



Kids Healthy Outdoors Challenge (KHOC)

2018-19 School Year Report

July 2019

KHOC is funded by:



KHOC 2018-2019 School Year Report

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Art from Redwood Regional Park by a KHOC student from Wilson

I. Executive Summary

Purpose of the Project: *Kids Healthy Outdoor Challenge (KHOC)* was first implemented in 2012 with a goal of promoting outdoor education while also supporting third grade curriculum content standards (now the Common Core Standards) 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 East Bay Regional Park District (EBRPD) Master Plan 2013 highlights the importance of connecting youth to nature and building future environmental stewards. Also, research shows that spending time outdoors contributes to student achievement, learning, and development. The Master Plan priorities include expanding efforts to attract young people to parks, and KHOC directly supports this plan.

Thank you for all you provide, this is an amazing program our students benefit from so much. For some, it is the first time visiting a regional park and studying outdoors.

~A KHOC Teacher

KHOC includes a teacher guide and an age-appropriate student workbook. The workbook has ten sections 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.

Many youth across EBRPD don't have the opportunity to participate in these activities, and KHOC addresses this disparity. Helping to make

KHOC even more accessible, a Spanish-language version of the student workbook is available, translated with funding from the Regional Parks Foundation in 2017.

Some KHOC lessons are designed to support classroom learning *at school and in parks* (e.g., following a trail), while others are ideal for students and families to explore *outside of class* (e.g., learning to swim or bike). Each chapter contains fun, interactive activities that relate to the chapter topic. For example, in *Connect to the Past*, lessons explore Ohlone culture and games. In *Explore Nature*, students experiment with different types of bird beaks and their adaptation to different environments.

School year 2018-19 was KHOC's seventh year, and each teacher was asked to use KHOC lessons *and* to go on one or more class trips to an EBRPD park. Anticipated **outcomes** included:

- Increased comfort and skills teaching outdoors among participating teachers.
- 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



Teachers may also request an EBRPD naturalist to help guide their park trip, with applications due by early December (for naturalist-led field trips between January-June of the next year). Having a naturalist is not a formal part of KHOC, and due to demand throughout the district, *KHOC teachers do not receive scheduling priority over other teachers*. However, *self-guided trip kits and instructions* have been introduced at teacher orientations so that teachers can deepen their skills teaching outdoors, a major aim of the program.

Teachers and Schools that Applied to KHOC: In fall 2018, a variety of schools applied to KHOC, representing 18 different school districts. Over half of applications (52%) came from an urban, 46% from a suburban, and 1% from a rural school (in Brentwood in Contra Costa County).

There was also wide variation in socio-economic class, with low-income status measured by the percent of students eligible for Free and Reduced Price Meals (FRPM): this rate ranged from 10% to 100%. On average, two thirds of students were eligible for FRPM across applying classrooms. A large number of students were also English Language Learners:

	Average	Range
% students eligible for FRPM	66%	[10%, 100%]
% English as a Second Language (ESL) students	42%	[8%, 95%] Spanish, Cantonese, Mandarin, Tagalog, and Vietnamese commonly spoken

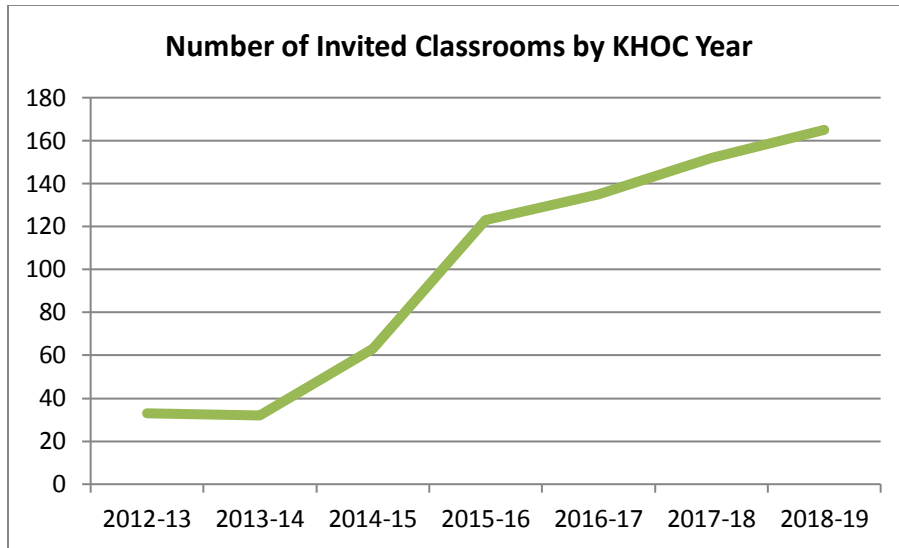
Overall, the diverse students in applicant classrooms were approximately **49% Latino, 16% Asian, 13% African American, 13% Caucasian (non-Latino), 2% Pacific Islander, <1% Native American, 5% More than One Race, and 2% Other.**

There was also variation in applicant *teachers*. As was true last year, teachers averaged almost 12 years of experience in the classroom, but some were brand new, and several had over 25 years of experience.

Comfort level teaching outdoors among applicant teachers was varied, with **78%** stating they were either **Very or Somewhat Comfortable** teaching outdoors. Seventeen percent (**17%**) were **Neutral** about their comfort level, and **5%** were **Somewhat or Very Uncomfortable** teaching outdoors.

School Year 2018-2019 KHOC Invitees: From the pool of applicants, EBRPD invited **165** teachers/classrooms to participate in 2018-19.

KHOC continues to grow year over year, as seen here:



These 165 teachers were invited to attend a KHOC orientation in fall 2018. At orientation, KHOC divides participants into five different training cohorts (each led by an EBRPD naturalist), so that each teacher had a central point of contact for questions and trouble-shooting.

In 2018, **127** teachers (77% of those invited) attended orientation – these were the teachers who were considered to have participated in the program; **44%** of these were *Previous Participants (PPs)* in KHOC (compared 25% PPs in 2017-18).

*Nature needs are [sic] help more and more every second.
~A KHOC student*

In all, 50 schools and 127 classrooms were represented at fall 2018 orientation; 56% were from Alameda County and 44% were from Contra Costa County.² The average classroom size of these participating classrooms was **25**.³

Note: Due to limited resources, KHOC limits participation for any one teacher to three years total. Experienced teachers are asked to check out self-guided park options, and are offered a supply of KHOC booklets for their class.⁴

KHOC Participants and Survey Process: The 127 teachers who attended orientation all participated in the program at some level. (Full KHOC “completion” was defined as attending orientation, using KHOC lessons in the classroom *and* taking an EBRPD park trip.)

Overall, over **3,100 third grade students** participated in or had some level of exposure to KHOC this year. There were about **86 bus trips**⁵ to EBRPD parks during the year, attended by over **4,800**

² Just 23% of schools had been from Contract Costa County the prior year, and this was a welcome increase, given the investment of the Contra Costa County Fish and Wildlife Committee in KHOC.

³ Class size ranged from 16 up to 56 in two classrooms from Achieve Academy, a charter school in Oakland.

⁴ One caveat is that if a teacher with 3+ years of experience applies along with less experienced teachers, and if that school requires all third grade classrooms to have the same experiences, those teachers *may* participate.

⁵ Some of these trips had multiple classrooms from a school, and some classrooms took more than one trip.

students and other passengers. (Note: Passenger count includes students, teachers, parents and chaperones, etc.)

All 127 teachers who attended the KHOC orientation were asked to take a year-end survey in May 2019. This is conducted at the end of each school year to determine whether project outcomes were met, and to gain feedback from program participants. This year, **51% responded to the survey** (N=65).⁶ KHOC PPs were more likely to take and complete the survey: 57% of respondents were PPs.

Of survey respondents, **88%** (n=56) had completed the program by using KHOC lessons *and* taking a park trip. (See Section III for information about program attrition and noncompletion).

Survey Outcomes: KHOC seeks to increase educator comfort and skills teaching outdoors. For the seventh year in a row, the majority of teachers indicate that KHOC meets this goal: **90%** Agreed or Strongly Agreed that *participating in KHOC increased their comfort with leading classroom activities outdoors*; **76%** Agreed or Strongly Agreed that *participating in the project increased their skills teaching outdoors*.

95% of KHOC survey respondents intend to continue teaching lessons that get kids active outdoors in the future.

It was also important that teachers not feel that KHOC took time away from meeting curriculum standards; **78%** Agreed or Strongly Agreed that *KHOC increased student learning and contributed to students' mastery of curriculum content* (the rest of the respondents were Neutral on this question).

Survey results continue to show that KHOC increases student and educator enthusiasm for learning outdoors:

- **86%** of teachers responding to the survey Agreed or Strongly Agreed that *participating in KHOC made their class want to spend more time being active outdoors*.
- **84%** Agreed or Strongly Agreed that lessons were *engaging and fun* for students.
- **60%** Agreed or Strongly Agreed they *spent more time teaching outdoors* this school year than they did the last school year. (This rate is down from **79%** last year, perhaps due to the fact that there were more previous KHOC participants, who had experience teaching outdoors, in this year's sample.)
- **55%** discussed the Children's Outdoor Bill of Rights with their class this year.

Section VII of this report details challenges and teacher suggestions (particularly regarding park transportation) to improve KHOC. However, with more students and educators participating each year, KHOC continues to change the way teachers teach, instilling key skills for educating children in natural spaces across the East Bay.

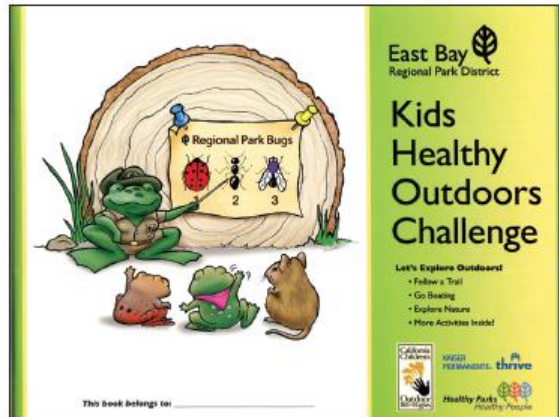
⁶ A total of 65 survey responses were received, but one was from a teacher who had not attended the orientation and did not complete the survey. This survey was not counted in results.

II. 2018-19 Program Changes & Trends

Every year, EBRPD makes tries to make KHOC program revisions based on teacher feedback. Ideas and suggestions, as well as information about emerging challenges, come to us through the year-end survey, and through communications with teachers during the year.

Some notable changes and trends this year included:

- *Ongoing Transportation Challenges:* As has been the case for several years, EBRPD and other educational/recreational agencies continue to face a challenge in reserving buses for park trips.



Although the Park District has eight separate bus companies under contract, many are not available when asked, and others have stated outright that they cannot provide service during the school year. This is due to competition for buses, with technology companies, in particular, paying top dollar for commuter transportation for their employees. For the last three years, KHOC has not been able to guarantee a bus for a KHOC trip for this reason. Unfortunately, we do not see this challenge going away in the near future.

As a result, we continue to offer KHOC teachers the option of booking a bus through their school district, with reimbursement from KHOC. (Often this option is more economical, too.) However, there are still problems with the bus-booking process.

For example, an emerging problem is that if a teacher has booked a naturalist on a certain day, and then can't obtain a bus for that day, they have to try to reschedule the naturalist. Parks Express (the EBRPD department that arranges transportation) is now represented at every KHOC orientation to warn teachers about this possibility. We are now even encouraging more trips in February and March so that if there are scheduling issues, there is more time to find an alternative date. Nonetheless, the process for booking a naturalist, and then a bus, is still a confounding problem for many teachers. Compounding the problem this year, the Oakland teacher's strike disrupted the booking schedule for some teachers.

These issues were a focus of several survey questions, and a discussion of feedback related to transportation is in Section VII.

- *New Science Curriculum Standards:* Next Generation Science Standards for California (California NGSS) have been adopted across the state, and districts are rolling them out at varying paces. According to the Alameda County Office of Education (ACOE), some districts have been early implementers while others are just beginning to train teachers. Our current survey bears this

out, showing that about 25% of teachers in our survey had not started to explore the new standards or were not sure if they had.

However, within the next few school years, most districts will have made this transition, and the Park District is preparing for it. EBRPD recently participated in an ACOE training for naturalist staff, and a “California Phenomenon Summit” which brought 70 teachers together with five scientists from EBRPD, the University of California at Berkeley, and Lawrence Hall of Science, to review research and identify scientific phenomenon, aligning them with NGSS. (The summit created resource materials for teachers that are posted on the website of the [San Diego County Office of Education Science Resource Center](#)).

In the coming year, KHOC staff may seek teacher feedback, or seek a master teacher or NGSS expert to review and revise KHOC with regard to these curriculum standards. However, any future revisions will maintain a focus on the Children’s Outdoor Bill of Rights as an organizing framework.

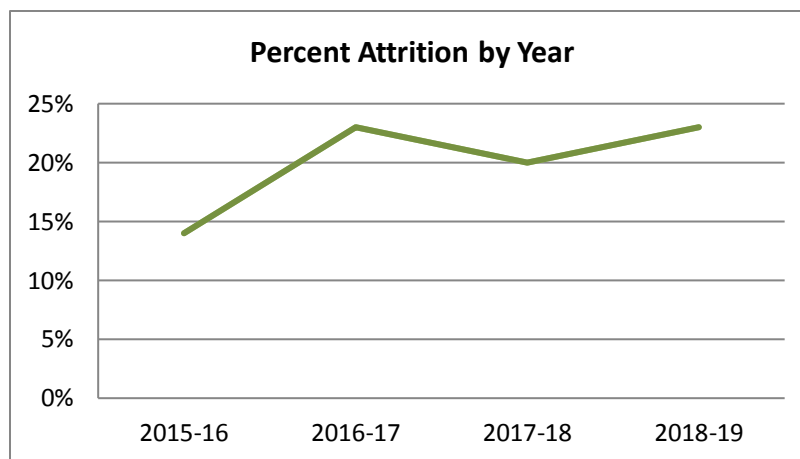
- *More participation from Contra Costa County schools:* Since the early days of KHOC, Alameda County schools have been disproportionately represented in KHOC. However, because the Contra Costa County Fish and Wildlife Committee is a KHOC funder, this year, we made an extra effort to encourage CCC schools to apply, and it has paid off. Contra Costa participation this school year increased to 44% of total classrooms, up from just 23% in school year 2017-18.

In other news, teachers continued to use the *Spanish-language translation of the kids’ KHOC booklet* (first made available in September 2017, funded by the Regional Parks Foundation), as well as *self-guided activity kits* available for teachers to use during class trips at four geographically disperse parks (Garin Regional Park, Radke-Martinez Regional Shoreline, Redwood Regional Park, and Shadow Cliffs Regional Recreation Area). However, many more teachers could be taking advantage of these resources.

III. 2018-2019 Participant Attrition & Noncompletion

Each year, KHOC experiences attrition, that is, teachers who do not complete basic program requirements (i.e., attending the orientation, using KHOC lessons with classes, and taking a park trip).

In fall 2018, teachers from **165** classrooms were invited to attend a KHOC orientation, with a choice of five dates and locations. New KHOC teachers were asked to attend a four hour orientation (with lunch provided), while returning teachers could opt for a shorter two-hour orientation. Thirty eight (38) or **23%** of invited teachers did not attend, and so were immediately counted as “non-completers.” Reasons for not attending orientation frequently include scheduling and childcare issues. This early attrition rate has varied in recent years, but overall, has increased with the number of invitees:



In the survey, an additional eight teachers (**6%** of those who had gone to an orientation) responded they *had not completed KHOC program activities* (three did not use any KHOC lessons; two did not go on a park trip, and an additional three did not do either).

Although a few teachers indicated that curriculum and testing standards made it difficult to fit KHOC in this year, the majority of non-completers had difficulties obtaining the bus to take a free park trip:

- *We were told we had a day or two past the deadline in December since we called ahead to give heads up, then we were told in January that we were placed on a waiting list and we never were successful at coordinating our trips due to uncertainties such as Park Express Bus availability and site availability. Then we had a tentative date in early March then the strike in OUSD killed that.*
- *The website is poor and not intuitive. I thought I sent out my bus application, but apparently it didn't go through.*
- *I was not able to figure out a date by the deadline for bus reservation. Without the free bus, I was not able to coordinate.⁷*
- *The Park did not respond in with a confirmation for me to reserve a bus and do the correct paper work that our district requires. Very disappointed.*

⁷ To clarify, the deadline for bus reservations may be extended for individual teachers or schools on request. This helps increase the chances of getting a bus. No teacher should have been refused a bus by missing the deadline.

IV. Survey Results: How Teachers Conducted KHOC

Rate of survey response and program completion: The 127 teachers who attended a KHOC orientation had some level of exposure to the program and its curriculum. All of these teachers received copies of the curriculum and student workbooks at the orientation.

Each of these teachers were asked to take the KHOC year-end “completer” survey in May 2019, and 65 teachers did so, providing at least partial survey responses (this represents a **51% response rate**).⁸

This is an excellent program my students truly enjoying learning while at an East Bay Regional Park site. I really like how the students are able to connect what they have learned in the classroom about indigenous people to all the naturalist led activities.

~A KHOC teacher

As noted, full KHOC “completion” was defined as attending orientation, using KHOC lessons in the classroom, *and* taking an EBRPD park trip: **88%** of survey respondents (n=56) **had successfully completed the project.**

Like the overall pool of invitees, the survey respondents were largely experienced educators, with an average of 13 years of teaching experience. The range was from one to 30 years of experience.

Park Trips: Overall, there were about 86 bus trips to EBRPD parks taken by teachers/classrooms during the year.⁹ There were about **4,800** students and other passengers on these trips.¹⁰

According to the most recent logs available, the **most popular park destinations** were: Coyote Hills (21% of trips; the Ohlone Cultures and Tuibun Ohlone Village Site interpretive programs here tie in closely to Social Science curriculum standards); Tilden Nature Area (21%, with rolling hills, ponds and riparian ecosystem); and Black Diamond Mines (16%, an historical preserve that contains relics of three mining towns, and former coal and sand mines).

2019 EBRPD Parks Visited¹¹

Coyote Hills	21%	Garin	4%
Tilden Nature Area	21%	Big Break	4%
Black Diamond Mines	16%	Redwood	3%
Crab Cove	11%	Ardenwood	1%
Martinez Shoreline	7%	Other Parks	6%
Del Valle	6%		

Note: in the May 2019 survey, 49% of respondents had more than one park trip during the year.

⁸ Not every teacher answered every survey question, resulting in a varying number of responses for each question.

⁹ Some of these trips had multiple classrooms from a school.

¹⁰ This is a duplicated count.

¹¹ This includes teachers who booked a bus through their Unified School District with reimbursement from the KHOC program.

Use of KHOC Curriculum: The KHOC curriculum has a teacher guide, as well as a student workbook full of activities, and **91%** of survey respondents *utilized the KHOC curriculum in their classroom.*

Popular lessons include *Connect With the Past* (which focuses on Ohlone history in the East Bay), *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 frame) and *Bird Bill* adaptations (in which students use tools like tweezers and toothpicks to lift different types of “food”), and *Follow A Trail* (ideal for a park trip).

My students wrote about each of their field trips, and were ecstatic when sharing about their experiences at each of the parks we visited.

~A KHOC teacher

In fact, many teachers completed lessons on their park trips, some using materials from self-guided kits:

- *We did the Plant A Seed, Bird Bill Exercise, Follow a Trail and Be an Animal Detective during our trip to Tilden and Connect with the Past during and after our trip to The Black Diamond Mines.*
- *We used all of the equipment in the Garin Park kit.*
- *We went to Garin park and used 3 kits (birds, water life, birds), took a hike, and flew kites we made at school beforehand. Then went to Coyote Hills where we took a hilly hike to see the bay and a marshlands hike, visited the Nectar Center and Ohlone Museum, and played some of our own Ohlone games.*



Teachers were asked to comment and give feedback on the KHOC lessons, and how students reacted to them. Comments included:

- *They liked that they can color in their books and we discussed in detail the importance of the outdoor agreements in Spanish, "Acuerdos para el aire libre."*
- *Students loved the hands on, real life experience.*

- They are engaging and a good overview before the field trips. Good lesson starters
- This program is amazing! Thanks for putting it on!
- They really enjoyed plant a seed, they were able to each have their own seed to observe while using the booklet.
- The kids LOVED when we would pull out the KHOC workbooks!
- We enjoyed the docent led tours, and I even ventured to plan my own outdoor field trip without a docent. Thanks for the opportunity!
- Many of the lessons were great as they tied into our third grade living structures unit of our garden time.
- They were excited, anything with the outdoors and science is exciting to my students.
- I am very happy that the program is being offered to 3rd grade classes. It would be nice to see other grades get an opportunity that we had...unless that means the 3rd graders won't get any more programs. If that's the case, nevermind, keep it 3rd graders only!
- We used some of the materials in the book and cut them out and colored them and wrote our own sentences about the items made our own informational books with them. We did this with the information about Tule and acorn.

Students loved when they saw "KHOC" on the daily schedule and when I asked them to take their KHOC book. They love personalizing and coloring first page.
~A KHOC teacher

Some suggestions or critiques included:

- The lessons were great for preparing them for the trip. It would have been great to have a follow up lesson with writing/art to do after the trip.
- They loved them but it would be nice to be in color.
- They could be aligned to the Foss Structure of life curriculum
- One rec: give teachers time during an orientation or follow up to collaborate and prepare a lesson.

The majority (**73%**) of survey respondents indicated that KHOC lessons were easy to complete during the class time I had available. About 9% disagreed with this statement, and comments included:

- Time and schedule is always a challenge with all of the other mandatory things that need to be completed.
- I don't have time for these lessons because of strict pacing guides.
- My students had a lot to write and are not the quickest writers, so most lessons had to be done over more than one day. With preps, recesses, etc., it was difficult to find time around the required curriculum to get these lessons in.
- We didn't have access to complete several of the lessons (the last ones in the booklet)
- Some lessons CANNOT be done such as bike riding, fishing, swimming, overnight stuff. Kids could try to do these with families at home, but I thought KHOC was for class use and would allow students to do these things that they normally wouldn't do or can't do with family. Although the book is also meant for home, so it could work both ways.¹²

¹² Each year in KHOC orientation, teachers learn about elements of the Children's Outdoor Bill of Rights, including activities like boating and swimming that are *not intended to be delivered in the classroom*. Although this is stated during orientation, in Section VIII, Lessons Learned, we explore other avenues to make this point clear.

- *I really wish we had more class time to explore more of the lessons. I also get to the end of the year and wish I had done more of them.*

Overall, teachers agreed that KHOC lessons were age and grade appropriate for students, with **86%** Agreeing or Strongly Agreeing this was so (13% felt neutrally about this statement, and 2% [n=1] disagreed).

Finally, in the KHOC orientation trainers emphasize that the curriculum can be used as a *guide* for teaching outdoors, that it can be *adapted* to make it useful in lesson plans. So each year we ask teachers whether they *individualized or tailored the KHOC curriculum to meet the needs of their classroom or schedule*. (This could include shortening lessons or substituting alternative content due to limited class time, or different teaching styles and class characteristics.)

This year, **72%** of survey respondents indicated they had *individualized or tailored the curriculum*. Some adaptations were made for practical reasons such as time, and the needs of the students:

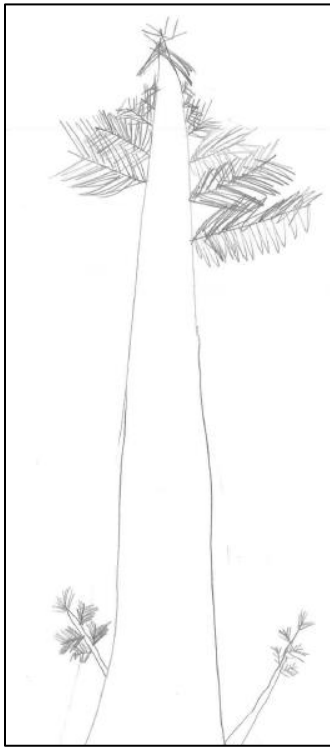
- *Some lessons we only did part of them due to time constraints.*
- *Some of the content was self-paced when the students had finished State Testing.*
- *I gave the lessons in Spanish.*
- *Just scaffolded lesson to help English Learners gain content better. Via visual, kinesthetic, and song.*
- *I researched additional articles to support the lessons - providing reading passages that are at the level of my very diverse class.¹³*
- *I made graphic organizers for my students that couldn't access the content.*
- *Less writing.*
- *Working in small groups.*

Some made adaptations to align activities with other curricula and classroom lessons:

- *For the section with World in a Box, we used it in the Butterfly Garden of Coyote Hills. We did this so that we could use the KHOC book while in Coyote Hills, and to give them a specific area for them to look at. For Playing Outdoors, we created our own Ohlone replicas of the hoop and spear game, and another game. Again, it was so that we could use the KHOC book to match what we were learning.*
- *Scavenger hunts were tailored to address the specific environments we were visiting.*
- *I added more to the plant cycle/plant a seed unit. We discussed parts of plants and pollination and used other curriculum to support learning of plants - life sciences. In another lesson on exploring plants outside, we looked at the stigma and other parts of plants for pollination, observing and checking out a list.*
- *I added more information from other resources about constellations and also about Native American/Ohlone Miwok.*
- *Connect with the Past - we didn't go quite so far back. We visited John Muir's house, so we focused on that era.*

¹³ More information on cultural and linguistic accessibility follows in Section V.

- Some lessons fit perfectly into our studies during Native American Heritage Month, so we were able to expand on the material provided to create projects detailing the process of making acorn soup and pinole.

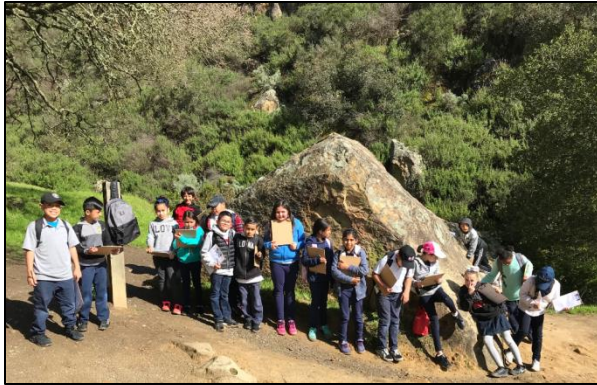


Art from Redwood Regional Park by a KHOC student from Wilson Elementary

Some of the most **creative and interesting adaptations** made this year included the following:

- *I made my own writing frame for the paragraph writing activity and had students type out their writing as part of our Ohlone unit.*
- *I just incorporated the plant a seed lesson into our honeybee unit. We researched flowers that honeybees are attracted to. Then, we planted seeds and observed them.*
- *Students wrote about the life cycle of fish after visiting crab cove. They also wrote about the food chain of fish.*
- *I did a dry run of our hike in Garin Park and then tailored the lesson to what we would see.*
- *We wanted our students to become familiar with nature surrounded by their peers. We went on a nature hike and had our students write poetry about nature.*
- *We planted seeds without soil to see if they would grow.*
- *We planted seeds in cups of soil and in our backyard garden to see if there would be a noticeable difference in the growth of the seed.*
- *We used a hydroponic set up for the plants in plant a seed.*

V. Cultural and Linguistic Accessibility



KHOC is designed to be used by third graders of different cultural backgrounds and language abilities, and as noted, on average, **42% of students had English Language Learner status.**

This school year was the second that KHOC made a **Spanish-language version of the kids' booklet** available to increase linguistic access. (This translation was funded by the Regional Parks Foundation.)

In this year's survey, **26%** of respondents (n=15) said they **had used this translation**, up from 19% the first year it was available. Classrooms that used them needed quite a few Spanish booklets: the average number of copies used in these classrooms was 16; the range was one copy all the way up to 30.

Comments about the translation included:

- *This year we were able to get our books in Spanish and I really appreciated that option. Kids at first thought the lessons would be boring but [they] were very engaged.*
- *My class is a dual language (Spanish) class. I had 2 newcomers in my group and it was helpful to have the KHOC booklet available in Spanish.*

As more classrooms begin to use the Spanish-language booklet, EBRPD will consider translating the KHOC curriculum into other commonly spoken languages such as Cantonese, Mandarin and Vietnamese.

In order to capture information on student experiences with the curriculum and activities, we asked also survey respondents: *How did students of different cultural backgrounds and language abilities in your class react to KHOC activities? Did any groups have difficulties?*

I am really happy that the books are available in Spanish because I teach a bilingual group and it is challenging to find curriculum in Spanish.

~A KHOC teacher

The vast majority of respondents (**89%**) indicated that the *curriculum and activities had worked well with their classes*. Comments included:

- *The hands on nature of the curriculum provided access to all students.*
- *I felt like all my students were able to engage, participate, explore and enjoy their experience in nature. Many students had prior connections to this park and commented on their previous examples.*
- *My students are in a Dual Immersion Class-English and Spanish. They had no difficulties with materials or guided tours.*
- *It is always a challenge to help those students with different backgrounds and languages gain access to content. So, yes, it was difficult, however, we were able to manage access fine.*

- All of my students were able to follow the lessons. Language in the book is all very student-friendly.
- Kids were good with it all. Nature's language is universal. :)
- The lessons worked great with all my kids — Latino and black, low-socioeconomic, some ELL
- No language conflicts in class. All lessons worked well, but lessons with more visual and sentence starters worked especially well.
- I think my students were all able to find connections to the activities especially if we really examined closely our own community.
- All of my students were able to access the content, whether through written, visual, or hands-on.
- Students loved lessons; students were able to make connections to their own cultures with the extension lesson in *Connect with the Past*.
- All my groups loved the lessons and the program. I did have to do some scaffolding with my new English Learners, but it was great.
- I have two newcomers who have very limited English. They got a lot out of the hands-on portions of the field trips, but would have benefited from a Spanish speaking docent.¹⁴
- All students loved KHOC.

The lessons worked well with our very diverse students. It just seems that being outside sort of levels the playing field for everyone.

~A KHOC teacher

However, **11% of responses included criticisms** regarding cultural and linguistic accessibility, including that hands-on experiences work better, and that groups with lower English skills needed extra support:

- Low groups had difficulty reading the booklet.
- The groups with difficulties needed smaller groups with more direction.
- Spanish speakers had a bit of difficulty understanding the material.
- Not culturally relevant to our demographics. I have primarily African American and Latino students and some of them would have rather had more time with the hands on experiments than lecture based.

Finally, several teachers mentioned the different levels of exposure to nature among students of different backgrounds:

- I think that getting out in the outdoors was good for all students. I have noticed that kids whose parents do not take them out in nature at all, cultural background doesn't matter, were much more intimidated and scared of being outdoors and were hesitant to explore. Kids whose parents that have exposed them to more travel/outdoor experiences were much more open to new experiences.
- Students did not know that they lived so close to the redwoods. My students typically do not venture too far from their community in San Leandro, so this time outdoors provided them with a new outlook on their greater community.
- They enjoyed the opportunity to be outdoors since many don't get that chance.
- We have a mostly ELL and T-1 (low income) population, so these experiences would simply not happen without your support. We thank you so much!

¹⁴ EBRPD does have a few Spanish-speaking staff members, but usually depends on teachers or parents to translate. EBRPD can bring in outside translators for students who use American Sign Language.

- *My school is predominately Latino. My students loved being outdoors, and many of the places we had visited , our students did not know were so close to them. The lessons were relatable and adaptable, and my students loved it.*
- *Most of my students had never been on a hike before, so the entire experience was new to them.*

One of the key aims of KHOC is to introduce diverse children to the *California Children’s Outdoor Bill of Rights*,¹⁵ which states that every child in California, by the completion of their 14th year, should have the opportunity to experience 10 key outdoors activities. KHOC is increasing exposure to these rights: **55% of survey respondents had discussed the Children's Outdoor Bill of Rights with their class this year.**



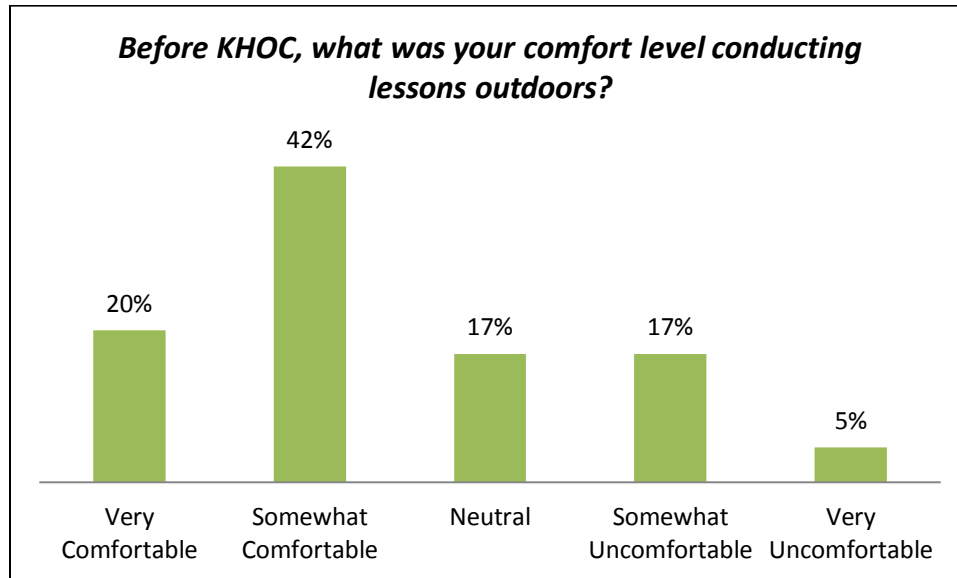
A KHOC student from Wilson Elementary draws the class at Redwood Regional Park.

¹⁵ Developed by the CA Roundtable on Recreation, Parks and Tourism, http://www.parks.ca.gov/?page_id=24952

VI. Outcomes

I. Increasing Comfort and Skills Teaching Outdoors.

Respondent skill and comfort teaching outdoors: To be able to measure an increase in skills and comfort level *teaching classes outdoors*, we asked survey respondents about their level of comfort conducting lessons outdoors *before KHOC*. About **62%** (n=40) of the survey respondents said they had had at least some level of *comfort teaching outdoors* before participating in the project.

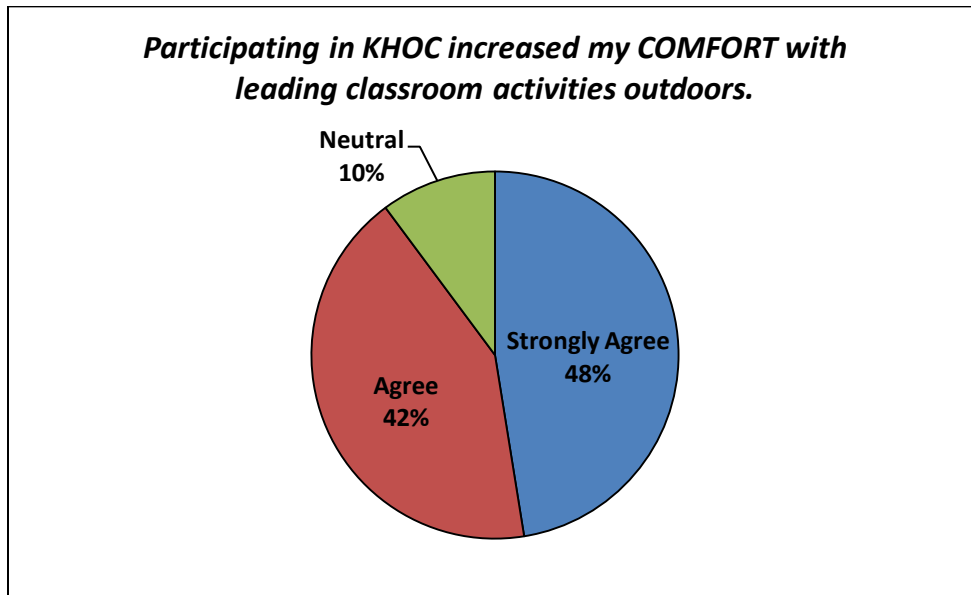


As was the case last year, at the beginning of the program, the survey respondents overall had less comfort than the original pool of all applicant teachers, not all of whom were invited to participate. About 22% of survey respondents had had some level of discomfort at the beginning of the year, compared to just 5% of original applicants:

Comfort level	All applicants in fall 2018	Survey respondents in spring 2019
Very Comfortable	37%	20%
Somewhat Comfortable	41%	41.5%
Neutral	17%	17%
Somewhat Uncomfortable	3%	17%
Very Uncomfortable	2%	4.5%

The rate of those with some level of comfort was very similar between previous KHOC participants (PPs) and first-time KHOC teachers: 63% vs. 58%. (About 22% of PPs were uncomfortable or very uncomfortable at beginning of year vs. 25% of first timers). Thus, this year, *previous exposure to KHOC did not significantly impact comfort at the beginning of the year.*

This year, survey question, **90%** (n=53) Agreed or Strongly Agreed that KHOC *increased their comfort* with leading classroom activities outdoors:



Note: KHOC PPs in the survey respondent pool were more likely to agree with this statement (97%) than first time KHOC teachers (79%). It is unclear why this should be, but they may be answering the question based on more than one year of KHOC experience.

Teacher comments that underscored growth in *comfort* included:

- *With the KHOC program, we have taken our classes to Garin and Coyote Hills for a few years. With each year that we've gone, ...I've become more relaxed and comfortable about trips mainly because I've learned that the students are naturally engaged by being outdoors.*
- *I loved when we went out during the training and did a simulation of a field trip. It made me think about how to present things to the kids!*
- *It felt like the energy and engagement was much higher than in a traditional classroom setting.*
- *We visited the park ahead of our field trip and planned together the route we were going to take and the things in nature that we were going to point out for our students to observe.*
- *After going to Crab Cove with my class and having a naturalist, I feel more confident in leading outdoor/nature field trips. I realized that briefly introducing them to the things they may come across on the field trip helped with holding their attention outdoors. They were very excited when they actually saw sea life that we discussed ahead of time.*
- *Feeling confident about my own knowledge of outdoor things such as nature, trails, plant life, animals, etc. Feeling confident with leading groups/students outdoors (fear was that students would dislike, not participate, get hurt or run). Comfort level increased with students - knowing they like it and will engage in. Easy to lead and let parents help lead.*

I realized that I can lead a hike and read a map. I don't work out and I'm getting older so I wasn't sure I could keep up but I did. And I've always been bad at reading maps, but I was able to figure it out.

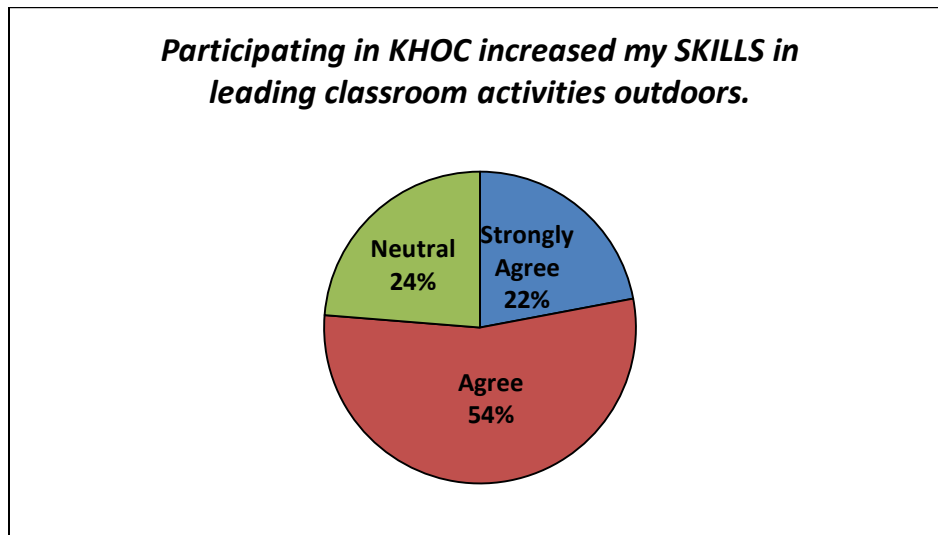
~A KHOC Teacher

- *The ease of the kit use and the teacher's booklet help along with the class in the fall.*
- *Knowing that I can engage students with nature: looking at trees characteristics - similarities and differences for example. Feeling confident of what things to point out in nature - poison ivy, etc.*
- *I was unsure if the students would be able to apply class rules to being outside and they did much better than I had expected.*
- *It can be difficult planning a field trip at my school, but it's worth the effort because the kids had so much fun.*
- *My background is in Parks and Recreation so I've done a bit of leading outdoor activities. The workshop was a good refresher for something I hadn't done in a while!*
- *I think that knowing more about the EBRParks and getting to visit them so I have some background knowledge about the parks so then I can teach kids better without having a naturalist increases my comfort level.*
- *Participating in KHOC gave me the confidence to plan my own nature hike to Castle Rock. I wouldn't have done it without KHOC's support!*
- *I realized how many "little things" there are in nature and how the kids really notice them if you guide them.*

Several teachers also noted suggestions about things that would make the process more comfortable:

- *The lessons were great for preparing. It would have been great to have a guided tour video for teachers of each park before the trip.*
- *I am a former outdoor educator, so I'm pretty comfortable with working with kids outside. The hard part for me is being able coordinate a program with transportation, as well as plan site-appropriate lessons.*

Next, **76%** (n=45) Agreed or Strongly Agreed that KHOC increased their **skills** teaching outdoors:



Note: KHOC PPs in the survey respondent pool again were much more likely to agree with this statement (94%) than first time KHOC teachers (50%).

In teacher feedback, about 45% of comments indicated that KHOC has helped improve classroom management skills while teaching outdoors, such as keeping students engaged. Comments included:

- *Time management with outdoor activities for breaks, hike, looking at items up close and studying, stopping to discuss and share, observe and analyze. Able to lead small groups and check in with other groups for comparison.*
- *I have gotten better at managing the groups and making sure everyone gets the most out of their outdoor experience.*
- *Planning ahead and preparing a note taking sheet for the students helped them stay focused on their observations.*
- *Ability to engage, get students interested in inquiry and participation.*
- *Going over the outdoor agreements is very important for students to know.*
- *Using management signals and the nature around to keep students attention.*
- *Asking for understanding and having their responses shared with other students. Giving turns. Having them close in a circle worked better.*
- *Gather students together to introduce objective, and allowing kids to explore and engage with nature.*
- *I know where to place parent volunteers when leading a line of students up trails. —Management*
- *Having small groups exploring rather than travel as a large group.*
- *Organization and allowing structured "play".*

It was nice not having to depend on technology to teach a lesson (laptops, iPads, projectors and the internet.) Instead of watching videos of nature on YouTube, we were able to actually experience it, both good and bad (mud, bugs, allergies).

~A KHOC Teacher

Other teacher comments underscoring growth in skill set, such as aligning activities to curriculum standards, included:

- *KHOC helped me integrate more science curriculum into my ELA standards.*
- *Connecting outdoor activities to standards we have in the classroom.*
- *Journaling, guiding student observations, finding the balance between letting kids enjoy nature freely and directing their attention to things they might have missed on their own.*
- *Hiking map reading.*
- *I think taking them out in nature just allows me to better anticipate questions, concerns, and structures they need outdoors.*
- *It gave me new ideas, from the lessons. It is always great as a veteran teacher to have some fresh input to spark new ideas.*
- *Knowledge of the parks really increased my skills because when I don't know a lot about a place and I'm trying to teach students about it is intimidating to me.*

Increasing skills and comfort for those originally less comfortable teaching outdoors: Of survey respondents (n=23) who had indicated they were either Neutral, Uncomfortable or Very Uncomfortable about teaching outdoors at the start of the year, **83%** Agreed or Strongly Agreed that participating in KHOC increased their comfort and **70%** their skills leading classroom activities outdoors. These were lower rates than in the overall survey respondent pool.

In addition, **55%** Agreed or Strongly Agreed that they *spent more time teaching outdoors this school year than I did last school year*. This compared to 60% in the overall respondent pool.

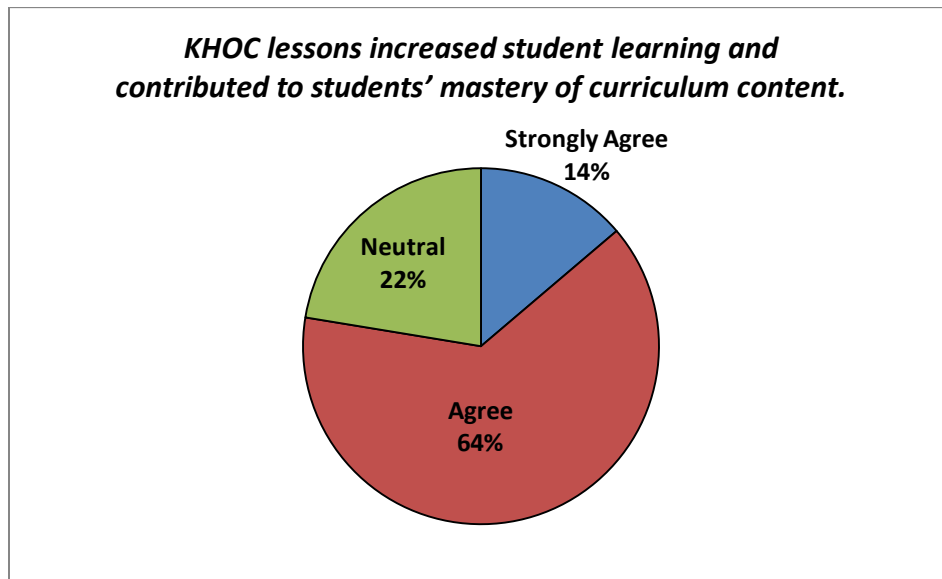
However, **100%** of these “less comfortable” survey respondents Agreed or Strongly Agreed that they *intend to continue teaching lessons that get kids active outdoors in the future*. (Among overall respondents, 95% of teachers agreed.) **100%** would participate in KHOC again.

2. Helping Teachers Meet Curriculum Standards.

Pond
Softly glistens a little pond in
the morning light.
What a delit! [sic]
~Poem by a KHOC student
from Peralta Elementary (at
Redwood Park)

It is important that teachers not feel that KHOC takes time away from meeting Common Core curriculum standards, but rather, that it supports and reinforces student learning.

We asked survey respondents if KHOC lessons *increased student learning and contributed to **students’ mastery of curriculum content***, and **78%** (n=45) Agreed or Strongly Agreed that they did. This rate is comparable to past years.



This is important because KHOC is designed to be a supportive curriculum *tool*, not the curriculum itself. As noted earlier, we also continue to encourage teachers to adapt KHOC with their own ideas to support unique class needs and protocols. (Please see upcoming section for possible future alignment with California Next Generation Science Standards.)

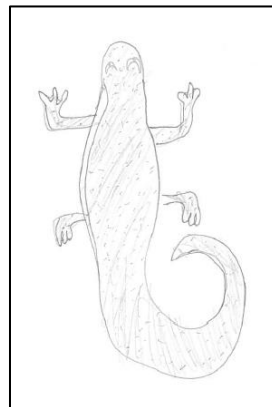
I was impressed with the empathy the students expressed when they looked at the tombstones at the Black Diamond mines. They were able to come up with possible reasons why so many young people passed and understand why they are not in danger of suffering the same consequences today.
~A KHOC teacher

Teachers also had many anecdotes about student reaction and learning:

- *The lesson connecting to the past was helpful because in a way students transported themselves to the past by playing the game that Native Americans used to play.*
- *Our curriculum this year was around water, frogs, and bees. We were able to use our field trips to make connections to all parts of our curriculum, and delve deeper into subjects while connecting it to places in our students' communities.*
- *At Martinez Shoreline, the students were discussing among each other the boat that burned. At Black Diamond Mine, the students visited the cemetery and shared with each other the dates of death. Therefore, learning the history of these places.*
- *Students commented on the fact that children in the past played similar games to them.*
- *We were able to see amphibians in the wild after learning about them in class. Students were able to see their environment and identify some adaptations the animal had to live in that environment.*
- *A couple of my students walked themselves through the lessons we did not cover and completed them.*
- *Students were able to understand the effect that Native Americans had on our land in the past and still today. Students were able to understand these 3rd grade social studies standards on Native Americans because the curriculum and field trips made the content more relatable and accessible to them!*
- *"Hey this is what we also learned in KHOC." When we were learning life sciences and history about Native Americans in CA (bay area), students could see how KHOC related to their learning in school.*
- *At Black Diamond Mine—"It was an adventure". "We learned forgotten history: some of it was that Adults only got \$2.00 for working more than 12 hours."*
- *After the Explore Nature lessons during recess you could hear students tell each other to leave things where they found them if it belongs in nature.*
- *Students learned how to take observation notes during the nature hike.*
- *Students could identify parts of a plant, better understood how plants are used in different places, cultures and different periods of history.*
- *The poetry they wrote. The notes that they took in their notebooks were better than the notes I've been trying to teach them all year!*
- *Students learned a lot about the past and the Ohlone/Miwok Indians of the area. Making connections to the*

*Newt O newt with your orange belly
You are a rare little felly.
Crawling from hand to hand
In a grassy dream land!*
~Poem by a KHOC student from
Peralta Elementary at Redwood Park

*past and
really
students.*



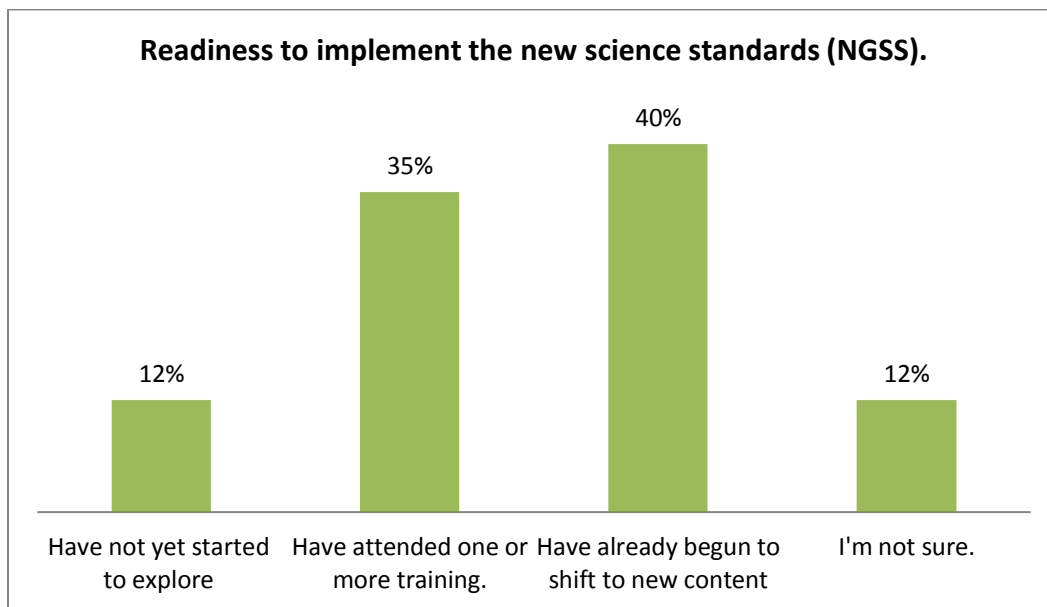
*present was
insightful for*

A Peralta student draws a California newt.

Next Generation Science Standards (NGSS): California’s current science standards have not been updated since 1998, and are missing recent scientific advances. Additionally, a large part of the state’s economy is based on science, technology, and engineering (www.nextgenscience.org/california).

New, rigorous science standards – *Next Generation Science Standards for California (California NGSS)* – have been adopted across the state, and districts are implementing them at varying paces according to the Alameda County Office of Education (ACOE).

Among survey respondents, **75%** have begun professional development on, or have already started to use the new standards (last year’s rate was a very comparable 74%). Other respondents had still not yet started to explore the standards or were unsure of their status.



According to an ACOE report, “The CA NGSS presents a unique opportunity to examine site and district science programs and how these programs align with the new science standards and the district’s vision for learning. Foundational to these new science standards is a belief that science education must begin in the earliest of years” (O’Connor, 2018 Alameda County Science Needs Assessment Survey Results and Report).

Because alignment with California NGSS is an essential next step for KHOC,¹⁶ the survey sought input on necessary revisions. While many didn’t feel prepared to comment yet, key suggestions included:

- *I think there is piece that could be added about or strengthened about how humans interact with their environment and how we effect the environment especially plants and animals. NGSS is looking at things like solutions to environmental problems such as invasives. It might be nice to include a few lessons that look to the changing climate and ways in which students can help. A lot of people doing a little can have a big impact.*

¹⁶ KHOC was last revised in 2015 to better align with Common Core.

- *More open-ended experiment ideas.*
- *I would love for the activities to have been more hands on and less lecture based.*
- *More alignment to the world around and preparation for 4/5 Science.*
- *I would love to have some simple experiment ideas and outdoor nature games that could be used at any East Bay Park field trip for my teacher tool box!*

At least one teacher noted that due to testing priorities, science may always come second: “Just keep in mind that science and social studies will always take a back seat to language arts and math. Too many programs I've seen appear to think we as teachers should or do devote equal time to all subjects. Truth is... students are tested on LA and math.... Science and SS are not a priority in any general ed room I know.”

3. Engaging Students and Educators in Outdoors Education.

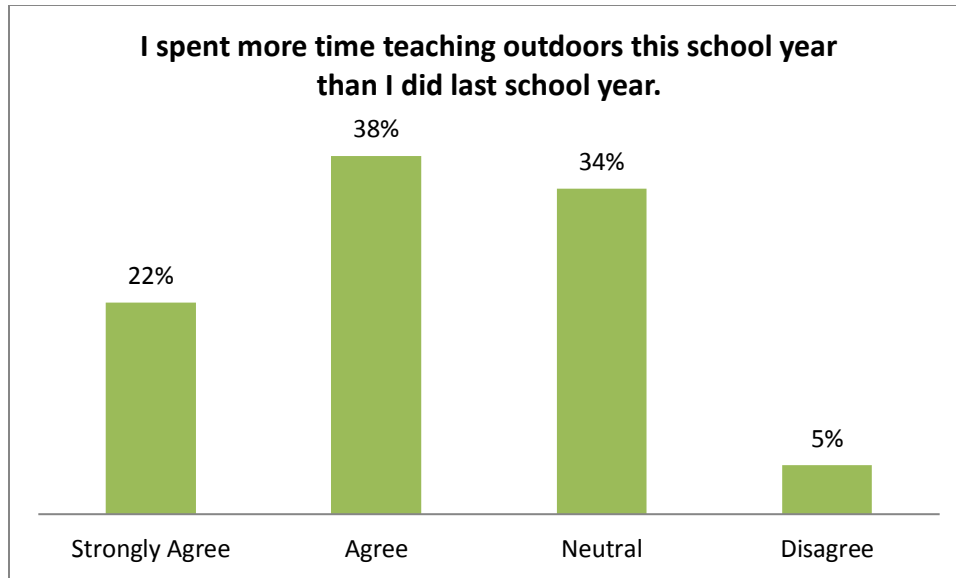
Through KHOC, EBRPD seeks to increase student and teacher enthusiasm and engagement in learning outdoors, particularly in natural park settings.

As in past years, **84%** (n=47) Agreed or Strongly Agreed that lessons were *engaging and fun* for students (the remaining 16% were Neutral).



Moreover, **86%** (n=50) of respondents Agreed or Strongly Agreed that participating in KHOC *made their class want to spend more time being active outdoors.*

For teachers, **60%** (n=35) Agreed or Strongly Agreed they spent *more time teaching outdoors* this school year than they did the last school year. (This rate is down from 79% last year, perhaps due to the fact that there were more previous KHOC participants in this year’s sample.)



In terms of future KHOC impact:

- Similar to last year's respondents, **95%** (n=53) of teachers said they *intend to continue teaching lessons that get kids active outdoors in the future.*
- **82%** (n=46) *plan to use KHOC lessons and/or booklets with other classes in future school years.*
- Most teachers, **95%** (n=53) respondents Agreed or Strongly Agreed that they *plan to return to EBRPD parks with their class next school year*
- **95%** (n=53) said they would return to EBRPD parks *on their own* in the future, showing that KHOC continues to be successful in engaging teachers to spend more time outdoors.

All (**100%**) of survey respondents Agreed or Strongly Agreed they would *recommend KHOC to another teacher.* Finally, **98%** (n=55) of the survey respondents agreed they would *participate in KHOC again,* and **86%** (n=48) *Strongly Agreed* with this statement.

The mine area [at Black Diamond Mines] seemed so different from what my students are exposed to. I know most of them will never again experience something as cool as it was.

~A KHOC Teacher

4. EBRPD naturalist involvement with KHOC classrooms.

KHOC teachers can apply for naturalists to help guide their KHOC field trips, along with other teachers throughout EBRPD. These applications are due by early December.



However, with limited staff availability and high demand, naturalists are not guaranteed for KHOC trips. Naturalist “slots” are filled according to staff availability the day field trips are scheduled. KHOC teachers *do not have scheduling priority* over other teachers, so some teachers do not receive them. (This is also why training on self-guided trips has become such an important focus of KHOC, per next section 5).

In our survey, **84%** (n=48) of teachers had requested a naturalist program for their KHOC park trip. Of these, **88%** (n=42) received a naturalist-guided program, up from 80% in the 2018 survey.

Of six who had *not*, several pointed to naturalist unavailability.

Remarkable one teacher, “*There were too many people who applied for the same trip I applied for, and I did not get picked to have a naturalist led trip.*” One teacher also noted, “*We also had issues with our district bus transportation so it would have been difficult to schedule.*”

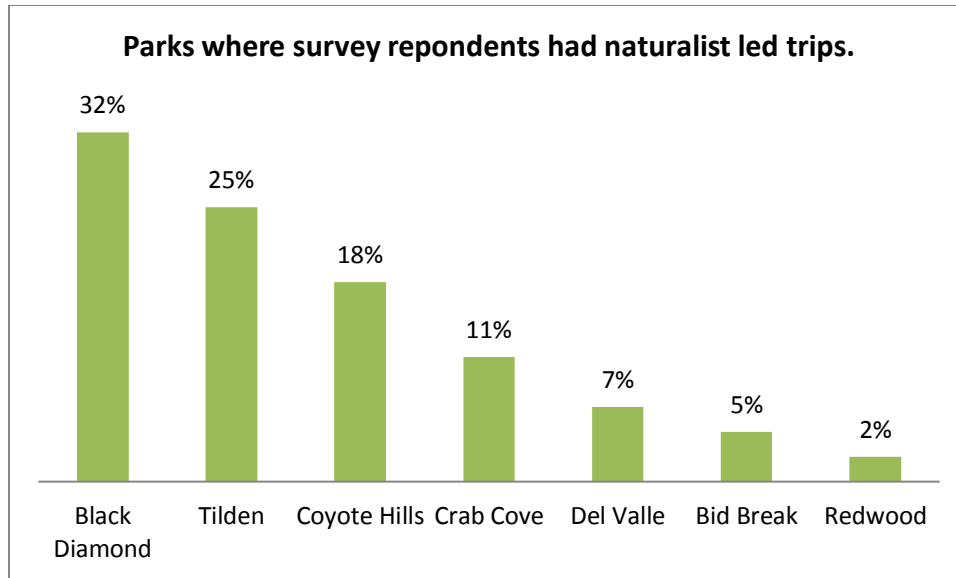
Two teachers who are close to “*termining out*” of KHOC expressed concerns that they will not have a chance to have a naturalist on their KHOC trips:

- *Well, we were told we had a day or two past the deadline back in December since we called ahead to give heads up, then we were told in January that we were placed on a waiting list and we never were successful at coordinating our trips due to uncertainties such as Park Express Bus availability and site availability. Then we had a tentative date in early March then the strike in OUSD killed that. ...it is our hope that we will have access next year since this was supposed to be our 3rd and final year.*
- *We have requested one for the past two years and have not gotten one. We would really like the chance next year to enjoy this support.¹⁷*

The following parks were where survey respondents and their classrooms had naturalist experiences, with most taking place at Black Diamond and Tilden.

¹⁷ While there is no waiting list for buses, teachers may ask to be placed on a waiting list for a naturalist-led program.

The naturalist showed the kids the tools that the Native Americans used for hunting, eating, making clothing, making music, etc. and gave us stories to better visualize their lives.
~A KHOC Teacher



Reasons for choosing these parks included proximity, but many (about 25%) chose the park they did expressly so that they could have a naturalist experience. One teacher remarked: *“I chose to visit parks where you naturalist guided experience so that the students could learn from experienced people who were experts on the lay of the land more than I am. I love the outdoors but it’s great to hear from an expert.”*

Several others noted the link between that park location and curriculum content as a reason for their selection:

- *Directly ties to both science and social studies standards*
- *It had a pond study that went along with our frog unit.*
- *Because it offered a connection to Native American life as well as the Little Farm.*

I thought kids might be more engaged or interested in [Black Diamond Mine] since so many played Minecraft and could relate to it .

~A KHOC Teacher

As in past years, most teachers were very *enthusiastic* about naturalist involvement, and several said they wouldn’t want to have the trips with them:

- *Michael was great with the kids, and he was loved by all those interested in his talks and stories. The best part was Michael’s story about the rotting seaweed =)*
- *I think it was better for my students because my students ask a lot of questions and often times I don’t have answers. The naturalist provided answers for my students.....*
- *The naturalists were excellent. They supplied lots of information in an age-appropriate fashion.*
- *Fabulous knowledge. and details, along with connective game.*
- *They did a wonderful job. The lessons were engaging and kept the students interest.*
- *It was wonderful. The guide kept us moving along and was excited about what he was sharing with us, which made the kids excited too.*
- *We had an excellent experience at the Black Diamond Mines and found all the naturalists to be very enthusiastic and informative.*

- *It absolutely enhanced our program. I wish the docents had been out when we went to the cemetery but the materials provided were also good.*
- *The naturalist-guided program is excellent! All the naturalists we had for our field trips were extremely educated about the parks and were really good with the kids. It definitely enhanced learning for my class.*

One key piece suggestion for was having bilingual or Spanish-speaking naturalist for ELL or Bilingual classrooms. Other suggestions included more hands-on experiments and improved sign-up processes:

- *This year was less hands on with the experiments. Some of my students thought that the lecture based content was boring.*
- *The whole sign up for the programs is a bit messy. I did love how helpful everyone when I called with questions. Our naturalists were wonderful. It was a spectacular trip ... even in the rain!!*
- *The naturalists were great. Our field trip was in the POURING rain, however, so it was difficult to hear and focus on the learning. Next time, we would reschedule if it was pouring.*

Most respondents (**91%**) indicated they would request a naturalist as part of KHOC in the future, underscoring the popularity of this option.

Note: Of 39 respondents who provided the location for their naturalist program, eight (8) had had more than one naturalist experience during the year. Currently reservations are decentralized across eight visitor centers, and some teachers from the same school may take turns signing up for naturalists so that multiple naturalist programs might not be detected. New integrated reservation software (see Sections VII and VIII) is being developed to help alleviate such problems.

5. Self-Guided Trip Options.

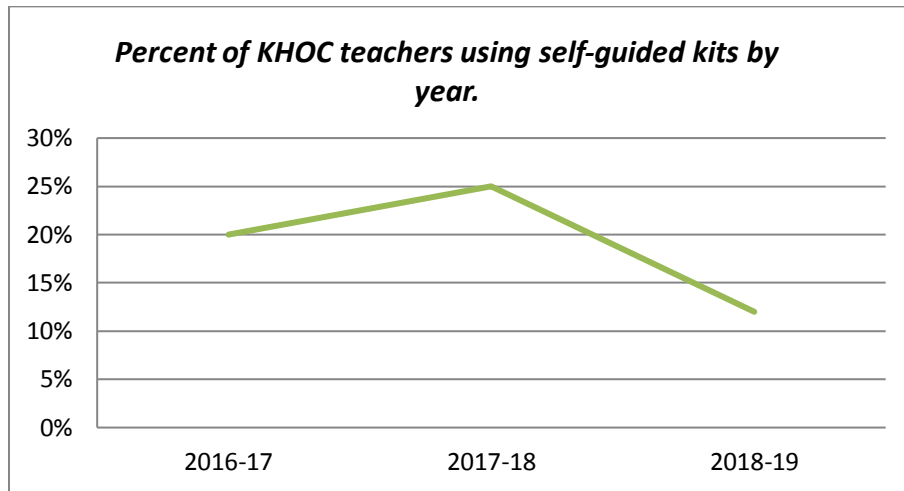
As noted in Section II, the KHOC orientation now includes included training on “self-guided” trips with materials and activity kits for teachers to lead their own trips.

This helps teachers learn how to start leading their own park activities in the future, and is important for two key reasons: First, demand for naturalist programs at EBRPD outstrips ability to present them, so every year, teachers (in KHOC and out of KHOC) are turned away. In addition, KHOC participation is limited to three years total so it is a major goal for teachers to learn skills to lead their own trips after KHOC.

The kits are available at four EBRPD parks: Redwood Regional Park in Oakland, Garin Regional Park in Hayward, Radke-Martinez Regional Shoreline in Martinez and Shadow Cliffs Regional Recreation Area in Pleasanton. They can be checked out at Visitor Centers, and include everything from guides to binoculars for bird watching, nets and viewers for pond study, plus games and other outdoor lessons.

These parks were selected for their accessibility, program opportunities, and facilities that support class trips. They are geographically spread out across the East Bay.

Unfortunately, just **12%** of survey respondents (n=7) indicated that they used these materials this year. There is a downward tick in use since they were introduced in school year 2016-17:



However, materials were praised by all teachers who did use them:

- *It was very easy to check out and we loved using the kit.*
- *We used all of the available materials.*
- *We went to Garin Park and I did the bird exploration kit. Materials and directions were easy to use.*

The materials were very well-organized and useful. They definitely enhanced the experience and made it easier to prepare for the field trip.
~A KHOC Teacher

Unfortunately, at least one teacher had difficulties accessing a kit: “...I really tried hard to check out the activity kit for Garin Park, but even after multiple phone calls and emails, I was unable to communicate with the person at Coyote Hills that is in charge of it. In fact, most of my communication with Coyote Hills about the kit and about field trips, both via email and telephone, was very frustrating.”

When asked where teachers would like to see new kits at in the future, the most popular responses were Tilden, Coyote Hills, Crab Cove, Castle Rock, and Lake Chabot. Because several teachers noted they were not aware of or did not remember the kits, they should be *promoted once more in next year’s teacher orientation*, along with reminder email blasts throughout the year.



6. Impact on families.

KHOC seeks to introduce students and their families to East Bay parks, imparting a lifelong love of the outdoors. In our survey, **98%** (n=55) felt their students wanted to return to EBRPD parks in the future, or with their families.

KHOC has a big impact on families too!

- *Students shared stories of amazement and shock. "I'm going to tell my mom and dad to come here too." "I'm going to show my parents about the mine." "I'm going to come back here and see the animals again." "This park is awesome. I can't wait to tell my parents." They and even chaperones were not aware we had these parks and expressed interest in returning on another day and with family.*
- *According to some students their parents were "jealous" of the students' visit to the mine. :)*
- *A student was excited after spring break to say that she took her family to explore Coyote Hills.*
- *I feel like it makes my students more likely to take their families out to the parks and share what they have learned through the program with them. The kids love the trips and are always enthusiastic about it both before and after.*
- *Students talked about how they wanted to bring their families to show them the mines.*
- *The students were very engaged with all the activities and several families returned to that park after our visit.*
- *Kids asked if they could stay longer, come back again, and if they could come with their families.*
- *The kids really enjoyed their time at Crab Cove. I had a couple students tell me they were going to ask their families to take them again on their own.*
- *They took the maps to show their parents how to get there.*
- *I heard so many students and chaperones say that they intended to come back and bring other members of their families. Some kids did complain about the walking, but they also stated that it was more enjoyable than going to a museum and looking at stuff.*
- *Many of them said, "I want to come back here to show my mom this place" or "I can't wait to come back here in fourth grade."*
- *My parents loved Coyote Hills and commented that they were definitely coming back later. I also heard that comment about Black Diamond Mines.*
- *My families had never been to Redwood Regional Park before. After returning, two of the chaperones reported that they already returned to Redwood Regional Park to bring their entire families to share in their experience.*
- *Students said: Wow! I'm going to bring my sister here. The butterfly garden is so beautiful. Wow, this deck out into the Tule Marsh is spectacular.*
- *After our field trips, I have checked in with kids, and many have returned to Tilden Park to feed the animals at Little Farm.*
- *The kids were excited to bring their families to the park. They kept talking about how close it was to their house!*

VII. Teacher Feedback on Project Processes

The survey solicited teacher feedback on project processes (e.g., teacher orientation, park trips, the KHOC website, etc.). Many teachers expressed satisfaction with processes, but challenges continue with park trip planning and transportation.

Teacher Orientation: EBRPD asks all teachers to attend a KHOC orientation in the fall, even if they had participated in KHOC before. (Previous participants can attend a shorter orientation.)

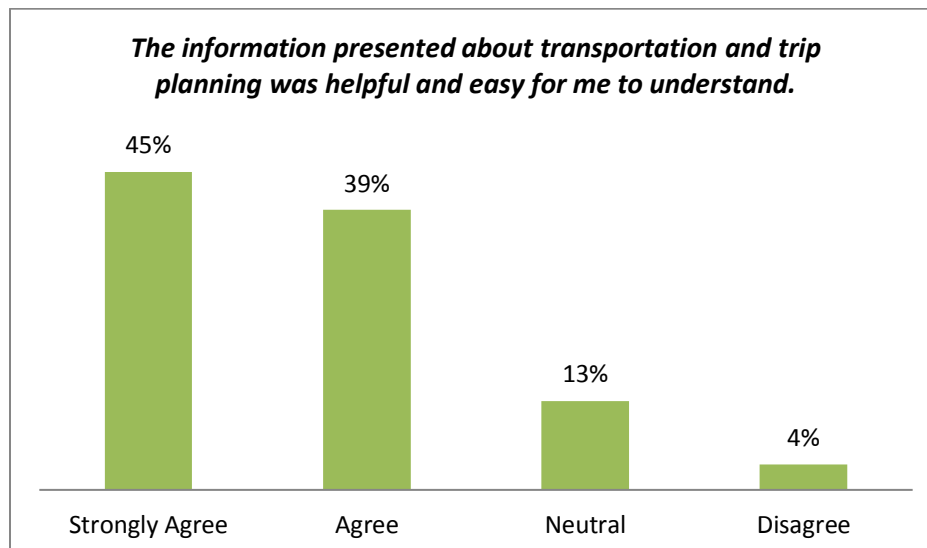
Most (**89%** or n=50) respondents Agreed or Strongly Agreed with the statement, *the teacher orientation in fall 2018 prepared me to implement KHOC in my classroom*; **11%** of respondents (n=6) were Neutral. Regarding training locations, one teacher remarked, *I would love having a training at Castle Rock or Borges Ranch.*

Park Trips: Park trip scheduling is the most challenging aspect of KHOC. To streamline processes as much as possible, Parks Express (the EBRPD department that schedules buses) comes to KHOC orientations to answer questions about the process. However, with increasing market competition, the process of booking buses for KHOC has become ever more challenging (please see Section II).

As an alternative, some teachers go through school district channels to book a bus, and are reimbursed by KHOC for that cost. This year though, only about **7%** (n=4) survey respondents indicated they had *gone through district channels to obtain a bus*. The rate last year was about one third.

Another complication can be that if a naturalist experience is requested, it can be difficult to coordinate available naturalist time with bus availability.

To determine if teachers were getting information they needed during the orientation, we asked survey respondents whether *the information about transportation and trip planning presented during the Fall 2018 KHOC Orientation was helpful and easy to understand*. Most (**84%** or n=47) agreed it was:

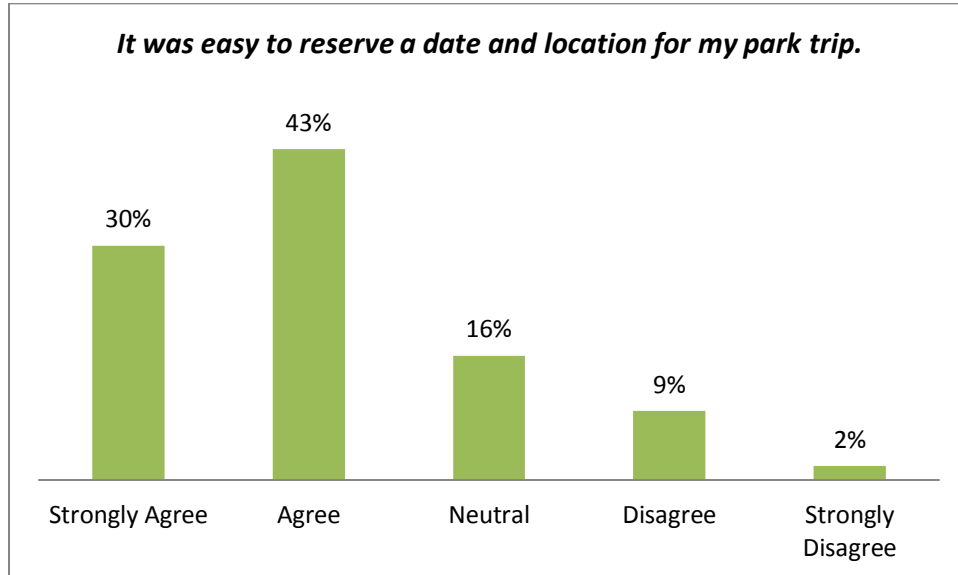


When asked what could be *improved* about trip planning information presented during the orientation, teachers said:

- *It gets very confusing because you don't know which of your Park choices you get. I can't think of a way to improve it. Perhaps sending out the questionnaire right after our trip would have it fresher in my mind. It's the end of the school year and I'm fried!*
- *The process for choosing classes to participate in a naturalist led trip was unclear, and also what do to/can be done if not chosen for a naturalist led trip was not communicated until I reached out to ask. As a first year participant, this information would have been helpful.*
- *Finding out about fee waiver reduction application before having to pay for trip. There was some struggles as we didn't hear back in time, and paid for our trip, then got a response later saying we got the fee reduction and then we had to return check, reissue check, etc. So if there could be a date set prior for fee waiver application to turn in and hear back from before we have to pay for actual trip?¹⁸*

One of the things that I think helped our group is that we planned our trips in March this year (luckily it didn't rain). I think this facilitated getting buses as opposed to waiting until May! More teachers should try planning their trips earlier.
~A KHOC Teacher

Then we asked teachers if it was easy to reserve a date and location for the park trip (e.g., use the KHOC reservation form, choose a park, schedule a date at the park, etc.). Overall **73%** (n=41) Agreed or Strongly Agreed that it was easy. However, at least **27%** did not agree that it was easy:



Several teachers said they were confused by the separate processes for reserving a park trip and then for obtaining a bus:

¹⁸ This comment refers to a naturalist program fee applied at Black Diamond Mined and Ardenwood; KHOC groups are eligible for a 50% fee reduction.

- *It seems unnecessarily complicated - took a while to figure out how to submit a request and deal with the transportation issue. It wasn't clear what dates and parks were available*
- *The separation between field trip naturalists and buses is very confusing.*
- *I thought the Coyote Hills field trip info was a bit confusing. I thought I signed up to go see the Ohlone village but I guess I hadn't so we ended up going to the visitor's center and on a guided hike.*

There were also times when a KHOC teacher booked a trip on a certain date, and EBRPD could not find a bus for that date.

- *I would rather secure a bus first and then find a park that has availability on that date, rather than the other way around. Otherwise, you go through a lot of work to set up a field trip, and then if you can't get a bus, you have to change everything.*
- *Buses not available for date of field trip; then programs not available when the bus was available.*
- *They lost the reservation but the head at the office was very willing to work with me the day before our trip. Very grateful that we had a bus for our 2 classes.*
- *Had to fight and cross our fingers to see if we were granted transportation.*
- *Turnaround time. Limited dates. And approval process through our district.*

Suggestions for improving processes included:

- *One person at KHOC to work feverishly to assure those teachers who have participated in KHOC prior and have attended orientation, that they are looked out for to get a trip reserved without complications of the minor type.*
- *It was hard to get someone on the phone for clarifications.*
- *It would have been beneficial if a coordinating person could assist a bit more aggressively to ensure those teachers that have: 1) Been in the KHOC program prior 2 years and 2) Attended the orientation in the fall, get proper assistance to confirm trip(s) to happen. Basically, we felt left out in the cold with communication and uncertainties about what was possible and available.*
- *I think we missed a deadline.... Did not see the one email you sent... Maybe if you can send a couple it would have helped seen it.*

Note: EBRPD is addressing these concerns by developing a **new user interface** that will combine program and bus reservations into **one system and one application**. It is scheduled to come online in the summer of 2020 and will be available for the **2020-2021 KHOC year**. This is discussed further in Section VIII.

KHOC Website: KHOCs maintains a website for teachers to download forms, learn about resources and important dates, etc. In the survey, teachers were asked if they had *visited the KHOC website for information about the program.*¹⁹

This year, the majority (**73% or n=41**) of teachers surveyed had used the KHOC website, up from 63% the prior year. Comments and suggestions for improving it included:

¹⁹ The KHOC Facebook was discontinued in 2018-19 because it was underutilized.

- *The website is poor and not intuitive. I thought I sent out my bus application, but apparently it didn't go through.*
- *Access to documents and park resources... that page is kind of crowded*
- *Have a color coded tab for just KHOC.*
- *No suggestions, but it is definitely confusing. The only way for me to find what I wanted was to dig through my email to find the correct links. I couldn't find the page I was looking for directly from the website.*
- *Maybe it could be a little easier to find.*
- *It would be nice to have a list of activities for each park, so that I can make sure it matches what we have been talking about in class.*



VIII. Lessons Learned & Recommendations for the Future



First implemented in 2012, KHOC is now an established program in many school districts, with outcomes that show the program has had an impact on the way that educators teach, and how third graders experience outdoor spaces and activities. Each year, the program touches the lives of more students, teachers, and families.

Although KHOC is established, it is not static, and teacher feedback is a critical factor in KHOC's improvement and evolution. In this spirit, we explore **recommendations** for the upcoming year.

Orientation: Survey results showed that some items could be better promoted, or made clearer, during the mandatory KHOC teacher orientation at the beginning of the school year.

First, **26%** of survey respondents used the new Spanish-language kids KHOC booklet this year – up from 19% last year. However, a little more focus during orientation could ensure that more teachers are aware of this resource. (As more classrooms begin to use the Spanish-language booklet, EBRPD will also consider translations in other commonly spoken languages such as Mandarin, Korean and Vietnamese.

Next, in the survey, a number of teachers remarked that some of the activities in the KHOC curriculum (aligned with the California Children's Outdoor Bill of Rights) are difficult to do in the classroom – e.g., fishing and swimming. Although orientation addresses this reality, a separate handout (and link on the KHOC website) might be developed, one that addresses *Where families can bike, boat, fish and swim in EBRPD*. These EBRPD programs should be promoted during orientation so that teachers understand they are not expected to cover all KHOC activities in the classroom.

The number of survey respondents engaging in self-guided park trips decreased this year, and the teacher kits may need extra promotion during the 2019 orientation, along with more frequent e-blast reminders throughout the year (this is discussed further below).

Lastly, park trip planning is a focus of orientation, with Parks Express staff attending and providing instructions to teachers. However, improvements continue to be needed, as addressed below.

With the KHOC program, we have taken our classes to Garin and Coyote Hills for a few years. With each year that we've gone, I have become more comfortable with taking my class out to these parks to hike and explore. I've become more relaxed and comfortable about trips mainly because I've learned that the students are naturally engaged by being outdoors.

~ A KHOC teacher

Park Trip Improvements: The process for requesting buses for park trips and scheduling park programs remains confusing, and challenges have been compounded due to the transportation issues outlined in Section VII. Some teachers cannot get transportation on the days they prefer.

EBRPD does not expect competition for buses in the East Bay to significantly lessen, so will continue to remind teachers that it can be quicker to book a school district bus for their trip, with reimbursement provided by KHOC. Teachers will also be encouraged to schedule a trip *earlier* in the year so they don't find themselves unable to find a bus, or reschedule a trip, in April or May.

To alleviate problems in scheduling, as well as the confusion that occurs when teachers have to separately reserve a bus and a naturalist program, EBRPD is currently working to combine program and bus reservations into an integrated on-line application. This new system is scheduled to come on-line in the summer of 2020, in time for the 2020-2021 KHOC year. For the upcoming year, teachers will be trained in current processes during teacher orientation, on the KHOC website, and through email blasts throughout the year.

Naturalist Involvement: Although KHOC teachers can apply to have a naturalist lead their park trip, demand for naturalist programs far outpaces EBRPD capacity, and therefore, KHOC teachers cannot be assured priority for naturalists.

The fact that *naturalist involvement is not guaranteed* is made clear during the application process and orientation, however, every year there is disappointment about this.

Because KHOC is designed specifically to help teachers learn how to *teach outdoors on their own*, and because teacher participation is limited to three years, EBRPD tries to promote *self-guided trip options* during orientation so that teachers have alternatives to naturalist-led programs.

Not only does this provide an option for teachers, but providing resources for teachers to lead their own trips (as discussed below) helps fulfill a *key KHOC goal*.

Self-Guided Trips: KHOC's intent is that in a teacher's first year of participation, they will be introduced to the program and self-guided options. In the second, they should develop their skills and activities, and in the third year, perfect their outdoor teaching skills *by exploring the self-guided options*. After this, we hope that teachers will have the skills to continue using the Regional Parks and self-guided materials on their own.

Grant-funded KHOC "Teacher Kits" are available to support self-guided trips at four parks. Unfortunately, only **12%** of survey respondents this year indicated that they used these materials, down from 25% last year. This is disappointing, and makes it critical to *strongly encourage* use of these kits in the 2019 teacher orientation, along with reminder email blasts throughout the year. As budget allows,

The students wrote opinion essays about the field trip to Castle Rock, and they all recommended that future third graders go on the field trip. It was the best day ever! ... A family of deer greeted us when we arrived, we saw a red tailed hawk, lizards, and lots of scrub jays. They loved climbing into the little cave on the trail. Most of all, they loved picnicking at the recreational area and playing in the sand.
~A KHOC teacher

incentives such as snacks or lunch, or special promotional items might be considered for teachers who utilize the kits.

Another key need for the coming year is to *re-train all staff at the four Visitor Centers* where kits are available for check-out. Some teachers complained that it was difficult to check out the kits, particularly the kit for Garin that must be checked out at Coyote Hills.

Improving processes and promoting self-guided trips will conserve naturalist time for less experienced teachers, and reinforce the KHOC goal of building teacher skills and confidence outdoors.

The KHOC Website: This year, the majority (**73%**) of teachers surveyed had visited the KHOC website for program information. A key teacher-recommended improvement to the site was to include links to parks in the District where one can swim, boat, fish and bike – i.e., California Children’s Bill of Rights activities that are difficult to do in the classroom.

KHOC Alignment with Curriculum Standards: New, rigorous science standards – *Next Generation Science Standards for California (California NGSS)* – are currently being adopted by districts at varying paces. About **75%** of survey respondents this year were at least familiarizing themselves with new standards. EBRPD is already focusing on NGSS alignment in its naturalist programs, and hopes to update the KHOC curriculum to better align with new standards for the 2020-2021 program year. Teachers are encouraged to share their specific recommendations for improving alignment.

Goals and Participation Targets for Next Year: EBRPD plans to invite a similar number of classrooms to participate in KHOC in 2020-21 so as to keep demand for buses and naturalist programs at a stable level. EBRPD will continue its focus on helping teachers learn to *independently* teach outdoors, and will continue to listen to teachers, students and families as they tell us what they need to broaden and deepen their commitment to outdoors education, improving health and well-being in our communities.

Thank you to KHOC funders!

- The Regional Parks Foundation*
- Kaiser Permanente*
- Andeavor Community Investments*
- Contra Costa County Fish and Wildlife Committee*

And for support and inspiration from:

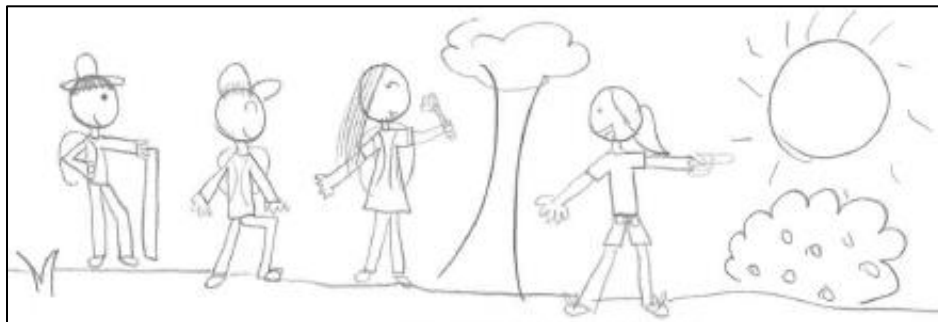


Kids Healthy Outdoors Challenge (KHOC)

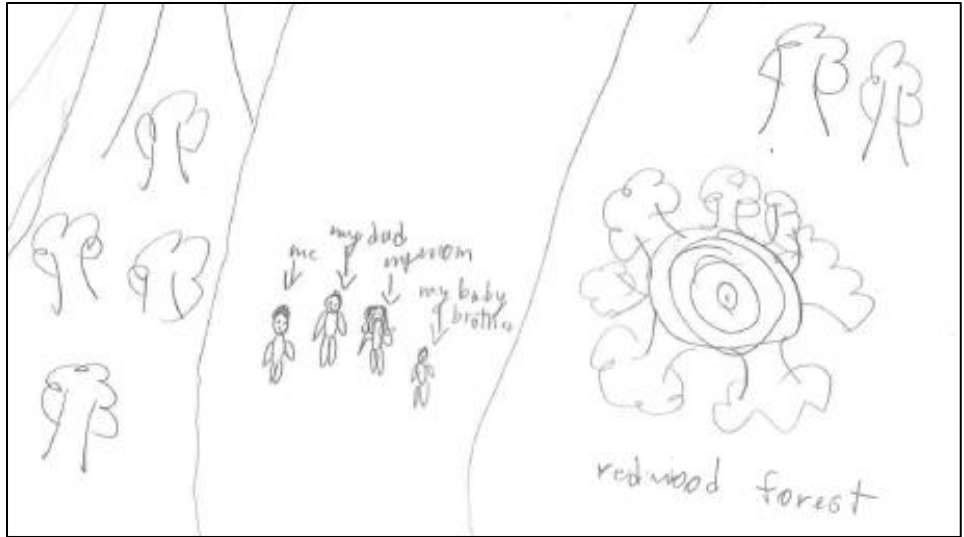
2018-2019 School Year

ADDENDUM: More KHOC Student Artwork

At the end of the school year, some teachers asked their students to write or draw what they remembered from their EBRPD park trip. We received some wonderful artwork and poems from students at *Woodrow Wilson Elementary* in San Leandro and *Peralta Elementary* in Oakland. Both schools explored Redwood Regional Park, and art from these trips are featured in this report. Here are some more of their contributions!



Learning about silk worms and poison oak in Redwood Regional Park



A KHOC student from Wilson Elementary draws his family in Redwood Regional Park



