teachers referenced in Section II who *had* completed the program, although they were initially identified as non-completers.

⁴ Not every teacher answered all survey questions, resulting in an N of less than 48 for some questions.

Garin	3%
Martinez Regional Shoreline	1%
Miller Knox	2%
Redwood Regional	1%
Tilden Nature Area	9%
Sunol	3%

Use of KHOC Curricula: Ninety percent (**90%**) of survey respondents indicated that they were able to use at least three KHOC lessons with their class, and 29% (N=14) had exceeded requirements, completing four or more lessons. This is encouraging, given that the curriculum had been redesigned to align more closely with Common Core standards.

As in past years, popular lessons taught included *Connect With the Past* (which focuses on Ohlone history), *Plant a Seed* (which reinforces curriculum content about how plants grow), *World in a Box* (in which students put a bottomless box on a patch of earth or grass and draw the things they see in the box) and *Bird Bill* adaptations (in which students use tools like tweezers and toothpicks to lift different types of “food”).

In response to a question about which lessons were most engaging, teacher responses included:

- *Learning about the past...we do a lot with the history of our town and were able to tie it back to the Native peoples through today.*
- *My students LOVED Plant a Seed, especially dissecting the seed. They each got their own seed, magnifying glass, and were prepared to do it independently.*
- *The box in the grass. This was very powerful to look in one spot.*
- *Exploring Nature because it was a good introduction before the field trip. It was a good way to get a sense of how much background knowledge the kids were coming in with.*
- *The Follow a Trail was the most engaging because we were going to Coyote Hills Regional Park which required following many trails.*
- *Games were the best way to engage my students.*
- *The class really enjoyed creating their own moon phases flip books.*
- *Doing the kite challenge and doing it from an engineering standpoint was challenging and we had the best discussions.*
- *Play and Explore Outside, because they love to look at things in their environment. They get excited about ladybugs and pillbugs*
- *I found all three lessons to be engaging. I also really appreciate the additions that have been made that require more expository writing related to the lessons.*



When asked which lessons were *least* engaging, teacher responses included:

- Follow a Trail was difficult since our school does not have a nearby trail. Thus, we had to use our imaginations.
- Follow a trail.... Unfortunately so many of our kids have not experienced parks and parks trails. The connection was lost, BUT an important lesson to keep so kids have a intro to parks and trails that they have available to them and to their families
- Trying to draw an historic item was challenging for my students. They didn't really understand what historic meant. We had to include places in our community (it is over 100 years old) as historic.
- Swimming...we don't have access to a place for this lesson. However, we are sending these books home for the kids over summer and encouraging them to do some of the activities we couldn't do at school.
- We could not do the lessons that needed to be done at home (biking, swimming, boating)
- Connect with the Past: Studied Native Americans at the end of the year and this was the first lesson. I would probably change how I plan my Social Studies to add the Kids Healthy Outdoor Challenge. Would be helpful to have at least one book at the beginning of the year to help plan the use of the book into curriculum that is already planned. This was my first year.

These responses underscore the differences between classrooms, and also the need to encourage teachers to adapt lessons and timelines to their own class activities, and where possible, to use some of the lessons on their park trips (e.g., Follow a Trail).

This has been a KHOC orientation message for several years, that the curriculum can be used as a guide for teaching outdoors, and it can be *adapted it to make it useful* in lesson plans.

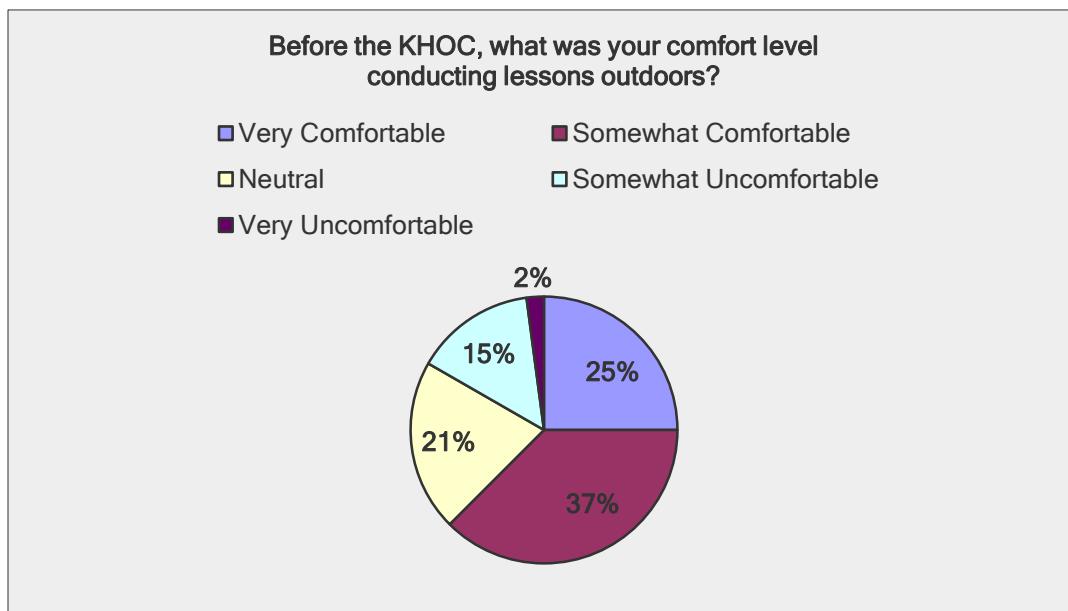
Accordingly, in response to the survey question about “**the extent to which you may have individualized or tailored the KHOC curriculum to meet the needs of your classroom or schedule,**” the vast majority of teachers (87.5%) tailored KHOC in some way. This could include shortening lessons (as presented in the curriculum and accompanying Teacher Guide) due to limited class time, different teaching styles, or class characteristics.

Q: In delivering the KHOC curriculum, did you:		
Answers	Response Percent	Response Count
Deliver all lessons exactly as outlined in the curriculum.	12.5%	5
Deliver some lessons exactly as outlined in the curriculum, but individualize or tailor others to meet the needs of your classroom.	60.0%	24
Individualize or tailor all of the lessons to meet the needs of your classroom.	15.0%	6
Individualize or tailor the curriculum in some other way.	12.5%	5
<i>answered question</i>		40
<i>skipped question</i>		8

Some of the interesting adaptations made this year included the following:

- We did a rotation with our six classes. Each of us chose a lesson from the book and taught it to all the third graders at our site.
- Shortened the lesson. The lessons are great as is, there is just not enough time given everything else we need to cover!
- I had 3 special needs children AND 13 English learners, so I modified and highlighted vocabulary words they may not understand.
- Two of my students do not speak English, so I modified it and translated.
- I had previously been a MARE teacher, and used a lesson called Bird Beak Cafe to supplement the Bird Bill Match lesson.
- For the Connect with the Past lesson, I bring in real items to show them that might have been used by Native Americans such as soap root and acorns.
- I created lessons to use specific to our field trips. For example, when we went to Tilden, we chose the Birds program. I created a worksheet and bought some native bird guides for students to use and work on while we were there.
- First try of building a kite students made a kite without directions to see what they could do. Second try followed rules but brought supplies out to field to make adjustments if kites were too heavy.
- Did not actually plant a seed, but dissecting a seed and used magnifying glasses.
- We modified Connect with the Past to link to the pioneer settlers Sommersville since we went to Black Diamond Mine for a field trip.
- I incorporated the Van Gogh lesson [Starry Sky] with other famous artists so students can become familiar with their work.

Teacher skill and comfort teaching outdoors: At the start of the year, EBRPD expected that teachers would have a range of skills and comfort level teaching their classes outdoors, and this was largely true – most (**63%** or **30**) teachers had at least some level of comfort teaching classes outdoors.

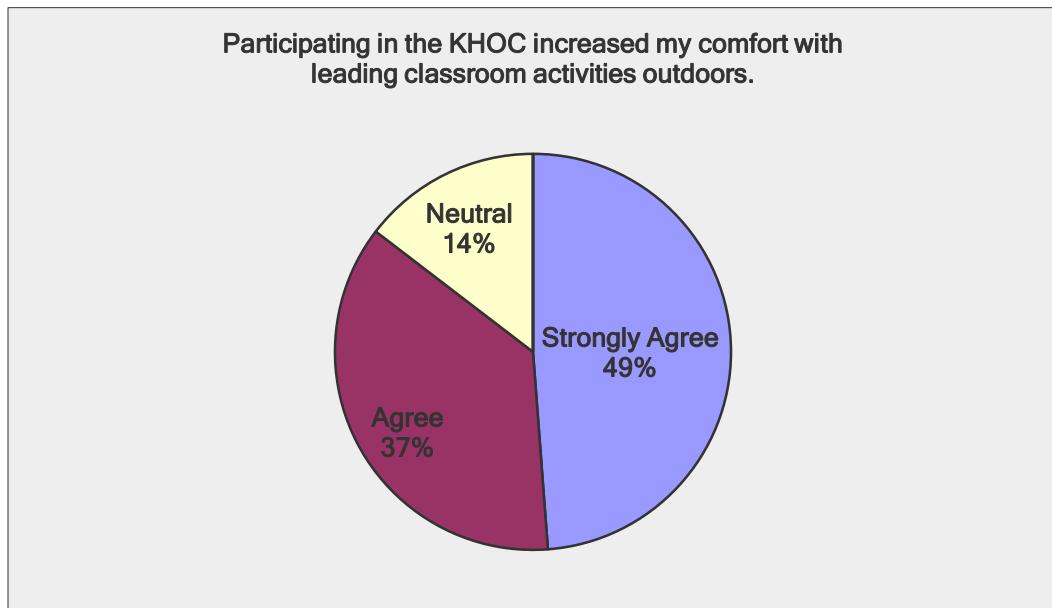


However, 10 teachers each felt Neutral (21%), and eight felt Very or Somewhat Uncomfortable (17%). As a result there was considerable room for KHOC to help teachers feel more comfortable teaching outdoors.

V. Outcomes

I. Increasing Comfort and Skills Teaching Outdoors.

One of the major goals of KHOC was to increase educator comfort and skills teaching outdoors. This year, of 41 teachers responding to this question, **85% (N=35)** Agreed or Strongly Agreed that KHOC increased their *comfort* with leading classroom activities outdoors:



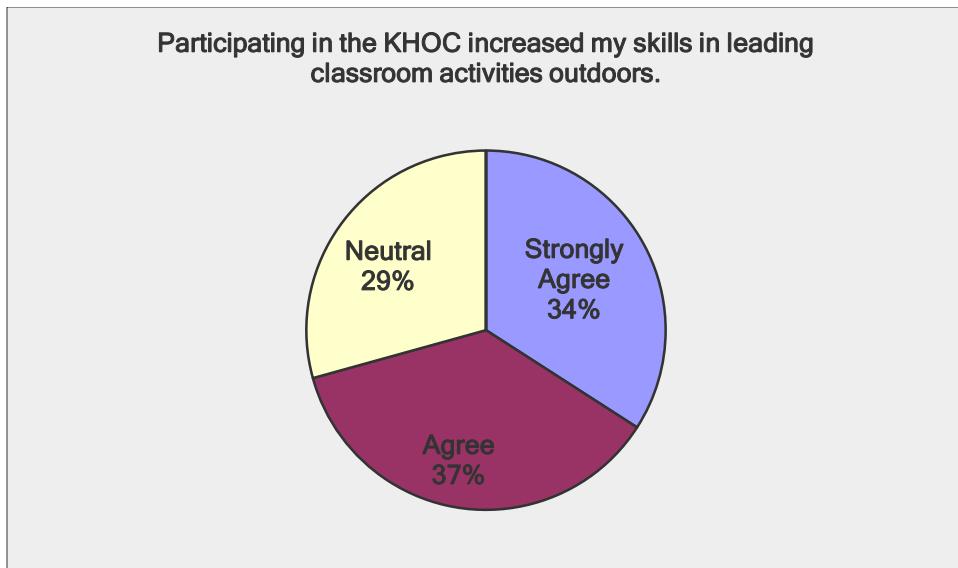
Teacher comments that underscored growth in *comfort* included:

- *The docent taught me a great deal about the parks and the history of the area and the lessons that were given for the self-guided field trip gave me a great starting point.*
- *We felt confident about accurately teaching the content to be learned. This was especially useful for the lessons on Native Americans and science terms used for planting and directing a seed.*
- *Because my kids were prepared ahead of time, it was easy to manage a trip like this because they already had familiarity with the content.*
- *I can see that students have a great deal of interest in the topics that were covered. This would allow for greater engagement during field trip, before and after.*
- *Having the materials; workbooks, lesson plans, and support from the park representatives makes my job easier and relaxed. My comfort level increases!*
- *I felt more comfortable knowing I can lead a hike and it was easy getting to the park.*
- *I gained more knowledge about the areas, which increased my confidence in teaching about it. With each field trip, I learned better ways to manage the students to ensure safety as well.*
- *It helped by making sure that students knew how to be respectful and good citizens when in nature. It taught them how to listen and be more aware of their surroundings.*

I feel very confident now about organizing the field trips and successfully leading groups. I feel supported by the naturalists and am confident to research areas on my own prior to trips.
~A KHOC Teacher

- Just being outside and having a format to follow helped. Seeing naturalists do lessons really helped too.
- I learned more about specific EB Regional Parks which enabled me to prepare and follow up with info and activities for the kids.
- Having the lessons helped me engage the children once we were at our site.
- Knowing that docents are ready to support the trip, allows me to breath. Especially for Black Diamond Mines which I had never been to before.
- It gave me experience being outside with a group of students. I had information [and] great lessons from the orientation so it was great to try out these lessons.
- I gained confidence in taking my students outdoors for lessons. Once the guidelines were set they were actually more engaged during the lessons. Prior to KHOC I was afraid I would lose their interest by being outside but I was pleasantly surprised.
- Watching what types of realia the docents used and how they presented the information was very helpful. I'm comfortable with teaching outdoors, just do not have some of the resources to enhance the experience like the docents have.
- In the past "classroom" management was a huge concern when we are outside. After taking them to the park I know that if they are prepped ahead of time, they can follow the agenda. Also, when consequences are discussed and followed through it makes a huge impact on the following trips.

Moreover, **71% (N=29)** Agreed or Strongly Agreed that participating in the project increased their skills teaching outdoors:



Teacher comments underscoring growth in skill set included:

- Managing students on trails
- It helped my classroom management, I could hold their attention more with being outside. Just walking, stopping, discussing was enjoyable. We were able to bridge the gap between what we learned in the classroom and on the field trips. For instance, we

I already have quite a bit of experience in this area and feel my role has been as more of a mentor to new teachers trying out the great outdoors!
~A KHOC Teacher

were able to identify plants and Native American objects that we learned while being outdoors on the field trip.

- Trusting children to be steered via highly motivating activities and explorations- increasing focus and eliminating "spacing out"/boredom, etc.
- Going outside more /first and then reading!
- I think the way the guides used the picture cards, realia, and stories throughout their tour helped me to remember that even when we are on a trip those items help scaffold learning for students.
- Keeping attention. Asking though provoking questions.
- The students knew the expectations and rules thanks to the student booklets.
- Having ideas to carry out outdoors really helped me. So much of classroom work is done with books so this was a great change.

Increasing skills and comfort for those originally less comfortable teaching outdoors: Of teachers who had indicated they were either Neutral or Uncomfortable about teaching outdoors at the start of the year, **13 (81%)** of 16 respondents to the question Agreed or Strongly Agreed that *Participating in KHOC increased my comfort with leading classroom activities outdoors.*

Twelve (12) of 16 (75%) Agreed or Strongly Agreed that KHOC had *Increased their skills teaching outside.*

Thirteen (**81%**) Agreed or Strongly Agreed that they spent *more time teaching outdoors this school year than I did last school year.* (Overall, **73%** of teachers agreed with this statement.) And promisingly, **100%** of these “uncomfortable” survey respondents Agreed or Strongly Agreed that they *intend to continue teaching lessons that get kids active outdoors in the future.*

2. Helping Teachers Meet Curriculum Standards.

As part of introducing outdoors education into third grade classrooms, it was critically important that teachers not feel that KHOC took precious classroom time away from meeting state curriculum standards, particularly **new Common Core Standards**, now implemented across the state.

KHOC had originally been designed taking Common Core into account, but at the time of design (2012), Common Core had not been implemented by any school. Given that last year was the first time many teachers used Common Core, we had collected feedback in the 2014-15 survey to redesign the curriculum before school year 2015-16. These curriculum changes EBRPD were designed to strengthen the alignment with Common Core.

Overall, **73%** of respondents Agreed or Strongly Agreed that the lessons helped them meet new curriculum standards, *an increase from 59% last year*:

Q: KHOC lessons helped me to meet Common Core Curriculum Standards.		
Answer Options	Response Percent	Response Count
Strongly Agree	19.5%	8
Agree	53.7%	22
Neutral	22.0%	9
Disagree	0.0%	0
Strongly Disagree	0.0%	0
I did not use any KHOC lessons with my class.	4.9%	2
<i>answered question</i>		41
<i>skipped question</i>		7

While many teachers expressed appreciation for the KHOC curriculum (e.g., “We felt that the lessons were already aligned with common core standards and we did not find the need to change anything”), there were responses from teachers who had suggestions for improvement:

- *(Include more) integrations with writing via record keeping and use of graphic organizers.*
- *I think anything where kids make things or view rather than being talked at. Viewing the water through the viewer for example, vs. seeing animal skins.*
- *I didn't look at all the lessons, but it would be helpful to include the standard or standards on the Table of Contents below the lessons.*
- *There is not a lot of math here (except the crickets) maybe we could add some other real world problems (watershed, environmental care-taking)*

I was very proud of how our Open House displays this year were focused on KHOC lessons. We made Buffalo Hides out of paper grocery bags with Native American drawings, we made kites with Haiku about Big Break on one side, and the California Children's Bill of Rights on the other....LOVED IT ALL!

~A KHOC teacher

And a few did not feel that alignment was complete:

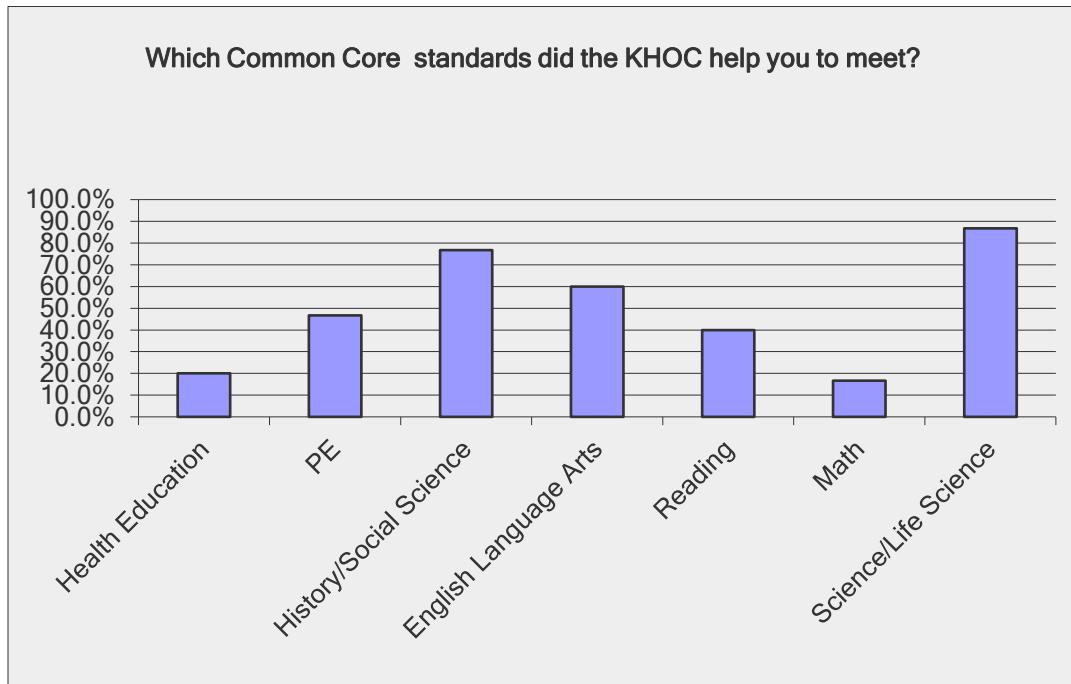
- Science standards aren't 'common core,' as far as I know. They are going from content standards to Next Generation Science standards.⁵
- Finding ways to implement the Common Core Standards into KHOC was not difficult. However, it would be great if the alignment was already done.
- I still needed to modify my lesson.

Thank you for the KHOC scavenger hunt. It was fun. I learned about coal and sandstone. I realized that sandstone wasn't as hard as coal. Little pieces were falling when we touched it.
~A KHOC student at Black Diamond Mines

Although KHOC isn't intended to be the *only* curriculum used in a classroom, state curricula are constantly changing and KHOC is intended to be a "living and breathing" curriculum that will keep up with standards. As noted earlier, we will continue to encourage teachers to adapt KHOC with their own ideas to support unique class needs and protocols.

Among teachers who felt that **KHOC supported the Common Core curriculum**, the following subjects were cited as those most

supported by KHOC: Science/Life Science (87%); History/Social Science (77%), English Language Arts (60%); PE (47%), and Reading (40%).



⁵ Another curriculum change, Next Generation Science Standards (NGSS) for California Public Schools, is currently in the process of being implemented:

http://www.cascience.org/csta/pdf/California_NGSS_Estimated_Implementation_Timeline.pdf

Moreover, **85%** of respondents Agreed or Strongly Agreed that KHOC contributed to students' mastery of curriculum content; this was particularly true of Science/Life Science (82%) and Social Science (76%). This is important because KHOC is designed to be a supportive curriculum tool, not the curriculum itself.

Finally, **90% (N=37)** of respondents to the question *My class participated in activities that supported curriculum standards on our park trip*, Agreed or Strongly Agreed that this was so, particularly Science/Life Science (92%), History/Social Sciences (81%), and PE (57%).

Teachers had many, many anecdotes to share that underscored student learning, including the following:

- At Coyote Hills my students learned about the different tribes that settle in California.
- At Del Valle the students loved the tule birds, the hoops game, the other Native American games, and the hike we took.
- My kiddos learned so much about the Native people that lived here before the Spaniards came. We learned about flora and fauna of our area. We learned about animal species native to our region.
- Students remembered names and characteristics of native plants
- Students were required, a few days after trip, to create a scene in paint that reflected something of what they learned/viewed about the Ohlone or Shadow Cliffs, and they produced work that indicated lots of understanding and retention of content.
- Our student were able to use poetry to reflect on their field trip experiences. They also learned soooo much more about the Native Americans in our area.
- Students know the Life Cycle of a Plant and are able to illustrate it.
- When we were at the Black Diamond Mine and went to the cemetery many of the students were trying to figure out how old people were when they died. We had a discussion about why people did not live as long back then as we do now. Discussion included jobs, vaccines, life expectancy depending on geography.
- Many of my kids have never been to the beach and never in a tidepool. They are still talking about the field trip to crab cove and seek out books in class that relate to our experience. And some even got their families to go there on the weekend.
- We had been discussing plants, which drew itself to trees, going along with our Life Science lesson. When we got to our field trip the students cold point out a redwood tree, without my prompt. they noticed other things too, but this really impressed me. On other trips I have had to hint to look around.
- Students were challenged to critically think and analyze the area around them and make inferences as to what it was like when the Black Diamond Mines were in operation.

This is precisely the kind of alignment EBRPD hoped would support teachers, without taking time away from meeting curriculum standards.

3. Increasing EBRPD naturalist involvement with KHOC classrooms.

During its first two years, KHOC had been framed exclusively as a teacher-led activity, but based on many teacher suggestions for more naturalist involvement, SY 2015-16 was the second year teachers could apply for naturalists to help guide their KHOC field trips. These applications were due by early December. Naturalist “slots” were filled according to staff availability the day field trips were scheduled.

In our educator survey, 41 teachers responded to the question about whether they submitted a request to have an EBRPD naturalist help guide their class’s KHOC park trip, and 40 or **98%** had. All (**100%**) of these received a naturalist-guided program as part of the park trip as a result.

*I have found that w/o a naturalist the students think that it is "play time" when they are at the park. The naturalist makes the trip official and they know they need to behave and pay attention or they will miss out.
~A KHOC Teacher*

This shows that even with staffing limitations, EBPRPD is making the effort to provide as many classes as possible with this experience, and the teachers were *overwhelmingly enthusiastic* about this addition to the program. Several teachers remarked they wouldn’t want to do the trip without a naturalist:

- Our naturalists were awesome! So informative!
- Great wealth of knowledge to support student learning.
- The experience was wonderful! We enjoyed the supplemental information that was provided to our students. If we did not have a naturalist, we would be a little more reluctant to lead the field trip on our own.
- Yes, the naturalist was knowledgeable and engaging! She made the experience even better!
- It really enhanced the experience for both myself and the students. It was wonderful, and I wouldn't do the trip without it.
- I loved having a naturalist. If they had not been able to lead me I would have had to do much more work to prepare for the trip and I might not have done it.
- WOW for the Coyote Hill Naturalists! They deserve a raise. Incredible program that modeled what we learned in class.
- We all loved it and are still talking about it!
- We had a great time with our naturalist at the Black Diamond Mines. We couldn't have done the cave trip without one. Kids from previous years still talk about that as their favorite outing during school.
- Fantastic experience. It was well-organized and very hands-on. My students are still talking about it.
- It was amazing. We did a pond study at Tilden and it was a perfect way to wrap up the lessons.
- Naturalists were awesome and totally enhanced our experience. They know things I didn't and had a positive influence on my students showing them another potential job they could have one day.
- What an amazing guide pair. We all learned a lot, in fact my parent chaperons were just as engaged as my students. We all came away with a depth of knowledge about the area, the mines, and life during that time that none of us quite expected. The guides integrated questioning techniques, storytelling, short picture demos, and physical demonstrations to bring learning alive! It was **fabulous!**

There were a few pieces of feedback, including one about the park trip planning process that was echoed by a good number of others; this will be explored in Section VI. General feedback about the experience included:

- Too much talking/not enough *active* engagement
- They were GREAT! Finding the funds to pay for one of the naturalist (Black Diamond Mines) was difficult for a few students, although the fee reduction did help a lot.⁶
- The experience with the naturalist was incredible. It made us want to have more experiences. The process for visiting a park was *terrible*.

Interestingly, only **52%** of respondents indicated they had *participated in EBPRD trips or naturalist-led activities with your class in the past*, so for **almost half**, taking an EBRPD trip and working with a naturalist was new experience.

All respondents (100%) indicated they would request a naturalist as part of KHOC in the future, underscoring the popularity of this part of the program.

This year a new “**self-guided**” option was made available to teachers: materials and kits for teachers to lead their own trips at four EBRPD parks: Redwood Regional Park in Oakland, Garin Regional Park in Hayward, Martinez Regional Shoreline in Martinez and Shadow Cliffs Regional Recreation Area in Pleasanton. These parks were selected for their accessibility, program opportunities, facilities that support class trips, and are located in different parts of the East Bay. (These were also the sites that had hosted teacher orientations in the fall.)

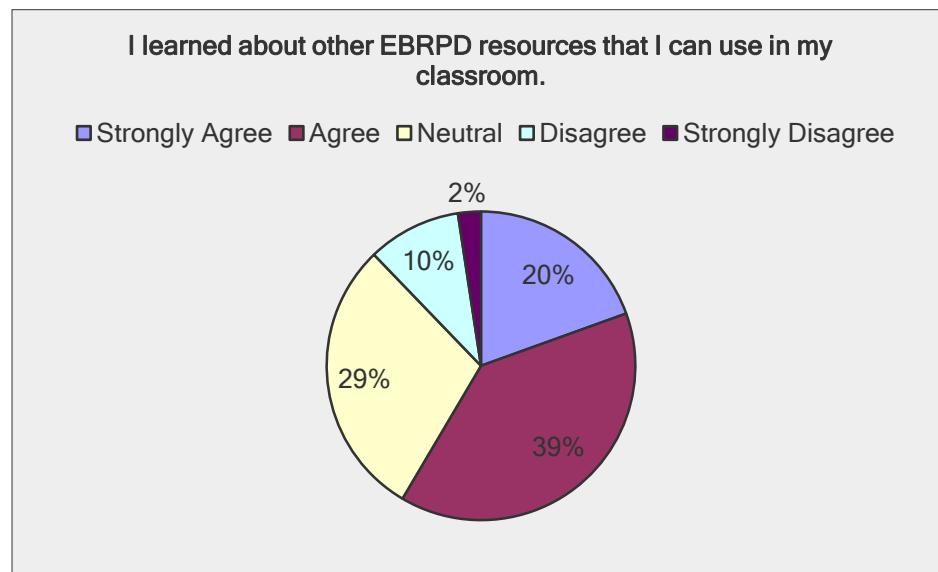
New park-specific activities and support materials for target parks were provided to teachers during the 2015 round of teacher orientations, covering both natural and cultural history topics and be aligned with State Content Standards for third grade students. Teachers could attend an “optional” part of the fall KHOC orientation to learn how to use these materials.

Kits to support self-guided trips could be checked out during the trip at the park’s Visitor Center, including everything from guides, to binoculars for bird watching. In all, eight (8) teachers attended the self-guided portion of the orientation, but only one utilized the self-guided materials in the park.

⁶ KHOC funds transportation, however at Black Diamond Mines, there is a \$5/person fee for underground mine tours. Low income groups are eligible to request a 50% fee reduction.

4. Helping teachers learn about EBRPD resources.

EBRPD hoped that teachers would learn about park district resources (i.e., free or low-cost recreational opportunities, educational tools, mobile exhibits, health resources and programs) that they could continue to use in their classrooms, and **59% (N=24 of 41 respondents)** felt that they did.



Resources mentioned included the following:

- *Health resources.*
- *All our parks are free to everyone. They are our parks!! There are lots of programs available for students to do over summer!*
- *Family resources to encourage family involvement with nature- very much missing from our downtown Oakland community.*
- *There is a regional park near our school that we could visit.*
- *All the different programs that are offered for kids, and scholarships.*
- *Special days at Black Diamond Mines that families can attend. Parents on the field trip were excited to learn about that.*
- *Black Diamond Mines, The map on the back of the book showing all the places available to explore, resource list at the end with contact numbers.*
- *Mobile exhibits.*
- *Kits you can borrow from different locations*
- *The materials that are available at Coyote Hills and directly related to our social studies standards.*

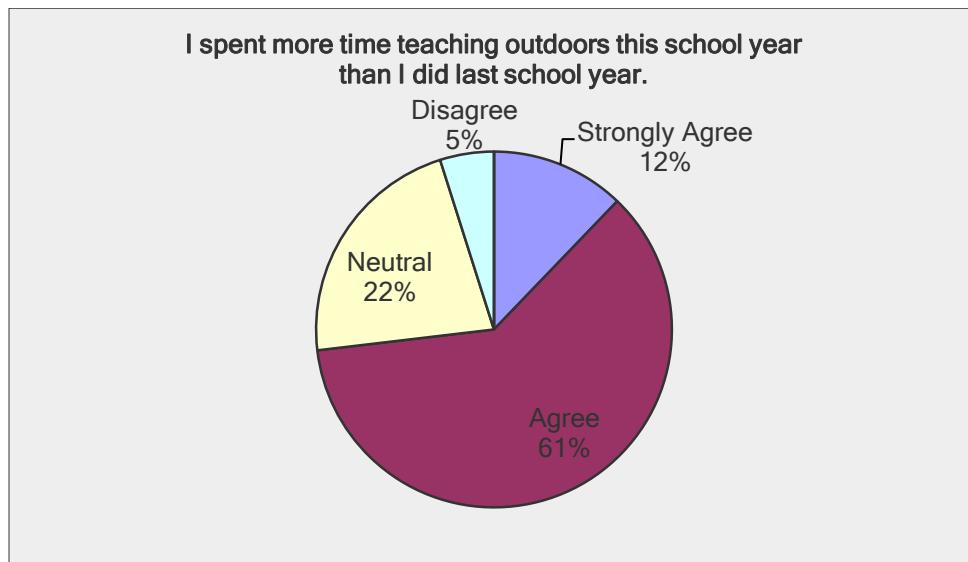
I learned about all the various parks, and made sure that at Open House, part of my "tour" was for my students to show their parents where they can explore in their own backyard.
~A KHOC Teacher

5. Engaging Students and Educators in Outdoors Education.

EBRPD sought to increase student (and educator) enthusiasm and engagement in learning outdoors, particularly in natural park settings.

Survey results show that these outcomes were successfully met:

- **93% (N=38)** of teachers responding Agreed or Strongly Agreed that participating in KHOC made their class want to spend more time being active outdoors.
- **98% (N=40)** Agreed or Strongly Agreed that lessons were engaging and fun for students.
- **73% (N=30)** Agreed or Strongly Agreed they spent more time teaching outdoors this school year than they did the last school year.



KHOC is designed to be used by third graders of different cultural backgrounds and language abilities. This year, EBRPD asked teachers an open-ended question about *how students of different cultural backgrounds and language abilities in your class reacted to KHOC activities, and whether any groups had difficulties.*

A good many indicated that their students all benefited from the program equally:

- *I think the lessons reached all students regardless of their cultural background and language abilities.*
- *They all loved it and learned from it.*
- *No groups had difficulty. All students benefitted from the hands-on activities and the excellent naturalists and docents.*

- All students responded well to the lessons.
- They were all engaging. No one really had any difficulties except my low readers.
- No difficulties. I think this program is excellent because it focuses on the student experience which minimizes cultural barriers.
- They really enjoyed the vocabulary.

But a few comments underscored the need to develop a Spanish-language version of the curriculum:

- Only the ones that don't speak English, but I am bilingual so I was able to translate.
- I have a lot of Spanish speakers and we are a Dual Language school. It would be FANTASTIC to have a Spanish version of the lessons.

Many teachers pointed out the different levels of exposure to nature among students of different backgrounds, and how KHOC was an important introduction to activities in nature:

- Our students are deprived from enjoy outdoor activities. From families with single working parents to living in not so safe neighborhoods, students were reluctant to play outside. However, once comfortable, they enjoyed themselves.
- Some students clearly had not spent as much time exploring nature outdoors before and were really excited to have the opportunity to do so.
- Many of my students had never been on a "hike" in a park. Just having that background knowledge to be outdoors is valuable.
- My group is all Hispanic without much outdoor experience so they really enjoyed themselves
- Many of my students do not get taken by their families to outdoor parks. Being outdoors around dirt and flying insects, sitting on the ground, etc. were great new experiences for them.

I was amazed each time we go to Crab Cove and find out how many students haven't been there before. It is a 10 minute drive so I tell them that they need to share the park with their families too.
~A KHOC teacher

In terms of future KHOC impact:

- **95% (N=396)** of teachers said they intend to continue teaching lessons that get kids active outdoors in the future.
- **93% (N=38)** plan to use KHOC lessons and/or booklets with other classes in future school years.
- **88% (N=36)** plan to share KHOC lessons and/or booklets with other teachers in my school or district.

Most teachers, (**93% or N=38** question respondents) Agreed or Strongly Agreed that they plan to return to EBRPD parks with their class next school year. And all survey respondents (**N=41**) said they would return to EBRPD parks on their own in the future; **73% (N=30)** Strongly Agreed that they would return, showing that KHOC is successful in engaging teachers to spend more time outdoors.

98% of survey respondents Agreed or Strongly Agreed they would recommend the KHOC to another teacher. Finally, **100% (N=40)** of the survey respondents agreed they would participate in KHOC again (75% Strongly Agreed to this statement).

Teachers say KHOC is having an impact on families too!

- *100% of my students want to return to an East Bay Regional park!*
- *Many students expressed interest in visiting the park with their families. Students asked if they could come on another day.*
- *My parent chaperones were THRILLED to learn about the opportunities, and I was able to reach 17 families on my field trips.*
- *Very few of my students had ever visited the Black Diamond Mines before. I think we made new converts. I also had a few students who really were unfamiliar with nature and they are now enthusiastic advocates.*
- *Some parents shared that the Black Diamond Mine field trip was the best they have ever attended.*
- *Some students have already explored other trails/parks in the area. They have talked their families into going out on the weekends.*
- *A few of my students told me they went hiking with their families at Coyote Hills after our field trip there.*
- *Several of my families returned to Black Diamond Mines for the Free Mother's Day "open house."*
- *I told my students to go to Coyote Hills with their families and if they did, they would receive a homework pass. All they had to do was show proof with a photo that they could email to me and 2 students did!*

6. Impact of Repeat KHOC Teachers.

For the second year running, KHOC had expanded funding, and was able to invite teachers who had participated in KHOC previously to join the program again. Overall, **36** teachers who were previous participants were invited to repeat KHOC (**29%** of the 123 invited teachers)

Seventeen (**17**) of these 36 were also survey respondents.

The Park District is interested in determining the impact of these teachers with their colleagues, and asked if they were able to *help guide, mentor or provide resources to new KHOC teachers*; 12 of the 17 survey respondents (**71%**) indicated that they had, in the following ways:

- *The new KHOC teacher and I went to the training even though I had already been before. We worked together on every aspect of selecting where to go, filling out all the right forms in a timely manner and worrying about whether or not the bus driver would know the way to our location.*
- *We brought a new teacher aboard this year, and we were able to share our experiences and lessons, and since we did so much more this year, plan to share it with another new incoming grade level partner.*
- *Helped with lessons and field trip application/process.*
- *I helped organize the field trip for the new teachers and guided them through the process. I also encouraged them to actually do some of the lessons.*
- *Completing the forms, scheduling transportation, managing students.*
- *I helped the newer teachers sign up, choose lessons to teach, and book the field trip.*

The number of repeat KHOC teachers is increasing every year, suggesting that the program is deepening and broadening its foothold in schools with every passing year.

These teachers are ambassadors for KHOC, parks and teaching outdoors. Said one teacher, “*Two more teachers at our school participated in KHOC this year due to our encouragement.*”

VI. Teacher Feedback on Project Processes

The survey addressed how the project processes worked (e.g., the project website, teacher orientation, park trip requests), and suggestions for improvement. Last year, KHOC made significant simplifications to paperwork and the orientation process based on Year 3 teacher suggestions.

For the most part, this year, teachers expressed satisfaction with program processes, but as has been the case for four years in a row, *planning class park trips* was a challenge.

Planning the Park Trip: This year, **60% (N=24)** of respondents Agreed or Strongly Agreed with the statement: *it was easy to plan my park trip.*

One quarter (**25%**) Disagreed or Strongly Disagreed that this process was easy, which is one of the poorest response rates ever to this question.

It was easy to plan transportation for my park trip (e.g., use the reservation form, schedule a bus, choose a park, etc.)		
Answer Options	Response Percent	Response Count
Strongly Agree	15.0%	6
Agree	45.0%	18
Neutral	15.0%	6
Disagree	12.5%	5
Strongly Disagree	12.5%	5
<i>answered question</i>		40
<i>skipped question</i>		8

One teacher shared, “*Last year I really struggled with setting up the field trip and bus situation. This year things went much smoother!*”, but critical comments were far more plentiful than in past years:

- *I wasn't clear at first that KHOC and Parks Express are two different entities. If they could coordinate, communicate and agree with each other about trip parameters, such as minimum/maximum number of passengers required, that could eliminate some confusion for teachers when planning trips.*
- *It was really difficult to arrange the bus. We tried and tried but it was very disorganized and we almost didn't get to go because there wasn't an available bus.*
- *The online process was a huge problem for our school. First it would take our selections. Then we couldn't get confirmation as to whether or not we had been selected for a naturalist led trip, even though we contacted several people. When we finally did find out, we were contacted so close to the trip date that we were almost unable to attend based on our district guidelines. We had to get special permission to go and the district was not very happy with us. At that time KHOC told us that while they would pay for our buses, we had to secure them through our district. Luckily it was early enough in the year that buses were available, though it was a nightmare trying to secure them because of the short time. For our second trip, we were contacted by KHOC informing us that we had been selected to visit a*

park we never asked to visit. While we are grateful that we will be able to take our students on another field trip, we would have never selected this park as its major attraction is water. Taking students to a park like this has caused many problems as special permission from our district had to be obtained, not to mention lots of extra paperwork and permission slips. We really enjoy our time at the parks, but the process has made us hesitant to use the program again.

- *Needed more directions of where to meet the naturalists. We were waiting in the parking lot and realized we needed to walk up the hill.*
- *The signing-up process was really clumsy and frustrating. We almost ended up not going because we didn't know for sure if park would be expecting us. That process needs to be streamlined a lot.*
- *I was disappointed that I could not get a docent led field trip. I feel if I spend a Saturday for training, it would have been nice to receive priority when bookings were made.*
- *I applied for a field trip but nobody got back to me to let me know if they even received my application. I think teachers who attend the workshop should have first priority in getting a field trip.*

As discussed in Section III, there were several challenges impacting bus scheduling this year. One was that there was turnover in all three Parks Express positions, and there was confusion in the department as to how to book KHOC trips. In addition, during the year, Parks Express staff noticed that fewer buses were available from the three main contract companies, with the shortage hitting a crisis point in February. A number of approved groups found no buses available for their planned trips. It took several weeks to complete contracting processes with a new bus company. Unfortunately, the KHOC teachers who had the greatest difficulty had trips planned in the middle of the shortage.

Parks Express training has taken place, and a new bus contractor has been added to the rotation. Additional ideas for improving this system are explored in Section VIII.

Teacher Orientation: As noted, the orientation had been shortened this year as part of program streamlining. Most (**91%**) of respondents Agreed or Strongly Agreed with the statement, *the teacher orientation in Fall 2015 prepared me to implement the KHOC in my classroom*. There were no comments or suggestions.

Ease of lesson completion during the class time available: The majority (**70%**) of survey respondents indicated *The KHOC lessons were easy to complete during the class time I had available*.

The KHOC lessons were easy to complete during the class time I had available.

Answer Options	Response Percent	Response Count
Strongly Agree	25.0%	10

Agree	35.0%	14
Neutral	35.0%	14
Disagree	5.0%	2
Strongly Disagree	0.0%	0
	<i>answered question</i>	40
	<i>skipped question</i>	8

However, there were disagreements with this statement, and comments alluded to the traditional time challenges teachers face:

- *My curriculum is already packed to the gills with activities so fitting in another activity meant I had to spend less time on something else. It was a balancing act. But this is typical of anything we do. Not enough time in the day and so many things to teach.*
- *Time is always a precious commodity in the classroom. I had to fill in the lessons when I had spare minutes. However, as I go through this survey, I think I will try to get a few more lessons in before the end of the school year.*
- *I wish I had more collaboration time with my colleagues in order to really do justice to the lessons.*

KHOC Website: Teachers were asked, *During the school year, did you visit the KHOC website for information about the program (e.g., forms, class materials, etc.)?* Only **67%** of respondents (**N=27**) indicated they had (down from 92% last year).

These teachers were asked for suggestions to improve it, and key ideas included:

- *Have a special section for KHOC teachers to remind us what is due when. The website is sometimes difficult to navigate and find correct links for teachers planning a trip.*
- *It would be GREAT to have a page on the website for teachers to show any extension activities they have done around the KHOC lessons.....pictures of trips could also be shared!*
- *You do not include all the programs at Coyote Point, which I was disappointed about. I had spoken to a ranger (?) and she told me about the generalized program for bigger groups. I can't remember the name of it. It wasn't listed on the website so I had to call and ask about the ones you did offer and she told me about the other one. We did go to Ardenwood for our one program though.*

More attention to resources on the website should be a focus of training in the next year, as fewer teachers are using it. Moreover, there is interest in creating a closed group Facebook page to allow KHOC teachers to interact with naturalists and each other.

Other suggestions and comments: The major challenges that teachers experienced in school year 2015-16 seemed to boil down to communication: “*Communication was our only issue. I had to do a lot of checking in to be sure everything was being handled.*”

This is not surprising, given that the size of the teacher cohort nearly doubled, more staff members were involved in project planning and implementation, and the fact that the Parks Express office had all new staff. Ideas for improvement are explored in Section VIII.

VII. Notable Differences Between Years

KHOC began in school year 2012-13, and there has been a teacher survey at the end of each school year. In general, results (responses to questions) have been very similar from year to year. The bottom line is that for four years running, the great majority of respondents have indicated that the program is effective in increasing skills and comfort teaching outdoors, and that students are benefitting from new opportunities to learn outdoors.

This year, after the curriculum re-design occurring in the summer of 2015 (to improve alignment with Common Core standards), we particularly wanted to examine survey questions that had to do with the effectiveness of curriculum alignment.

As we noted in Section V, this year, **73%** of survey respondents Agreed or Strongly Agreed that the lessons helped them meet new curriculum standards

The table below shows response rates to this question over all four years of the program:

KHOC lessons helped me to meet curriculum standards.				
	Response %	Response %	Response %	Response %
	2016	2015	2014	2013
Strongly Agree	19.5%	14.8%	5.6%	31.3%
Agree	53.7%	44.4%	44.4%	43.8%
Neutral	22.0%	40.7%	33.3%	25.0%
Disagree	0.0%	0.0%	16.7%	0.0%
Strongly Disagree	0.0%	0.0%	0.0%	0.0%
Did Not Use Lessons	4.9%	N/A	N/A	N/A

Agreement that KHOC lessons helped teachers meet curriculum standards is at its highest level since the first year, when the program was brand new, and teachers were first introduced to it. This result suggests that the KHOC curriculum update was well-received.

It also underscores the importance of keeping KHOC up-to-date, reflecting constantly changing teaching standards. This will be critical with the upcoming roll-out of Next Generation Science Standards, designed to provide students with a more “hands-on” approach to science through experimentation.

A study by Lawrence Hall of Science at UC Berkeley and SRI International found that only 10% of California’s public elementary schools receive high-quality science-based education, and that 40% of elementary teachers said they spend no more than one hour teaching science each week.⁷ But teacher survey results have always underscored that KHOC supports science curriculum content (please see page 20), and the roll-out of new standards will provide an additional opportunity to help students excel.

⁷ High Hopes – Few Opportunities: The Status of Elementary Science Education in California, 2011.

VIII. Lessons Learned & Recommendations for the Future

EBRPD has now finished four full years of KHOC, and each year feedback shows that the program is having an impact on the way that educators teach their third grade classes, as well as the relationship of these classes to outdoor spaces and activities. And this year, the program reached far more classrooms and students than ever before.



As we have noted throughout this report, KHOC evolves and changes each year.

For instance, with the full implementation of Common Core curricula this school year, the KHOC curriculum was updated in summer 2015 to better align with standards, and 12 pages of student activities were added to the booklet.

The size of the program expansion this year resulted in operational changes such as further decentralization in the administration of the program (with KHOC naturalists taking a greater role in leading teacher cohorts), as well as significant streamlining of program processes (e.g., eliminating previously-required paperwork).

Many of these improvements were a *direct result* of the feedback teachers gave us during the survey process. In short, we learn important lessons from participating educators each and every year.

In this spirit, we explore **recommendations** for the upcoming school year. Changes such as these could help all teachers complete KHOC more successfully.

In an age where kids are inside playing video games it is great to get them outdoors and show them how awesome it really is!
~A KHOC Teacher

Additional Naturalist Involvement: KHOC should continue to dedicate resources to include naturalist involvement on park trips, and to maximize naturalist involvement with teachers and classes throughout the year. The naturalist-led park trip has been one of the most popular parts of the program for two years now.⁸

In addition, in 2015-16, KHOC identified four Regional Parks as targeted sites for expansion of (optional) self-guided opportunities. The parks (Redwood Regional Park in Oakland, Garin Regional Park in Hayward, Martinez Regional Shoreline in Martinez and Shadow Cliffs Regional Recreation Area in Pleasanton) were selected for their accessibility, program opportunities, facilities that support class trips and are located in different parts of the East Bay.

⁸ One or two teachers commented they didn't get confirmation on whether they had a naturalist reserved for their trip. EBRPD is working on a Universal Program/Parks Express application that will allow teachers to request both transportation and a naturalist *at the same time*. Software changes are necessary, and this is projected to "go live" by spring 2018, minimizing any future problems.

New park-specific activities and support materials for target parks were provided to teachers during the 2015 round of teacher orientations, covering both natural and cultural history topics and be aligned with State Content Standards for third grade students. An introduction to each self-guided opportunity was also posted on the KHOC website, and emailed out to teachers.

Grant-funded “Teacher Kits” were also available to support these self-guided class trips, including identification guides and tools for the students to use, such as hand lenses or binoculars. These were available for teachers to check out at any of the District’s visitor centers.

Although they were not widely used, a few teachers commented on the self-guided materials: “*We really enjoyed our trip. I liked the foldable field guide; this is something I could use if I do a self-guided tour in the future— although I would still prefer a naturalist-led trip. She had so much specialized knowledge of native plants.*”

To maximize naturalist resources, EBRPD will ask some repeat KHOC teachers to use one of these kits to lead their own trip this coming year. This will help conserve naturalist time for less experienced teachers, and also reinforce one of KHOC’s goals: to build teacher’s skills and confidence teaching their students outdoors.

Park Trip Improvements: The process for requesting buses for park trips, and scheduling trips, has consistently been the most confusing part of KHOC for teachers. The EBRPD process is that all transportation requests are completed on-line and go directly to Parks Express, who conduct all follow-up about the trip scheduling. This year, there was significant turnover in Parks Express staffing, resulting in some dropped balls, and more confusion about park trip scheduling than usual.

But new staffing in this department also provides an opportunity. New staff may be open to more streamlined processes for KHOC trip planning, as well as more involvement with the program. Suggestions for improvement include:

- KHOC Coordinator should meet over the summer with Parks Express staff to review teacher comments and explore solutions.
- Make sure location and layout of on-line trip planning forms are *clear*.
- Include Parks Express staff in teacher orientations.
- Improve systems to confirm to the teachers that the transportation request has been received and approved.
- Ensure that each teacher receive site-specific instructions about the field trip (a visitor confirmation form) before the day of the trip with all instructions they need about where to park, and where to meet naturalists.
- Set clear expectations for Parks Express Staff about recording trips and providing documentation to the KHOC Coordinator.
- KHOC Naturalists should continue to check in with their cohort of teachers about deadlines, and to see if they are having trouble or need help problem solving.

As noted, there are currently separate forms online for requesting a naturalist and requesting transportation. The teachers get those links in their orientation packets (as well as having them posted online with instructions on the KHOC webpage). By Spring 2018, these two requests will be combined into a Universal on-line request form, simplifying trip planning.

And finally, as always, all processes need to be explained repeatedly during teacher orientation. Although instructions are given during orientation, teachers may forget where to look for information, where to send their requests, or who to call if they have any questions. Establishing expectations and processes for this type of communication will be critical in the upcoming year.

The KHOC Website & Social Media: This year, fewer survey respondents than usual indicated they had turned to the KHOC website for information (about two-thirds, vs. 92% last year). As KHOC expands, EBRPD may wish to explore the website and other on-line systems as tool for improving communication and managing the demands of administering the project. For the coming year:

- The teacher orientation should include more focus on information and resources available on the KHOC website.
- The website should be updated regularly with project deadlines and expectations.
- Tools that support communication and interaction may be explored, for example a KHOC Facebook page to serve as another platform to keep teachers engaged and informed, and for teachers to share experiences, tips, resources, photos and other items from their trips.
- Some video clips about the self-guided materials will be edited and posted to the KHOC website, providing another resource for teachers leading their own trips.

Centralization issues: As noted, with the growth in the program, administration of KHOC was divided among KHOC naturalists, each of whom communicated with the cohort of teachers who attended their fall orientation. This process generally worked well in meeting the needs of a large group in a personalized way, and the KHOC Project Coordinator provided email templates and reminders about timelines to the naturalists. But with different naturalists phoning and emailing different groups of people, there was slightly less tracking and accountability for communications. However, this sacrifice is necessary to accommodate increasing KHOC popularity and participation. Most of the naturalist cohort leaders will return this school year, and since this will be their second year leading teacher cohorts, we anticipate that their skills, and comfort in administration and communication with teachers, will increase.

KHOC Materials and Alignment with Curriculum

Standards: As we discussed in Section VII, KHOC works best when the curriculum aligns with up-to-date curriculum standards, and when teachers have the chance to make suggestions for its improvement.

In the next few years, KHOC staff should pay close attention to the plan for rolling out Next Generation Science Standards, and should work with teachers on curriculum improvement that might bring KHOC in line with these standards. In addition, the introduction of a Spanish-language KHOC booklet would be welcome in many school districts.

KHOC is an extremely valuable program for our students, who many rarely leave their community. I hope to be able to continue participating every year, so that the fun of the outdoors can be experienced by more students and families. It really helped expose our families to places and activities that they may otherwise never know about.

~A KHOC teacher

Goals and Participation Targets for Year 5: EBRPD

enthusiastically looks forward to school year 2016-17, and plans to invite a similar number of classrooms (120-125) to participate in KHOC.

EBRPD is excited about reaching out to increase participation in Contra Costa County, and deepening the growing impact of KHOC.

We plan to work closely with the new Parks Express team to ensure a smoother transportation scheduling experience. In orientations this coming year, we will also highlight self-guided park materials available, so that more teachers know about them and use them.

Finally, EBRPD will continue to listen to teachers, students and families as they tell us what is needed to broaden and deepen their commitment to outdoors education, improving health and well-being in our communities.

Thank you to KHOC funders!



The Snyder Family Foundation

And for support and inspiration from:



Kids Healthy Outdoors Challenge (KHOC) 2015-2016 School Year Pilot Project

ADDENDUM: KHOC Student Letters and Artwork

This year, third grade KHOC students from Sun Terrace Elementary in Concord wrote letters to park naturalists about what they learned after a trip to Black Diamond Mines. Artwork from Black Diamond Mines is by KHOC students from Ygnacio Valley Elementary School, also in Concord.

Dear Virginia and Kevin,

Thank you so much for helping our class attend our field trip to Black Diamond Mines. I liked the part where we hiked up to the cemetery, and going in the mine. I learned from the field [trip] that it is important to keep old stuff so that people who don't know that, they can learn from that.

Sincerely,

Brandon



Dear Miss Virginia,

Thank you for showing us all of the fossils. I appreciate that you told us about the ghost shrimp and I loved that you showed us Chris and that you let us use the flashlight and the helmets. I really enjoyed going to Rose Hill Cemetery. It was nice finding people that died and we wrote them on a paper.

Thanks Again,

Sincerely,

Ariana



Dear Miss Virginia,

Thank you for the scavenger hunt. It was fun. I learned about coal and sandstone. I realized that the sandstone wasn't as hard as coal. Little pieces were falling when we touched it. If I were a coal miner, it would be a little easy because I'm shorter. At the cemetery it was sad because there was a stone who said they died at 1 year and 3 months. I think it was nice and safe of you to give us helmets and flashlights. I also thought the fossils were cool. My favorite part was the cemetery and the stone of Sarah Norton. The dynamite rooms were really cool. Thank you for showing us the mine.

