

EST. 1999

PRAIRIE CROSSING
CHARTER SCHOOL



CREATING NATURAL LEADERS

Accountability Report
2014-2015

Prairie Crossing Charter School

Accountability Plan 2014-2015

Exhibit G

Part 5 – Education Elements

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Section A: Class Size

2014-2015

Class	Number of Students
Kindergarten, Berger	21
Kindergarten, Barnett	21
1st, Johnson	23
1st/2nd, Jeffery	23
1st/2nd, Kulbeda	23
2nd, Smith/Buesking	23
3rd, Hahn	23
3rd/4th, DePaz	23
3rd/4th, Painter	23
4th, McGovern	23
5th, Stefans	23
5th/6th, Hershiser	23
5th/6th, Siwy	23
6th, Scott	23
7th, Sustich	19
7th, Zamiar/Stewart	20
8th, Jackson	18
8th, Habel	17
Total	392

Section B: Enrollment and Lottery & Outreach

Documents included:

- **Outreach Timeline & Lottery Details**
- **Lottery Results**
- **Lottery Registration Form**
- **Admissions to Prairie Crossing Charter School Policy**
- **Fee Waiver Policy**
- **Transportation Policy**
- **Volunteer Policy**
- **Collection Student Instruction Fees**

Our admission criteria will continue to:

- Ensure that admission is on a non-discriminatory basis with respect to *Educationally Disadvantaged* and *At-Risk Students*
- Ensure that admission is on a non-discriminatory basis with respect to race, ethnicity and religious preference;
- Provide alternate transportation services for those that request it.
- Ensure that no priority is given to any applicant, except returning students and their siblings as well as siblings of accepted students in accordance with State law;
- Comply with all applicable state and federal laws.

The School strives to ensure that all students have equal access to enrollment. The School's admissions policy is based upon the Illinois Charter Schools Law that states in part, "If there are more eligible applicants for enrollment in a charter school than there are spaces available, successful applicants shall be selected by lottery." The School will initiate a robust outreach plan that will provide opportunities for educationally disadvantaged and at-risk students that will present the School as an educational alternative to all residents of the underlying districts.

4th Quarter Outreach Efforts: Update to the State Charter School Commission May 13, 2015

Prairie Crossing Charter School continues to commit to further intensify its outreach efforts. There are five areas that we have identified this year, to address and implement plans to aid in making our outreach efforts more robust, with a goal of attracting more families of educational disadvantaged students.

Organizational Initiatives

In our second quarter (October through December), PCCS modified, updated and created marketing materials to serve as outreach materials for the public. Additionally, all enrollment outreach materials were updated and available in English and Spanish. Hundreds of hours of work were completed this quarter in revamping the school website, with the goal of providing a clearer and more user-friendly format for the general public and school community to find information about PCCS. Our website features translation into other languages and contains information regarding enrollment and the lottery that are available for download in English and Spanish.

Our Outreach Workgroup has been involved on many levels to aid in communicating to the larger community, sharing information about PCCS. PCCS' outreach efforts have included the following:

- Participated in the school's Community Rummage Sale;
- The Mundelein Boo Bash, a community event that reaches 400 families each year; through this event, PCCS staff were able to disseminate information about PCCS to all those present.
- Hosted the Holiday Open House, through a partnership with Warren Township Youth and Family Services, with music, refreshments, crafts, and books given to about 25 children and 12 parents; PCCS shared information about our free public school.

In our third quarter, we continued to develop and deepen our communications to local community organizations. We identified and reached out to local Moms Clubs to share information about PCCS; again met with the local libraries about how we can be included in their programming; and took part in the Green Living Fair in Libertyville. The outreach workgroup spent time at the end of this quarter further identifying and developing outreach events for the upcoming twelve months.

Plans for the fourth quarter include: completion of the school supply drive the group planned to benefit low income families in our townships; discussion with PADS about working with them; completing the outreach events calendar for the 2015-2016 school year.

Lottery Taskforce

Last fall, our Lottery Taskforce explored the feasibility of amending our lottery protocol to increase the opportunities for educationally disadvantaged individuals to attend PCCS. Specifically, this taskforce explored whether weighted lotteries can be conducted at PCCS. A request for an opinion letter on the lottery was submitted to the Commission in the second quarter, with a request to hear about the opportunity to implement an altered lottery system by December. In the interim, the taskforce continued to explore other avenues to increase the number of applicants in the lottery pool.

During the third quarter, improvements were made to make the existing Lottery more transparent as well as to meet the requirements of Charter School Law. Some methods utilized

during the lottery included videotaping the lottery process and projecting the lottery on a large screen, so the public could view--in real time--the selection and movement of students based on the draw. Karen Washington of the SCSC also attended the lottery as an impartial third party. Also in this quarter, the Lottery Taskforce met and developed additional options to our current lottery system, to identify ways to encourage and incorporate a more diverse cross-section of our underlying district population in future lotteries.

Our Lottery Taskforce, in quarter four, will continue to meet and work to identify additional strategies to deepen and attract more families to take part in our lottery process. The taskforce is aware of the barriers to the lottery that: do not permit a weighted lottery; do not give preference to at-risk students; and that sibling preference in the lottery limits the number of new families admitted by lottery each year. Despite those barriers, emphasis continues to be placed on drawing more families of at-risk students.

Recognizing that we are limited by the lottery in the number of new families who can realistically enter the school each year, PCCS is in discussions on its Board committee level to explore increasing classroom size to 24 students in a class. This increase could eventually bring PCCS to our maximum enrollment cap of 432 students. Our Academic Excellence Committee has met and supports increasing the class size to 24, recognizing that there will be no impact to our exceptional classroom and personalized experience that parents choose for their child. We will be submitting to SCSC additional information and potential strategies for the lottery and waitlist protocols over the summer months, with the hopes to implement these strategies by our lottery draw in March of 2016.

The **Outreach Taskforce** is a separate group from the Administrative Outreach Taskforce that has been in existence for a number of years at PCCS. This new taskforce's directive is twofold: to identify community organizations that we can collaborate with to assess how PCCS is perceived by the larger community and to increase our visibility; and to work with the PCCS parent community to build a parent ambassador program. Our parents are one of our greatest resources in advocating for PCCS and we feel their reach is widespread and diverse.

In quarters two and three, the Executive Director worked directly with a small group of parents to develop a Parent Ambassador program. This taskforce is a partnership between the Administration of PCCS and its parent community.

In quarter four, we expect that this Parent Ambassador Program will become a more defined program and look to implement it by fall 2015, when school is back in session.

The **Transportation Taskforce** completed a great amount of research about transportation options, including making contact with local schools to assess the feasibility of busing for students at PCCS. This taskforce identified several different transportation scenarios and presented their findings to the Board in October, with recommendations for next steps.

The taskforce presented their findings to the SCSC and ISBE, who they asked to determine/interpret Illinois School Code with respect to whether the underlying districts had the responsibility of providing busing for PCCS students. PCCS is awaiting the determination from ISBE and SCSC. Additional resources have been added to the draft FY16 budget for an increase in transportation allowances, additional outreach efforts and increased fee waiver allocations.

In order to **Expand our Outreach** opportunities, PCCS staff identified a number of community, educational, environmental and faith-based organizations in the first quarter, with the goal of identifying groups that we can partner with to further our outreach mission.

In the second quarter (October through December) PCCS identified a few organizations that we continued conversations with, and scheduled follow-up discussions to build on the relationships we had established. PCCS met with the Lake County Community Foundation, and discussions surrounded ways in which PCCS can improve its outreach outcomes. Lake County Community Foundation has served as an invaluable resource and support to PCCS in identifying and approaching other community groups. Two primary partnerships PCCS identified were *Mano a Mano*, in Round Lake, and *Waukegan Public Library* in Waukegan. To support the development of these relationships, PCCS offered free classroom space to Mano a Mano for their adult ESL classes and any other programs for which they needed support. Additionally, PCCS held a book drive at the school and donated a few hundred children's, young adult, and adult fiction and nonfiction books for the clients that Mano a Mano serves.

In the third quarter, PCCS sponsored a large community event through a partnership with the One Earth Film Festival. PCCS partnered with College of Lake County, Conserve Lake County, and Liberty Prairie Foundation--all who helped sponsor the event--to draw in the larger community to PCCS for a film, "Project Wild Thing," a documentary film that encourages children and families to spend more time connecting with nature. This event was a great success, attracting approximately 200 people, who came from larger Lake County and who had the opportunity to learn about our unique public school.

Beginning in the fourth quarter, PCCS' partnership with Waukegan Public Library's Bus to Us program included implementation on a student level. PCCS 3rd/4th graders and their teachers took part in the Bus to Us program, with the students serving as book buddies to 1st graders from local Waukegan schools. The students paired up and read, and completed lessons together. PCCS anticipates this as a strong first step in a long and satisfying partnership between PCCS, WPL and Waukegan schools.

In May, PCCS participated in College of Lake County's Cinco de Mayo celebration and shared flyers about PCCS at the Liberty Prairie Foundation's Annual Plant Sale.

Due to a slow start in partnering with Mano a Mano, PCCS' plans for the fourth quarter and over the summer include identifying alternate partnership opportunities in the area, with a concentration on finding an agency/organization that serves at-risk families.

Respectfully Submitted:

Dilrukshi Dybas
Community Engagement Liaison
Prairie Crossing Charter School
ddybas@pccharterschool.org

Prairie Crossing Charter School
 Lottery Results
 2004-2015

	Total # of Applicants	Total # accepted	# of siblings of returning students	# of Out of District Applicants	Woodland 50 Applicants	Fremont 79 Applicants
2004-05	188	43	22	4	N/A	N/A
2005-06	211	42	37	10	N/A	N/A
2006-07	229	44	36	4	185	40
2007-08	188	74	33	14	150	24
2008-09	185	52	29	20	151	26
2009-10	182	40	27	19	127	36
2010-11	198	39	28	27	137	31
2011-12	205	44	17	19	148	38
2012-13	238	44	19	31	173	34
2013-14	191	44	26	24	150	17
2014-15	165	51	29	20	133	12
2015-16	166	46	27	11	142	13

2015-16

Kindergarten	79	42	19
1 st Grade	29	4	0



Registration for the 2015-2016 Lottery & Wait List

Instructions

1. Complete form only for new student drawing for lottery. (Not for current students attending PCCS)
2. Include **both** a proof of residency (i.e., tax bill or rental agreement) **and** a copy of your child's birth certificate.
3. Parent or guardian must sign the statement at the end of the registration form.
4. Only complete registration forms will be accepted.
5. You will receive a confirmation receipt of the registration by email.
6. If you do not hear from the school within 2 weeks of mailing the registration, call the school.
7. Return through US Mail or Fax: PCCS, 1531 Jones Point Rd, Grayslake, IL 60030-3536, Attention: Lottery

Plan to attend an Open House Night on either: January 22 or February 18 at 7PM.

Deadline for receipt of registration is February 27, 2015 at noon.

The lottery will be held at 7:00pm on Monday, March 2, 2015 in the Comstock Bldg.

Results of the lottery will be posted on the website the day after the lottery.

Applications will be accepted after the lottery drawing- names will be placed on the wait list in the order they are received by the school.

Student Information

Name (first, middle initial, last) _____

Date of Birth _____ (Must be 5 by Sept 1 to attend Kdg.) Gender _____ M _____ F

Circle Grade level of student in 2015-2016 school year: K 1 2 3 4 5 6 7 8

Schools attended to date (include preschool) _____

Do you currently have a child/children attending Prairie Crossing Charter School _____ yes _____ no

Your child is a resident of: _____ Woodland School District #50 _____ Fremont School District #79

_____ Out of District (Name of current school) _____

Siblings and residents of District #50 and #79 have priority over Out of District registrations.

Out of District tuition will be charged if an offer is made and accepted.

We heard about Prairie Crossing Charter School from: _____

(Friend, Newspaper, Schools, Daycare, Online, Other-Please Specify)

Siblings applying for lottery 2015-2016. A separate registration form is needed for each student.

Name _____ **Grade entering in 2015-2016** _____
(first, middle initial, last)

Name _____ **Grade entering in 2015-2016** _____
(first, middle initial, last)

Parent/Legal Guardian Information

Name of Father/ Guardian _____

Address _____
Street City Zip Code

Telephone _____
home number with area code work or cell with area code

Email address _____

Name of Mother/ Guardian _____

Address _____
Street City Zip Code

Telephone _____
home number with area code work or cell with area code

Email address _____

Parent/Guardian Signatures Required

The information provided on the registration form is true and correct.

My child and I are residents of the district noted as of the date of the lottery, March 2, 2015.

I will notify Prairie Crossing Charter School immediately if my child or I move from the school district noted on the registration.

Father, or Legal Guardian Signature Date

Mother, or Legal Guardian Signature Date

For School Use Only: Date Received _____ Init. _____ Date Called & Accepted: _____/_____/_____

Notification of admission or placement on the waitlist will be mailed within 14 days of the lottery. The wait list is maintained on our website. Please refer to the 2015-2016 wait list which is updated as changes are made.



Registro par el año escolar de 2015-2016

Instrucciones

1. Incluya **los dos** comprobantes de su residencia (registro de impuesto personal o contrato de alquiler) y una copia del acta de nacimiento de su hijo/hija.
2. El padre/la madre ó el tutor tiene que firmar la declaración en la parte inferior de la planilla.
3. Aceptaremos solamente las planillas que estén completas.
4. Usted recibirá un recibo como comprobante si usted se registró por correo.
5. Si usted no ha recibido ninguna comunicación después de dos semanas, llame a la escuela.

Devuélba por correo a: PCCS: Attn: Lottery, 1531 Jones Point Rod, Grayslake, IL 60030-3536
La fecha final para que el registro sea aceptado es el 27 de febrero del 2015 a las noon.

La lotería se realizará a las 7:00 pm., 2 de marzo del 2015

Información del estudiante

Nombre (primer, inicial del segundo nombre y el apellido) _____

Fecha de nacimiento _____ Género/sexo ___M___F

Tiene que tener haber cumplido 5 años de edad antes del primero de septiembre para entrar al kinder.

En el año escolar del 2015-2016, el estudiante entrará al: K 1 2 3 4 5 6 7 8

Incluya toda las escuelas en donde el alumno a estudiado (inclúyal en prekinder) _____

Tiene usted a un ó unos de sus hijos estudiando en Prairie Crossing Charter School actualmente ___si___no

Su hijo/hija pertenece a: ___Woodland School District #50 ___Fremont School District #79

___Usted vive fuera del distrito (¿Cuál es el nombre del distrito?) _____

Los hermanos y hermanas tanto como las personas que pertenecen a los distritos #50 y #79 tienen prioridad sobre los estudiantes que viven fuera del distrito. Los estudiantes que viven fuera del distrito pagarán es tipo de matrícula al ser aceptados.

Nos informamos acerca de Prairie Crossing Charter School por medio de _____
(amistades, el periódico, las escuelas, la guardería, en línea, de otra fuente sea específico)

Hermanos y hermanas pidiendo ser admitidos par el año escolar del 2015-2016.

Tienen ser registrado por separado usand una planilla para cada estudiante.

Nombre _____ Entrará al _____ año durante el 2015-2016
(nombre, inicial del segundo nombre y apellido)

Información de los padres ó del tutor legal

Nombre de los padres/Tutor _____

Dirección _____
Número y calle Ciudad Código postal

Teléfono _____
De la casa incluyendo el código del area Del trabajo ó el celular

Correo electrónico _____

Nombre de los padres/Tutor _____

Dirección _____
Número y calle Ciudad Código postal

Teléfono _____
De la casa incluyendo el código del area Del trabajo ó el celular

Correo electrónico _____

Se require la firma de los padres/tutor

Confirmando que la información incluida en esta planilla es correcta y verdadera.

My hijo tanto como yo, vivimos en el distrito especificado desde la fecha de la lotería, el 2 de marzo del 2015.

Notificaré a la escuela Prairie Crossing Charter School inmediatamente si yo ó mi hijo/a nos mudamos del distrito escolar que hemos puesto en la planilla.

Firma del padre ó del Tutor legal Fecha

Firma de la madre ó del Tutor legal Fecha

For School Use Only: Date Received _____ Init. ____ Date Called & Accepted: ____/____

Estén seguros de atender a nuestra bienvenida el: 22 de enero del 2015 ó el 18 de febrero del 2015 a las 7:00 p.m.

La lotería pública par ser admitido a la escuela, se realizará, 2 de marzo del 2015 a las 7:00p.m. en el edificio Anna B. Comstock (K-4). Los resultados de la lotería pública serán publicados en la página web de la escuela el próximo día. Usted será notificado por correo en cuanto el estudiante ha sido aceptado ó puesto en la lista de espera, dentro de 14 días después de la letría pública.



Board of Director's Policy Students 500 Series

Policy # 500.6

Admissions to Prairie Crossing Charter School

Prairie Crossing Charter School students are admitted in accordance with the state Charter Schools Law. The application process begins in January when parents are encouraged to fill out an application which they can get at the office or from the school website. After all applications have been submitted, returning students are given places as are their siblings if places are available.

Thereafter, admission is determined by a public lottery. The lottery is a nonexclusive, nondiscriminatory process where all students who live in Districts 50 and 79 are welcome to apply. All in-district applicants have the same chance of being selected. Out-of-district applications are also accepted. Legal residency must be established as of the day of the lottery for an applicant to be included in the in-district lottery process. Out-of-district students will only be admitted after all in-district student applications have been placed during the lottery process. After classes are filled, the lottery continues to create a waiting list for each grade. The application policy and procedures referred to below reflect Prairie Crossing Charter School's intent to maintain integrity and clarity throughout the following admission process.

1. Any student living in District 50 or 79 is eligible for admission to Prairie Crossing Charter School (PCCS).
2. The registration period runs from approximately January 1 to March 1 each year. During the time, PCCS sends information in English and Spanish to local newspapers, community service organizations, and other sources advising the community of opening at the school for the coming school year.
3. During the registration period, families of current students are asked to inform the school as to whether the student(s) will return for the coming year. These families are also asked to submit applications for any siblings who wish to attend the school, since siblings are given priority where space allows.
4. Also during the registration period, applications are available online and at the school for any interested and qualified families. These applications must be submitted to the school prior to the deadline, usually March 1. Families with children on the current waiting list are contacted to determine whether they are interested in being in the lottery for the next school year. Except as provided for in item #6, the waiting list is not maintained from year to year; a new waiting list is drawn each year.
5. All new applicants to the school and families currently on the waiting list indicating their desire to have a child(ren) considered for admission will be given a receipt to document the school's acknowledgement of their application or restatement of their desire for their child(ren)'s admission to the school.
6. At the end of the registration period, the school determines how many spaces are available at each grade level after returning students have been tabulated. Priority for registration at each grade level is as follows: returning students, siblings of returning students, in-district applicants and finally out-of-district applicants. If there are more siblings than can be accommodated at any given grade level that are on the current year's waiting list, they will remain on the list in the current order. If there are new siblings to be added to the waiting list, their names will be drawn and added to the bottom of the current siblings' waiting list.
7. Once places have been assigned to returning students and their siblings, students from the applicant pool are assigned to the various grade levels. If there are more students than can be accommodated at a given grade level, a lottery is held among new students seeking admission to the affected grade levels, beginning at the highest grade level and moving to the lowest. If

applicable, a final lottery is held in the same manner at each grade level for out-of-district applicants. They will be placed on the wait list immediately following the last in-district applicant previously drawn. If any student with siblings in the applicant pool is accepted, his or her siblings are automatically given priority as described above (i.e. the siblings are either accepted or added to the bottom of the waiting list of other siblings at the appropriate grade level).

8. All lotteries are held in public on a publicly disclosed date as soon as possible after the registration period has closed. Each lottery is held by grade level and priority as described above. Names from a pool of all applicants will be randomly selected to fill each grade level. Additional applicants are placed on a waiting list in the order selected, maintaining a priority status for siblings. Beginning with student enrollment for the 2015-2016 school year, the lottery must be administered and videotaped by the Executive Director, or designee. The authorizer or its designee must be allowed to be present or view the lottery in real time. The Executive Director or designee must maintain a videotaped record of the lottery, including a time/date stamp. The Executive Director or designee shall transmit copies of the videotape and all records relating to the lottery to its authorizer on or before September 1 of each year.
9. If during the lottery procedure a name was left out of the drawing for the appropriate grade level, one of five scenarios will result.
 - a. If the missing name is found before any other grades have been drawn, the lottery for that class is repeated with the name included.
 - b. If the missing name is found after other grades have been drawn and no siblings are impacted, the lottery for the class from which the name was missing is repeated with the name included.
 - c. If the missing name is found after other grades have been drawn and a student, Student A, was accepted into the class as a sibling because of the errant drawing, but is not a sibling based on the corrected drawing, the name of Student A and those of the students on the waiting list for that grade will be redrawn. The purpose for this redraw is solely to place Student A in the waiting list. Student A will be placed in the waiting list after the name of the student who is drawn immediately before he or she in the redraw. The order of the other students on the waiting list will not change. If Student A is drawn first, he or she will be accepted into the class unless the student at the top of the waiting list is a sibling of a student selected in the lottery. In that case, the sibling is accepted into the class. If not, the student whose name was first on the waiting list will be accepted into the class.
 - d. If the missing name is found after other grades have been drawn and a student, Student A, was placed above other students on the waiting list as a sibling because of the errant drawing, but is not a sibling based on the corrected drawing, the name of Student A and those of the students on the waiting list for that grade will be redrawn. The purpose for this redraw is solely to place Student A in the waiting list. Student A will be placed in the waiting list after the name of the student who is drawn immediately before he or she in the redraw. The order of the other students on the waiting list will not change. If Student A is drawn first, he or she will be placed first on the waiting list unless the student at the top of the waiting list is a sibling of a PCCS student or a student selected in the lottery. In that case, Student A will be placed on the waiting list immediately following any siblings of PCCS students or students selected in the lottery.
 - e. If the missing name is found after other grades have been drawn and a student, Student A, was not accepted as a sibling in the errant drawing, but is a sibling in the corrected drawing, Student A will be placed in the spot he or she would have been if his or her status as a sibling had been known. If student A is placed into the class, the last person placed in the class in the errant drawing will become the first person on the waiting list. No other changes in the waiting list will occur.
10. If after the lottery a student, Student A, was found to have been left out of the drawing, the name of Student A and those of the students on the waiting list for that grade will be redrawn. The purpose for this redraw is solely to place Student A in the waiting list. Student A will be placed

in the waiting list after the name of the student after whom he or she is drawn. The order of the other students on the waiting list will not change. If Student A is drawn first, he or she will be placed first on the waiting unless the student at the top of the waiting list is a sibling of a PCCS student or a student selected in the lottery. In that case, Student A will be placed on the waiting list immediately following any siblings of PCCS students or students selected in the lottery. If Student A is a sibling, he or she will be placed in his or her appropriate spot based on his or her sibling status.

11. All affected families are advised of the results of the lottery as soon as possible in writing and on the website.
12. Students are moved up from the waiting lists as openings occur at their grade level. When a family on the wait list is eligible to be offered a space, the school will contact the family to determine their interest in having the child attend the school. The school will use three working days for contacting the family. The family will be given three working days to notify the school of their decision to enroll from the date they are contacted by the school. Those applicants who cannot be reached or who do not respond within this designated period of time will be removed from the wait list and will be required to reapply. The spot will then be offered to the next applicant on the wait list.
13. No priority is given to any applicant to Prairie Crossing Charter School, except returning students, their siblings, and siblings of accepted students, as noted above and provided for in the Illinois' Charter Schools Law.

Adoption Dates:

Adopted: November 15, 2005

Revised : May 2015



Fee Waiver Policy

Definition of Instructional Fees

Instructional fee or fees mean any monetary charge collected by Prairie Crossing Charter School (PCCS) from a student or the parents or guardian of a student as a prerequisite for the student's participation in any instructional program of PCCS. It is not defined as a fee when PCCS requires that a student provide his or her own ordinary supplies or materials (e.g. pencils, paper, notebooks) that are necessary to participate in any curricular or extracurricular program.

Prairie Crossing Charter School has a yearly books, materials, and activity fee per child. PCCS also charges fees for involvement in extracurricular activities and field trips. School fees do not include library fines and other charges made for the loss, misuse, or destruction of school property; charges for the purchase of pictures; charges for optional travel undertaken by a school club or group of students outside of school hours; charges for admission to school dances, athletic events, or other social events; or charges for optional community service programs (e.g. before- and after-school child care and recreation programs).

Students Eligible for Waiver

Each child's instructional fee is due by July 1st each year. For students that enroll in Prairie Crossing Charter School during the school year, this fee is due on their first day of attendance. The due dates for fees for extracurricular activities vary and are provided to students interested in those activities.

Fees may be waived for students whose family income falls within the United States Department of Agriculture guidelines for free or reduced price lunch and breakfast. Fees may also be waived for students whose families have suffered a significant loss of income due to death, severe illness, or injury in the family or unusual expenses incurred because of a natural catastrophe.

Any family unable to pay the books and materials, or needing extra time to pay the fee should submit the form below to the Executive Director **by June 30th** or the first day of attendance for students enrolling in PCCS during the school year. For fees for extracurricular activities, due dates will be provided with the information about each activity. The Executive Director will process the request within thirty (30) calendar days and reply to the family with a payment plan, fee waiver statement, or denial of request. PCCS shall decide waivers on a case-by-case basis in a non-discriminatory fashion and shall rely upon documentation submitted by the applicant. The Executive Director's decision can be appealed to the School Board President.

Payment plans will be provided for students whose families do not qualify for fees to be waived but whose children would be prohibited from attending Prairie Crossing Charter School or taking part in extracurricular activities unless a payment plan is provided. The Executive Director will review explanation for payment plan requests.

Notification to Parents/Guardian

PCCS's policy for the waiver of instructional fees shall be communicated in writing to the parents or guardian of all students enrolled in the PCCS near the beginning of July with the first bill or fee notice sent and any other time a notice of fees (e.g. for extracurricular activities) is sent to parents. PCCS also will state in all of its notices sent to parents who owe instructional fees that PCCS waives fees for persons unable to afford them in accordance with its policy and the procedure for applying for a fee waiver. A fee waiver application form also may be included with this notice when it is sent to parents. The notification will be in English, Spanish, or the home language of the parents, if it is

needed to ensure their understanding of the district's policy (if translation of the notice is not feasible, PCCS will use interpreters, e.g. other students or neighbors). The notice shall describe:

- PCCS's policy, including the criteria and other circumstances under which PCCS will waive school instructional fees or provide a payment plan for these fees;
- the instructional fees subject to waiver under the district's policy;
- the procedure to be used by parents in applying for a waiver of instructional fees;
- the procedure to be used by parents in resolving disputes concerning the waiver of instructional fees.

If the fee waiver policy and/or procedures are substantively amended, then parents of students enrolled in PCCS shall be notified in writing within thirty (30) calendar days following the adoption of the amendments.

Resolution of Disputes

If PCCS denies a request for a fee waiver or payment plan, then it shall mail a copy of its decision to the parents within thirty (30) calendar days of receipt of the request. The decision shall state the reason for the denial and shall inform the parents of their right to appeal, including the process and timelines for that action. The denial notice shall also include a statement informing the parents that they may reapply for a waiver or payment plan at any time during the school year, if circumstances change.

An appeal shall be decided within thirty (30) calendar days of the receipt of the parents' request for an appeal. Parents shall have the right to meet with the President of the PCCS Board of Directors, who will decide the appeal, in order to explain why the fee waiver or payment plan should be granted. If the appeal is denied, then PCCS shall mail a copy of its decision to the parents. The decision shall state the reason for the denial.

No fee shall be collected from any parent who is seeking an instructional fee waiver in accordance with PCCS's policy until the district has acted on the initial request or appeal (if any is made), and the parents have been notified of its decision.

Confidentiality

School records that identify individual students as applicants for or recipients of instructional fee waivers are subject to the Illinois School Student Records Act (105 ILCS 10/1 et seq.). Information from such records is confidential and may be disclosed only as provided in the Act.

Prohibition Against Discrimination or Punishment

No discrimination or punishment of any kind, including the lowering of grades or exclusion from classes, will be exercised against a student whose parents or guardians are unable to purchase required textbooks or instructional materials or to pay required fees.

Adoption Dates:

Adopted: April 2004

Amended: May 2007

Revised and Adopted: September 2009

Request for Fee Waiver or Fee Payment Plan
Please submit by June 30

Student's Name: _____

Student's Grade: _____

Parents' Names: _____

Address: _____

Phone Number: _____

Email: _____

I/We request a payment plan for our books and materials.

I/We request a waiver of the books and materials.

Please provide a brief explanation of the reason you are requesting a payment plan or waiver of fees. The Director is the only person who will see the reason for which you are requesting a payment plan or waiver of fees. _____

Please mail to: Attn: Executive Director
Prairie Crossing Charter School
1531 Jones Point Road
Grayslake, IL 60030-3536

Transportation Plan

The Prairie Crossing Charter School transportation plan is closely aligned with the school's size, environmental philosophy, dual district boundaries and finances. Door to door bus service for all students will not be offered, since the Charter Schools Law exempts Prairie Crossing from this requirement except for special needs students.

Prairie Crossing Charter School is situated at the far corner of each district. Its students may come from anywhere in a 63 square mile area. It simply cannot commit to door to door bus service. However, being committed to welcoming a diverse array of students from throughout the districts, Prairie Crossing Charter School will coordinate a car pool program designed to address the needs of families beyond walking or biking distance (which is greater than usual given a regional network of trails). The parents of children who are at risk or who are from low income families may be unable to take part in the car pool program. It is important to provide a means by which these children can attend Prairie Crossing Charter School. One of the principles on which the school is founded is the belief that children can learn to respect a diverse group of people by learning next to them and becoming friends with them. The following options will be provided for parents of at risk and low income children who wish to send their children to Prairie Crossing Charter School but cannot take part in the car pool program.

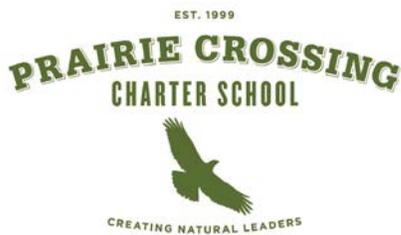
1. Parent volunteers will be sought to pick up and drop off the children whose parents cannot take part in the car pool program. In this way, these children will arrive at school in the same manner as other children and will not be singled out in any way that may make them feel different from other children attending the school.
2. If no parent volunteers can be found to pick up and drop off children and there are only a few children that need transportation, Prairie Crossing Charter School will hire a person to pick up and drop off these children using his or her car. In this case, Prairie Crossing Charter School would register with the Illinois Secretary of State as a School Bus Driver Employer. Prairie Crossing Charter School will insure that the person obtains and maintains a valid bus driver permit. This includes:
 - A. an initial classroom course for school bus drivers;
 - B. a minimum of two hours classroom training annually related to driving responsibilities;
 - C. participation in a Federally required drug and alcohol testing program, possessing a valid and properly classified Commercial Driver's License (CDL) with a Passenger Endorsement and properly classified school bus driver permit;
 - D. completion and certification of a passed annual physical examination on a form prescribed by and available from the Secretary of State's Office; and
 - E. Criminal background check including fingerprinting through the Illinois State Police.

Prairie Crossing Charter School will further insure that any vehicle used to transport children by an employee meets the requirements for a Division I vehicle. Under no circumstances will a Division II vehicle be used to transport students to and from school. All vehicles will have proof of adequate insurance on file at PCCS and will complete a safety inspection every six months at an Official Testing Station regulated by the Illinois Department of Transportation.

3. If the number of children needing transportation is large enough, Prairie Crossing Charter School will lease a school bus to transport the children to and from school. The Director of Prairie Crossing Charter School or his/her designee will obtain documentation from the bus company insuring that the drivers used hold valid bus driver permits and that their buses are maintained and inspected as required. In this case the Director of PCCS or his/her designee will do the following to insure the safety of school bus-transported children:
 - A. Supervise school bus emergency evacuation drills for all bus-riding students on school property twice annually and maintain documentation;
 - B. Insure classroom instruction in safe bus-riding practices by classroom teachers for all bus-riding students twice annually including the dangers in the loading and unloading zone and maintain documentation; and
 - C. Insure that all bus-riding students have copies of bus-riding rules which include the consequences for gross disobedience or misconduct.

Adoption Dates:

Adopted: December 2003



Volunteer Policy

Prairie Crossing Charter School encourages the participation of the entire family in the education process and emphasizes the importance of a pledge to life-long learning. The parental role in achieving the Prairie Crossing vision is critical. This role can take many forms.

All parents are encouraged to provide a home atmosphere in which their children are supported in their educational goals. Frequent two-way communication between school and home is a hallmark of PCCS. This serves to keep parents informed of their children's progress and any special help they may need. It also provides an opportunity for the parents to discuss any questions or concerns with school personnel. Parents of Students are welcome to volunteer for many school activities in the classroom;

- as chaperones and drivers for field trips;
- as helpers in the maintenance of the school;
- as coaches, as participants in Parent Staff Organization (PSO);
- as members of the school board or its committees, task forces, etc.;
- in contributing special talents and skills; or
- by providing financial contributions to the school.

However, no parent is required to volunteer at the school or provide financial contributions. Children will not be discriminated against in any way if parents are unable or choose not to volunteer or contribute financially. Volunteerism and financial contributions are not requirements for enrolling in or remaining at Prairie Crossing Charter School.

Adoption Dates:

Adopted: November 2003

Collection Student Instructional Fees

1. Instructional fees, including all tuition obligations for out of district students, for continuing students shall accompany a completed Enrollment Form. Both are due on or by June 30, of each year. Instructional fees are those fees charged to families because of their child's admission to, and enrollment in, Prairie Crossing Charter School. These Instructional Fees are collected to support the general operating expenses of the School including, but not limited to, instructional materials, textbooks, and consumable supplies.
2. A lottery for open slots in each grade is held in accord with Board Policy# 500.6- admissions to Prairie Crossing Charter School.
3. Any continuing student who has not submitted a completed Enrollment Form accompanied by full payment of the instructional fee will be subject to having his/her slot filled by a waiting list student from the most recent lottery.
4. Instructional fees for new students (siblings of returning students and those who are selected in the lottery) are due on or by June 30 of each year. Failure to comply with this deadline will result in assignment of the student's slot to a student on the waiting list.
5. The exclusionary provisions of this policy shall not pertain to those families who have requested and qualified for a Fee Waiver.
6. Any family unable to comply with the above deadlines must file a written request for an extension to a specified date, or for a payment plan. The PCCS Executive Director must receive this request no later than the applicable deadline for payment. Compliance with the agreed-upon extension or payment plan will be required in order for the student to begin school in the upcoming year. In no case will a student be allowed to begin attending school without payment of fees in full, or a valid payment plan, which was approved prior to June 30th, and a payment plan for which payments are current by the first day of attendance.
7. Should a family whose student is attending on the basis of a payment plan become delinquent in payments, that student's seat will be filled by a student on the waiting list at the conclusion of the trimester during which the account became delinquent unless by the last day of the trimester the account has been paid in full or the family has filed a request for an appeal to the Board of Directors.
8. The Board of Directors charges the administration with the responsibility to develop Rules and Regulations, by which the covenants of this policy shall be administered. The rules and regulations shall provide to families the right to appeal to the Board of Directors the administration's decision to replace an existing student as a result of a default on a payment plan or failure to make payment in full of Instructional Fees by June 30th should a payment plan have not been established.
9. Prior to any child being denied admission under this policy, the School Director shall send to the parent/guardian not less than two certified letters over a fourteen day period in an attempt to notify the parent/guardian that failure to comply with the instructional fees policy will result in the child's non-admission to the school or the child's forfeiture of the child's current enrollment in the event of delinquency on a payment plan.

Cross Reference:

Policy# 500.6-Admissions to Prairie Crossing Charter School
Policy #800.3-Fee Waivers

Adoption Dates:

Adopted: February 2002

Revised and Adopted: July 2009

Disability			Therapy		
Emotional Disability		Social Work			
Hearing Impairment	Speech or Language Impairment	Hearing Itinerant	Audiology	Speech/Language	
Hearing Impairment		Hearing Itinerant			x
Hearing Impairment		Hearing Itinerant	Speech/Language		
Other Health Impairment	Hearing Impairment	Social Work	Occupational Therapy		
Other Health Impairment	Speech or Language Impairment	Speech/Language			
Other Health Impairment					
Other Health Impairment		Occupational Therapy			
Other Health Impairment		Speech/Language			
Other Health Impairment		Occupational Therapy			
Specific Learning Disability	Other Health Impairment	Occupational Therapy			
Specific Learning Disability	Speech or Language Impairment	Speech/Language			
Specific Learning Disability	Speech or Language Impairment	Speech/Language			
Specific Learning Disability	Speech or Language Impairment	Speech/Language			
Specific Learning Disability		Speech/Language			
Specific Learning Disability					
Specific Learning Disability		Speech/Language			
Specific Learning Disability		Occupational Therapy			
Specific Learning Disability					

Specific Learning Disability					
Specific Learning Disability		Occupational Therapy			
Specific Learning Disability		Social Work			
Specific Learning Disability					
Specific Learning Disability					
Specific Learning Disability		Social Work			
Specific Learning Disability		Social Work			
Specific Learning Disability		Speech/Language			
Specific Learning Disability					
Specific Learning Disability					
Specific Learning Disability					
Specific Learning Disability					
Specific Learning Disability					
Specific Learning Disability					
Specific Learning Disability					
Specific Learning Disability					
Specific Learning Disability					
Specific Learning Disability		Speech/Language	Occupational Therapy		
Speech or Language Impairment					X
Speech or Language Impairment					X

Speech or Language Impairment		Occupational Therapy			x
Speech or Language Impairment					x
Speech or Language Impairment					x
Speech or Language Impairment					
Speech or Language Impairment					
Speech or Language Impairment		Occupational Therapy			
Speech or Language Impairment					
Speech or Language Impairment					
Speech or Language Impairment					
Speech or Language Impairment					
Speech or Language Impairment		Occupational Therapy			
Speech or Language Impairment					
Speech or Language Impairment					
Speech or Language Impairment					
Speech or Language Impairment					
Speech or Language Impairment		Occupational Therapy			

SECTION D: 2014-2015 Personnel Credentials

Name	Position	Degree	Certification	Years Teaching
Alvarado, Jesse	Custodian			
Alvey, Diana	Teacher	Bachelors		1
Anderson, Jacqueline	Assistant	Bachelors	Substitute	
Barnett, Katy	Teacher	Masters	Yes	11
Batz, William	Maint. Supervisor	Bachelors		
Berger, Shirley	Teacher	Bachelors	Yes	12
Boyle, Peggy	After Care Supervisor			
Buesking, Lori	Assistant/Teacher	Bachelors	Yes	1
Coonan, James	Tech Support	Bachelors		
Corra, Adam	P. E. Teacher	Bachelors	Yes	7
Deigan, Geoff	Executive Director	Bachelors		
DePaz, AnneMarie	Teacher	Bachelors	Yes	5
Disalvo, Kim	Business Manager			
Dybas, Dil	Community Engagement Liaison	Bachelors		
Flaig, Carol	Assistant			
Freeman, Robert	Assistant/Teacher	Bachelors	Yes	1
Gass, Tony	Assistant	Bachelors	Yes	
Gehrig, Stefanie	Teacher	Masters	Yes	2
Germata, Katie	Assistant			
Habel, Paul	Teacher	Bachelors	Yes	14
Hahn, Lynn	Teacher	Bachelors	Yes	13
Heinrich, Megan	Sp. Ed Admin. Asst.			
Hershiser, Michael	Teacher	Masters		12.5
Hershiser, Naomi	Dean Of Environmental Learning	Masters	Yes	8
Hoffman, Jody	Assistant	Bachelors	Substitute	
Jackson, Heather	Teacher	Bachelors	Yes	2
Jeffery, Christine	Teacher	Bachelors	Yes	12
Johnson, Annette	Assistant			
Johnson, Matthew	Assistant	Bachelors	Yes	
Johnson, Patricia	Teacher	Bachelors	Yes	10
Krissek, Donna	Assistant	Bachelors	Substitute	
Kulbeda, Melissa	Teacher	Bachelors		5
Leve-McClevey, Wendy	Assistant	Bachelors	Substitute	
Lynch, Kathleen	Dir. of Spec. Ed & Student services	Masters	Yes	16
Marlette, Megan	Assistant			
McGovern, Cynthia	Teacher	Masters	Yes	20
McKee, Marjorie	Resource Teacher	Masters	Yes	1.5

Mehrtens, Sallie	Title 1 Reading Spe.	Masters		
Meyer, Caryn	Social Worker	Masters	Yes	21
Moriello, Nicholas	Custodian			
Moyer, Rebecca	Assistant	Bachelors	Substitute	
Nasir, Nasreen	After Care	Bachelors		
Nielsen, Margret	After Care			
Nham, Justine	Assistant	Bachelors	Yes	
Plucinski, Melissa	Resource Teacher	Bachelors	Yes	6
Reidy, Nancy	One-on-One Teacher Assistant	Masters	Yes	
Roman-Ahlgrim, Lisette	Teacher	Bachelors		3
Schaefer, Yvonne	Admin. Assistant			
Scott, Andrew	Teacher	Masters	Yes	1
Siegel, Janette	Admin. Assistant			
Siegel, Quentin	After Care			
Siwy, Brittney	Teacher	Bachelors	Yes	2
Smith, Kelly	Dean of K-4/Teacher	Masters	Yes	12
Stefans, Karin	Teacher	Bachelors	Yes	3
Steinbeck, Tammy	Assistant	Bachelors	Substitute	
Stenzel, Patti	Bookkeeper			
Stewart, Sarah	Assistant/Teacher	Bachelors	Yes	1
Sustich, Kerri	Teacher	Bachelors	Yes	2
Sylvester, Angela	Teacher	Bachelors	Yes	1
Thomas, Andrew	Teacher	Bachelors	Yes	1
Tomei, Susan	One-on-One Teacher Assistant	Bachelors		
Turner, Roxanne	Assistant	Bachelors	Yes	
Venegoni, Danelle	Resource Teacher	Masters	Yes	2
Verenski, Frances	Assistant	Masters	Substitute	
Wyatt, Kristen	Assistant	Bachelors	Yes	
Zamiar, Tony	Dean of 5-8/Teacher	Masters	Yes	22
Sub-Contractors				
Name	Position	Degree	Certification	Years Teaching
Caruth, Laura	Speech Pathologist	Masters	Yes	
Gernady, Anne	School Psychologist	Masters	Yes	
Schumaker, Leslie	Hearing Itinerant Teacher		Yes	
Vanderbilt, Katie	OT	Bachelors	Yes	

Prairie Crossing Charter School

Forces and Motion Unit

Authors: Katy Barnett and Shirley Berger



Unit Overview

Unit Title: **Forces and Motion**

Grade level: **Kindergarten**

Time Frame: (# of lessons, seasonal requirements if applicable, etc.)

Overarching Question: What are Forces and Interactions?

Essential Questions:

- How do things move?
- What are pushes and pulls?
- What is gravity?
- What words can I use to describe an object's position?
- How do you increase speed?
- How do you increase a force on an object?
- What is it about shapes that make them easier or harder to pull?

Enduring Understandings:

- Students will develop an understanding that the position and/or motion of an object is relative to a point of reference.
- Students will understand forces affect the motion and speed of an object and that the net force on an object is the total of all of the forces acting on it.
- Students will understand the Earth pulls down on objects with a force called gravity.
- Students will develop an understanding that some forces are in direct contact with objects, while other forces are not in direct contact with objects.

Knowledge and skills:

- Students will brainstorm words for how things move
- Students will experiment with pushes and pulls on their wheeled toy
- Students will play "Simon Says" position game with their toy
- Students will use wooden cars and add a push or pull when moving
- Students will sort geometric shapes by ability to roll
- Students will cut apart movement words from lesson 1 to sort into categories: direction, speed, position
- Students will guess what will happen before you do the action you described- drop, push, pull
- Students will use scientific language when describing what will happen

NGSS Standards:

- K- **Plan and conduct an investigation to compare the effects of**

PS2 **different strengths or different directions of pushes and pulls on the motion of an object.**
-1.

- K- **Analyze data to determine if a design solution works as intended to change the speed or direction of an object with a push or a pull.**
PS2
-2.

PS2.A: Forces and Motion

- Pushes and pulls can have different strengths and directions. (K-PS2-1),(K-PS2-2)
- Pushing or pulling on an object can change the speed or direction of its motion and can start or stop it. (K-PS2-1),(K-PS2-2)

PS2.B: Types of Interactions

- When objects touch or collide, they push on one another and can change motion. (K-PS2-1)

PS3.C: Relationship Between Energy and Forces

- A bigger push or pull makes things speed up or slow down more quickly. (*secondary to K-PS2-1*)

ETS1.A: Defining Engineering Problems

- A situation that people want to change or create can be approached as a problem to be solved through engineering. Such problems may have many acceptable solutions. (*secondary to K-PS2-2*)
- **Common Core State Standards Connections:**
- ELA/Literacy -
 - RI.K.1 With prompting and support, ask and answer questions about key details in a text. (K-PS2-2)
 - W.K.7
 - Participate in shared research and writing projects (e.g., explore a number of books by a favorite author and express opinions about them). (K-PS2-1)
 - SL.K.3
 - Ask and answer questions in order to seek help, get information, or clarify something that is not understood. (K-PS2-2)

- **Mathematics -**

- MP.2
- K.MD.A.1
- K.MD.A.2
- Reason abstractly and quantitatively. (K-PS2-1)
- Describe measurable attributes of objects, such as length or weight. Describe several measurable attributes of a single object. (K-PS2-1)
- Directly compare two objects with a measurable attribute in common, to see which object has “more of”/”less of” the attribute, and describe the difference. (K-PS2-1)

Assessments:

- See attachment at bottom of document. This attachment will be used as a pre and post assessment.

Resources available:

Next Generation Science Standards, lesson plans available--

<http://moodle.tbaisd.org/course/view.php?id=1021>

Lesson Overviews:

Lesson 1: Ways That Things Move

- Students brainstorm words for how things move
- Homework: students bring 1 toy with wheels to school for scientific experiments for the next 2 lessons

Lesson 2: Pushes and Pulls

- Experiment with pushes and pulls on their wheeled toy
- Game: students, in pairs, push or pull their toy; partner needs to identify whether it was a push or pull

Lesson 3: Position and Gravity

- “Simon Says” position game with your toy
- Introduce gravity concept and test it out on a slope with their toy (no pushes or pulls involved)
– last time they will need their toy with wheels

Lesson 4: Speeding Up, Adding Weight

- Wooden cars – adding a push or pull when moving
- Adding weights to wooden cars

Lesson 5: Shapes in Motion

- Geometric shapes sorted by ability to roll
- Sit in group circle and test shapes to roll across floor
- Draw which shape rolled best in student journals

Lesson 6: Sorting Motion Words

- Cut apart movement words from lesson 1 to sort into categories:
direction, speed, position

Lesson 7: “What Would Happen If...” Game

- Drop, push, pull, etc. and students have to guess what will happen
- Encourage scientific language when describing what will happen before you do the action you described

Ways That Things Move

Overview:

Students will brainstorm words for how things move.

Essential question:

- How do Things Move?

Key concepts and Vocabulary:

- None/Take student suggestions.

Student Performance Objectives:

- Students will think of and discuss words for how things move.
- Students will share ideas of what movement is and what causes objects to move.

Time Required: 20 minutes, whole group

Standards: Introduction to the standards on Forces and Interactions: Pushes and Pulls

- K-PS2-1, K-PS2-2

Materials needed/Advanced preparation required:

- Large Writing paper and marker.

Background Information:

Students have developed an understanding of the motion of objects. They can make inferences about reasonable causes of motion of objects. They think of forces as pushes and pulls that are needed to explain an object's motion.

Learning Activities/ Procedure:

1. Ask your students, "What are some words for how things move?"
2. Students may think of fast, slow, rolling, falling, sliding, bouncing, etc.
3. Write these words on a "Ways That Things Move" chart on chart paper
4. Tell students their homework is to bring a toy that moves with wheels to school tomorrow and discuss words with parents. Bring in a list of additional words.

Adaptations/ Differentiation:

High Students: Define words

Low Students: Clap words, stretch out words to hear sounds and be able to say word clearly.

Related Readings:

And Everyone Shouted, "Pull!": A First Look at Forces and Motion by Claire Llewellyn

Motion: Push and Pull, Fast and Slow by Darlene Stille

Push and Pull by Robin Nelson

Forces and Motion by John Graham

Lively Elizabeth! What Happens When you Push by Mara Bergman

Resources:

[Push and Pull Song](#)

[Push and Pull with Kids](#)

[Gravity Song](#)

Pushes and Pulls

Overview:

Pushes and Pulls, Experiment with pushes and pulls on a wheeled toy. Play game, students in pairs will, push or pull their toy. Partner needs to identify whether it was a push or pull.

Essential question:

What are Pushes and Pulls?

Key concepts and Vocabulary:

Push, Pull, Towards, away from, right, left

Student Performance Objectives:

Students will observe how the wheeled object moves on a level area.

Students will observe what happens when they push or pull the object towards and away from themselves.

Time Required: 30 minutes

Standards:

K-PS2.A Forces and Motion

- Pushes and Pulls can have different strengths and directions.
- Pushing or pulling on an object can change the speed or direction of its motion and can start or stop it.

Science and engineering Practices:

- With guidance, plan and conduct an investigation in collaboration with peers. (K-PS2-1)

K-PS3.B: Relationship Between Energy and Forces

- A bigger push or pull makes things speed up or slow down more quickly.

Assessments/Performance Tasks:

Materials needed/Advanced preparation required:

Book to read-What are pushes and pulls?

Poster with vocabulary, Outline of hands with right and left written in it.

Prepare extra wheeled objects for students who forget theirs at home!

Objectives:

Students will use their wheeled objects to explore different ways to make it move.

Students will follow directions to push or pull towards them or away from them.

Background Information:

Teacher will build on and use the early learners' ability to correctly sense some of the behaviors of simple mechanical objects and the motion of objects. The central idea is for the young learner to be able to attach appropriate language that describes motion, compares motion, and begin to develop an understanding of forces and their relationship to changes in motion.

Learning Activities/ Procedure:

1. Read Push and Pull Book, (informational book to introduce vocabulary and define words.)

Look at words on poster board and review what each word means. Demonstrate push and pull. Review right hand and left hand.

2. Pushes and Pulls – Students bring in toys that have wheels to work on their pushes and pulls, not throwing! Hands have to stay on the item so it does not fly away from them.

3. Experimentation – Students will first play with their wheeled toy on a level area of floor in the classroom. Ask them to find a personal space to explore where they cannot reach any of their friends. Allow them this time so they can then follow directions of what to do with their toy next.

4. Tell students, “Push the toy away from you.” Then tell them, “Pull your toy towards you.” Ask students, “What made your toy move?” It is their hand giving it a push or a pull, but the hand has to do this kind of action to make it move. You can do this like Simon Says to make it into a game and give students practice. Students need to know they are practicing pushes and pulls, both towards them and away from them. Use these terms to introduce directionality as well. Practice pushing to the right or pulling to the left.

5. Have students work in pairs and either push or pull their toy. The other student has to identify whether they are doing a push or a pull.

Suggested Vocabulary:

· Push

- Pull
- Towards
- Away from
- Right
- Left

Adaptations/ Differentiation:

High students: Additional reading books at Daily 5

Low students: Websites or video to review

Related Readings:

And Everyone Shouted, "Pull!": A First Look at Forces and Motion by Claire Llewellyn

Motion: Push and Pull, Fast and Slow by Darlene Stille

Push and Pull by Robin Nelson

Forces and Motion by John Graham

Resources:

[Push and Pull Song](#)

[Push and Pull with Kids](#)

[Gravity Song](#)

The Push-and-Pull Song

(sung to the tune, “Row, Row, Row Your Boat”)

Push, push, push your cart,

Gently through the store.

Fill it full of lots of things,

Then let’s add some more.

Pull, pull, pull your sled,

Gently through the snow.

Let’s get on and zip on down.

How fast can we go?

Push, push, push the boat,

As the wind does blow

Over the ocean and into the sails,

To make the sailboat go.

Pull, pull, pull the flag,

As the wind goes by

Pull the flag to make it flap,

Look how proud it flies!

Push, pull, to make it move,

Try it and you’ll see.

Things move with a push or pull-

Even you and me!

Position and Gravity

Overview:

Simon Says position game with wheeled object.

Introduce gravity concept and test it out on a slope with wheeled object.

Essential question:

- What is gravity?
- What words can I use to describe an object's position?

Key concepts and Vocabulary:

Gravity, front, behind, above, below, on, under, away, close, between, top, slope

Student Performance Objectives:

Students will demonstrate their knowledge of position words with their wheeled object.

Students will discuss and demonstrate what gravity is?

Students will identify a slope.

Time Required: 45 minutes

Standards:

Science and Engineering Practices-

K-PS2-1 Planning and Carrying Out Investigations

Planning and carrying out investigations to answer questions or test solutions to problems in K-2 builds on prior experiences and progresses to simple investigations based on fair tests which provide data to support explanations or design solutions.

- With guidance, plan and conduct an investigation in collaboration with peers. (K-PS2-1)

Assessments/Performance Tasks:

Materials needed/Advanced preparation required:

Book to read

Wheeled objects for each student

Poster board with words written on it

Outdoor classroom to use bridge to roll down wheeled objects and plank.

Prairie Crossing Charter School [Force and Motion]Page 12

Background Information:

Students are introduced to the concept that objects fall toward the Earth and that the force that pulls objects toward Earth affects the motion of all objects.

Learning Activities/ Procedure:

1. **Position** – Test students’ knowledge of position words with their toy. This can also be done as a game like Simon Says. Ask students to return to their personal space on the floor like last time place their toy

i. in front of you,

ii. behind you,

iii. above you

iv. below you,

v. on you,

vi. under you,

vii. away from you,

viii. close to you

ix. between your hands,

x. on top of your feet.

2. **Gravity** – Return to whole group. Pick up various classroom materials (pencil, book, eraser, etc.). Ask students what will happen to the material if you let go of it while holding it in the air. This is because of gravity, which causes things to fall to the earth. Do multiple experiments, explaining that scientists try something multiple times to make sure it’s true.

3. **Gravity In the outdoor classroom** – Students will go outside to raised planks(slope-lines or surfaces with one end higher than the other) and bridge in the outdoor classroom, to observe as they roll their wheeled objects down. Student releases object from top of the slope and observe gravity at work.

4. Discussion – Return to the classroom to ask students why the toys will still roll downhill even though they didn’t have to push or pull.

Students should remember their new science term, gravity.

Adaptations/ Differentiation:

Related Readings:

Prairie Crossing Charter School [Force and Motion]Page 13

And Everyone Shouted, "Pull!": A First Look at Forces and Motion by Claire Llewellyn

Motion: Push and Pull, Fast and Slow by Darlene Stille

Push and Pull by Robin Nelson

Forces and Motion by John Graham

Resources: [Push and Pull Song](#)

[Push and Pull with Kids](#)

[Gravity Song](#)

http://www.bbc.co.uk/schools/scienceclips/ages/5_6/pushes_pulls.shtml

video game to demonstrate pushes and pulls

Song-Gravity (to be sung to the tune of London Bridges)

Chorus: Gravity is pulling down,
Pulling down, pulling down
Gravity is pulling down
All around you!

Take a ball and toss it high.

Will it stay in the sky?
Gravity will pull it down
All around you.

Chorus: Gravity is pulling down,
Pulling down, pulling down
Gravity is pulling down
All around you!

Jump up high and down you'll go

There's a force down below
Gravity is pulling down
All around you!

Chorus: Gravity is pulling down,
Pulling down, pulling down
Gravity is pulling down
All around you!

Speeding Up, Adding Weight

Overview: Students will use wheeled cars and add a push or pull when moving them along with adding weight to the cars.

Essential question:

- How do you increase speed?
- How do you increase a force on an object?

Key concepts and Vocabulary:

- Students will understand that with an extra push an object will move faster.
- Students will understand that when you add weight an object is harder to pull.
- Vocabulary- speed, fast, faster, slow, slower, weight, heavier, lighter, harder, easier

Student Performance Objectives:

- Students will work in small groups and experiment with pushes and pulls.
- Students will identify what happens when you give an object and extra push.
- Students will hypothesize what will happen if weight is added to their wooden cars.
- Students will identify what happened when they added weight to their wooden cars.

Time Required: 45 minutes

Standards:

- K-PS2-1, K-PS2-2, KPS3.C, K.MD.A.1, K.MD,A.2

Assessments/Performance Tasks:

Materials needed/Advanced preparation required:

- wheeled cars with string attached (6)
- weights to add to car, 3 per group

Background Information:

Prior to entering kindergarten, many students have developed an understanding of the motion of objects. They think of forces as active pushes and pulls that are needed to explain an object's motion.

Learning Activities/ Procedure:

1. **Wheeled cars** – Remind students that little wheeled cars are science tools and not toys. Let students experiment with pushes and pulls in small groups first. While they're working, ask

students, “What if your friend is pulling the car by the string and you give it an extra push? What happens? Test this out.”

2. Discussion on change in speed – Call students back to whole group. Ask students what happened when they added a push or a pull? What happened to the speed of the car? Students should notice that with an extra push, objects can travel faster.

3. Adding Weight – Ask students, “What will happen if I add this weight to my car? How will it feel? Will it be easier or harder? Give students time to hypothesize before testing it out with the weights. Give students all 3 weights and ask them to be scientists – everyone try pushing and pulling the cart with no weights, then 1 weight, then 2 weights, finally 3 weights. Tell students they will come back to discuss their scientific findings as a whole group when they’re done experimenting.

4. Discussion on adding weight – What happened when you added more weight? What felt harder to pull? Why?

Adaptations/ Differentiation:

Discuss other objects: What kinds of objects need a push? What objects need a pull? Let students tell you a variety of every-day objects that they either push or pull. Does it matter how much something weighs for how easy it is to push or pull?

Related Readings:

And Everyone Shouted, "Pull!": A First Look at Forces and Motion by Claire Llewellyn

Motion: Push and Pull, Fast and Slow by Darlene Stille

Push and Pull by Robin Nelson

Forces and Motion by John Graham

Resources: [Push and Pull Song](#)

[Push and Pull with Kids](#)

[Gravity Song](#)

Shapes in Motion

Overview: Students will sort geometric shapes by their ability to roll, test shapes to roll across the floor and draw which shape rolled best and label it.

Essential question:

- What is it about shapes that make them easier or harder to pull?

Key concepts and Vocabulary:

- Students will identify which shapes are easy to pull and hard to pull.
- Vocabulary- push, speed, shape, size, faster, slower, smooth, edges, points

Student Performance Objectives:

- Students will hypothesize which shapes will be easiest to roll across the circle.
- Students will test different objects and identify which ones are easy to roll and which ones are hard to roll.

Time Required: 45 minutes

Standards:

- K-PS2-1, K-PS2-2, SL.K.3, K.MD.A.1, K.MD.A.2

Assessments/Performance Tasks:

Materials needed/Advanced preparation required:

- Geometric Shapes
- Prediction paper

Background Information:

Students should know that a cube has points and a sphere is smooth.

Learning Activities/ Procedure:

1. **Predicting how shapes will roll** – Geometric shapes will be used to test how pushes and pulls work on various shapes. Sit in whole group with your class in a circle. Tell students to think about which shapes they think will be easiest to roll across the circle. Once students have had time to think, ask individuals to sort the shapes into “rolls well” or “doesn’t roll well” piles, one student at a time coming up to choose an object and put it in one of the piles. Encourage students that many scientists do not agree before testing something, but they don’t argue about it – they do scientific testing to find out what is true.

2. **Rolling shapes** – Roll each object across the circle to a student, one at a time. Discuss if they were right – does it roll well or is it tricky to roll? Some shapes, like cubes, don’t roll well because you have to push so much harder, or use more force, to get them to move. Stress that

you're trying to make them all equal by pushing the same amount each time.

Note: Make sure to discuss why some objects rolled faster or more easily than others. What is it about their shape that made it easier to roll?

Adaptations/ Differentiation:

High students- have them write down their predictions for which shape will be easier to pull and which shape will be harder to pull

Average students- have them draw which shape will be easier to pull and which shape will be harder to pull and label each picture.

Low students- have them draw which shape will be easier to pull and which shape will be harder to pull.

Related Readings:

And Everyone Shouted, "Pull!": A First Look at Forces and Motion by Claire Llewellyn

Motion: Push and Pull, Fast and Slow by Darlene Stille

Push and Pull by Robin Nelson

Forces and Motion by John Graham

Resources: [Push and Pull Song](#)

[Push and Pull with Kids](#)

[Gravity Song](#)

Sorting Motion Words

Overview: Students will sort words from lesson 1 into categories of direction, speed and position.

Essential question:

- What words can I use to describe an object's position?

Key concepts and Vocabulary:

- Students will sort words into 3 categories: **direction, speed, and position.**
- Vocabulary- right, left, fast, slow, away, close, on, under, in front of, behind, between, above, below, on top of, faster, slower

Student Performance Objectives:

- Students will identify which vocabulary words belong in which category (direction, speed and position)

Time Required: 25 minutes

Standards:

- SL.K.3, K.MD.A.1

Assessments/Performance Tasks:

Materials needed/Advanced preparation required:

- Take chart paper words for how objects move (lesson 1) and cut them apart
- New chart paper and marker
- Tape or glue

Learning Activities/ Procedure:

1. Prep: Take chart paper words for how objects move (lesson 1) and cut them apart.
2. Have students help you sort the words into 3 categories: direction, speed, and position. Write these categories on the chart paper and tape words onto the category they belong in. Students may have new words they want to add after all the experimenting they have done. Let students decide which category these new words belong in and just write them on the chart. Below are some examples students may come up with:
 1. Direction: right, left
 2. Speed: fast, slow
 3. Position: away, close, on, under, in front of, behind

Adaptations/ Differentiation:

Related Readings:

And Everyone Shouted, "Pull!": A First Look at Forces and Motion by Claire Llewellyn

Motion: Push and Pull, Fast and Slow by Darlene Stille

Push and Pull by Robin Nelson

Forces and Motion by John Graham

Resources:

[Push and Pull Song](#)

[Push and Pull with Kids](#)

[Gravity Song](#)

“What Would Happen If...” Game

Overview: Students will predict what will happen to an object after the teacher has described an action. Students will practice using specific scientific language.

Essential question:

- What words can I use to describe an object’s position?

Key concepts and Vocabulary:

- Students will be able to identify what will happen to an object when you ask “What will happen if I **push** the book **away from** me?” “What will happen if I **pull** the book **towards** me?”

Student Performance Objectives:

- Students will be able to play the game “What Would Happen if...” with a partner using the scientific language such as- push, pull, drop etc.

Time Required: 30 minutes

Assessments/Performance Tasks:

Materials needed/Advanced preparation required:

- Various objects chosen from around the room

Learning Activities/ Procedure:

1. Take an object from the room and either hold it in the air to drop, or put your hand on it as if to push it on the floor, or put your hand on it as if to pull it towards you, etc. Act as if you will do the action (but don’t do it yet!) and describe what you will do by asking students, “What will happen if I _____.”
2. Call on individuals to tell you what will happen, using their new scientific words on pushes and pulls. Then have students come up and take a turn, using their scientific words. They may call on students to guess what will happen. Students can play this in small groups as well. Make sure they refer to your poster from lesson 6 for scientific words.
3. Example: Jerry puts his hand on the edge of the book and says, “What will happen if I push the book away from me?” It may help students if you model this quite a bit so they understand the formula.

Adaptations/ Differentiation:

Related Readings:

And Everyone Shouted, "Pull!": A First Look at Forces and Motion by Claire Llewellyn

Motion: Push and Pull, Fast and Slow by Darlene Stille

Push and Pull by Robin Nelson

Forces and Motion by John Graham

Resources: [Push and Pull Song](#)

[Push and Pull with Kids](#)

[Gravity Song](#)

Parent letter to be sent home prior to Unit.

Prairie Crossing Charter School

Kindergarten

December 6, 2013

Dear Parents,

Our next science unit, Forces and Motion will be starting on Monday, December 9. Your child will be reading books about gravity, force and motions and push and pull.

Your child will need a small wheeled car or truck **WITHOUT Batteries or any sounds and not a transformer car and please label with your child's name for** Monday and Tuesday 12/9/13 and 12/10/13!

Your child will be learning these key concepts;

- A force is a push or a pull that makes an object move. The motion of objects can be changed by a push or a pull.
- Gravity: Earth pulls down on all objects with a force called gravity. With very few exceptions, objects fall to the ground no matter where the object is on the Earth.
- Pushes and Pulls can change the speed or direction of moving objects.
- Shape of objects can affect the motion.

Your child will be learning these vocabulary words;

- Push
- Pull
- Towards
- Away from
- Right
- Left
- On
- Under
- Away
- Close
- Top
- Gravity

Share and Learn

Walk around your home with your child. Look for objects that move by pulling or pushing. Write their names in the appropriate column on the chart below and draw a picture. Ask this question: Is this object easy or hard to push? Is this object easy or hard to pull?

Things That Move by Pushing	Things That Move by Pulling

http://www.bbc.co.uk/schools/scienceclips/ages/5_6/pushes_pulls.shtml

Here is a link to a video game that demonstrates pushes and pulls.

Mrs. Barnett and Mrs. Berger

Pushes and Pulls

add in scanned Assessment for pre and post testing

add in Student booklet

My Push and Pull Book

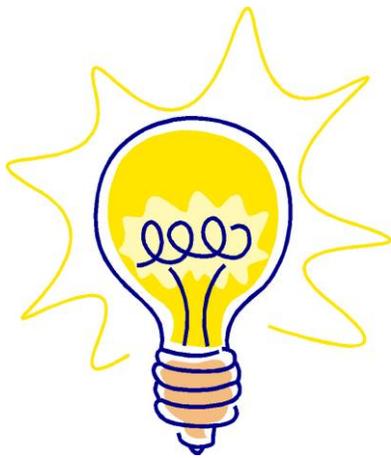
Higher level books to read aloud

Poem and songs for forces motion

online game to illustrate force & motion/technology

Waves:

Light and Sound



First Grade

Next Generation Science Standards

TBA ISD June 2013

Created by:

Sue Bishop, Erika Olvey and Annie Grammer

Teacher Introduction to Waves: Light and Sound

During the study of light and sound waves students will develop their science skills through inquiry, prediction, observation, exploration, discussion and recording. These lessons focus on students collaboratively problem solving, discovering and investigating to find answers and solutions. They will answer questions such as; What happens when materials vibrate? What objects can be used to communicate over a distance? What happens when light is blocked or when materials of different kinds are placed in the path of a beam of light? Each lesson includes science and engineering practices, disciplinary core ideas and crosscutting concepts which are a part of Next Generation Science Standards.

These lessons were designed to allow students to make their own predictions and observations while testing and recording their findings. Our lessons were planned using the 5-E Learning Cycle Model. Each lesson is broken down into the following categories; Engage, Explore, Explain, Extend and Evaluate. We also chose to break the lessons into sessions. Some lessons may take 1-2 thirty minute sessions. We included suggestions as to how we would break those lessons; please use these lessons as they fit into your schedule. Each lesson contains pertinent information to assure that all of the standards are addressed.

Student journal pages are included after each lesson. There are 3 performance assessments included in the student journal. Make sure to keep the student journals until those have been recorded on the final assessment page.

1.Waves: Light and Sound

1.Waves: Light and Sound

Students who demonstrate understanding can:

- 1-PS4-1. Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate.** [Clarification Statement: Examples of vibrating materials that make sound could include tuning forks and plucking a stretched string. Examples of how sound can make matter vibrate could include holding a piece of paper near a speaker making sound and holding an object near a vibrating tuning fork.]
- 1-PS4-2. Make observations to construct an evidence-based account that objects can be seen only when illuminated.** [Clarification Statement: Examples of observations could include those made in a completely dark room, a pinhole box, and a video of a cave explorer with a flashlight. Illumination could be from an external light source or by an object giving off its own light.]
- 1-PS4-3. Plan and conduct an investigation to determine the effect of placing objects made with different materials in the path of a beam of light.** [Clarification Statement: Examples of materials could include those that are transparent (such as clear plastic), translucent (such as wax paper), opaque (such as cardboard), and reflective (such as a mirror).] [Assessment Boundary: Assessment does not include the speed of light.]
- 1-PS4-4. Use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance.*** [Clarification Statement: Examples of devices could include a light source to send signals, paper cup and string “telephones,” and a pattern of drum beats.] [Assessment Boundary: Assessment does not include technological details for how communication devices work.]

The performance expectations above were developed using the following elements from the NRC document *A Framework for K-12 Science Education*:

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
<p>Planning and Carrying Out Investigations Planning and carrying out investigations to answer questions or test solutions to problems in K–2 builds on prior experiences and progresses to simple investigations, based on fair tests, which provide data to support explanations or design solutions.</p> <ul style="list-style-type: none"> Plan and conduct investigations collaboratively to produce data to serve as the basis for evidence to answer a question. (1-PS4-1),(1-PS4-3) <p>Constructing Explanations and Designing Solutions Constructing explanations and designing solutions in K–2 builds on prior experiences and progresses to the use of evidence and ideas in constructing evidence-based accounts of natural phenomena and designing solutions.</p> <ul style="list-style-type: none"> Make observations (firsthand or from media) to construct an evidence-based account for natural phenomena (1-PS4-2) Use tools and materials provided to design a device that solves a specific problem. (1-PS4-4) <p style="text-align: center;">-----</p> <p style="text-align: center;">Connections to Nature of Science</p> <p>-----</p> <p>Scientific Investigations Use a Variety of Methods</p> <ul style="list-style-type: none"> Science investigations begin with a question. (1-PS4-1) Scientists use different ways to study the world. (1-PS4-1) 	<p>PS4.A: Wave Properties</p> <ul style="list-style-type: none"> Sound can make matter vibrate, and vibrating matter can make sound. (1-PS4-1) <p>PS4.B: Electromagnetic Radiation</p> <ul style="list-style-type: none"> Objects can be seen if light is available to illuminate them or if they give off their own light. (1-PS4-2) Some materials allow light to pass through them, others allow only some light through and others block all the light and create a dark shadow on any surface beyond them, where the light cannot reach. Mirrors can be used to redirect a light beam. (Boundary: The idea that light travels from place to place is developed through experiences with light sources, mirrors, and shadows, but no attempt is made to discuss the speed of light.) (1-PS4-3) <p>PS4.C: Information Technologies and Instrumentation</p> <ul style="list-style-type: none"> People also use a variety of devices to communicate (send and receive information) over long distances. (1-PS4-4) 	<p>Cause and Effect</p> <ul style="list-style-type: none"> Simple tests can be designed to gather evidence to support or refute student ideas about causes. (1-PS4-1),(1-PS4-2),(1-PS4-3) <p style="text-align: center;">-----</p> <p style="text-align: center;">Connections to Engineering, Technology, and Applications of Science</p> <p>-----</p> <p>Influence of Engineering, Technology, and Science, on Society and the Natural World</p> <ul style="list-style-type: none"> People depend on various technologies in their lives; human life would be very different without technology. (1-PS4-4)
<p><i>Connections to other DCIs in first grade:</i> N/A</p> <p><i>Articulation of DCIs across grade-levels:</i> K.ETS1.A (1-PS4-4); 2.PS1.A (1-PS4-3); 2.ETS1.B (1-PS4-4); 4.PS4.C (1-PS4-4); 4.PS4.B (1-PS4-2); 4.ETS1.A (1-PS4-4)</p>		
<p><i>Common Core State Standards Connections:</i></p> <p>ELA/Literacy –</p> <p>W.1.2 Write informative/explanatory texts in which they name a topic, supply some facts about the topic, and provide some sense of closure. (1-PS4-2)</p> <p>W.1.7 Participate in shared research and writing projects (e.g., explore a number of “how-to” books on a given topic and use them to write a sequence of instructions). (1-PS4-1),(1-PS4-2),(1-PS4-3),(1-PS4-4)</p> <p>W.1.8 With guidance and support from adults, recall information from experiences or gather information from provided sources to answer a question. (1-PS4-1),(1-PS4-2),(1-PS4-3)</p> <p>SL.1.1 Participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups. (1-PS4-1),(1-PS4-2),(1-PS4-3)</p> <p>Mathematics –</p> <p>MP.5 Use appropriate tools strategically. (1-PS4-4)</p> <p>1.MD.A.1 Order three objects by length; compare the lengths of two objects indirectly by using a third object. (1-PS4-4)</p> <p>1.MD.A.2 Express the length of an object as a whole number of length units, by layering multiple copies of a shorter object (the length unit) end to end; understand that the length measurement of an object is the number of same-size length units that span it with no gaps or overlaps. (1-PS4-4)</p>		

*The performance expectations marked with an asterisk integrate traditional science content with engineering through a Practice or Disciplinary Core Idea.

The section entitled “Disciplinary Core Ideas” is reproduced verbatim from A Framework for K-12 Science Education: Practices, Cross-Cutting Concepts, and Core Ideas. Integrated and reprinted with permission from the National Academy of Sciences.

Dear Family,

Our class is starting to learn about sound and light. My teacher said we're going to be exploring and experimenting with a lot of fun stuff. We get to be scientists!

These are the main ideas of our unit.

- Sounds are made when something vibrates
- Sounds can be loud or soft and high or low
- We use sound and light to communicate
- A shadow is made when something blocks the light.

These are a few of our new vocabulary words.

- Translucent
- Opaque
- Illumination
- Communication
- Transparent
- Reflective
- Vibration

Here are a few fun ways you can help me at home.

- We can put out different sized cooking pans and use spoons to tap on them to hear different sounds.
- We can use a few of the same size drinking glasses and fill them with different amounts of water. Then we lightly tap on them and listen to the different sounds they make.
- Using a flashlight or lamp we can shine it against a blank wall and put different objects in front of it to make shadows.

There are also a couple of good books that we can get from the library.

ZIN! ZIN! ZIN! A Violin by Lloyd Moss

What Makes a Shadow? by Clyde Robert Bulla

One more thing. . . I need to bring a **toilet paper tube** for one of our first activities.

Thanks for helping me be a great student!



Lesson 1*

Focus: 5 Senses

Length: 1- 30 minute session

Materials:

- *My Five Senses* by Aliko
- Student Journal cover and pg. 1

Student Grouping/Class Set Up: Whole Group

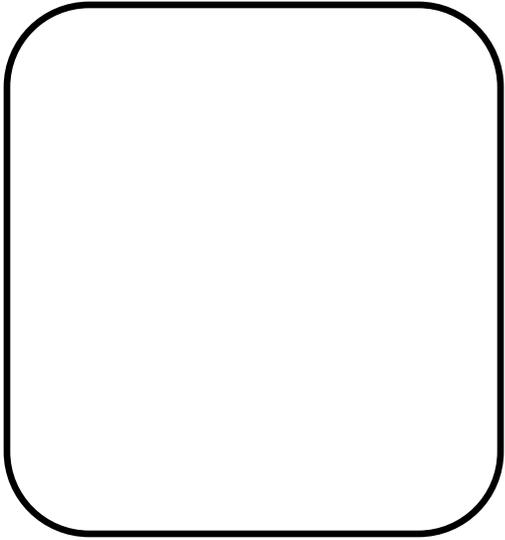
Engage: Read the book *My Five Senses* aloud to the class. Then explain that they will complete the student journal page. They need to draw and label two examples of each of the five senses.

Explore: As students finish their first journal page they can discuss their drawings and explore the journal with their friends.

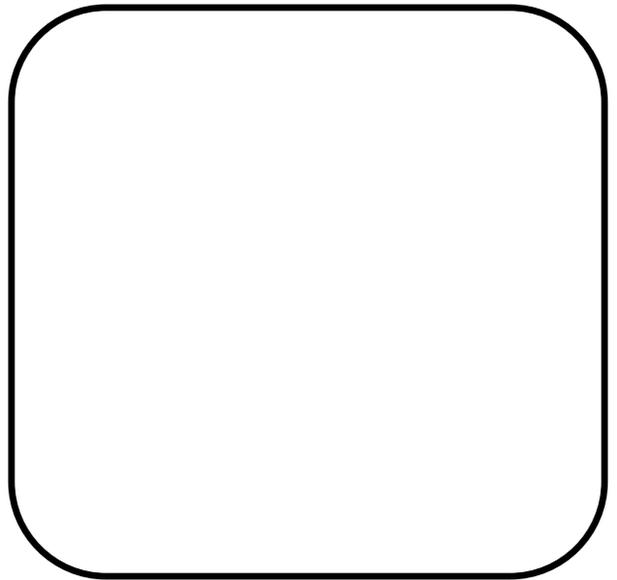
Explain: After the kids explore their journals, see if they can tell you what 2 senses we will be focusing on. Discuss where light and sound come from and then they can do the front cover of the journal.

* This lesson is optional and can be used to introduce or review the 5 senses if you think your students need it. If not, please continue to the next lesson.

Name _____



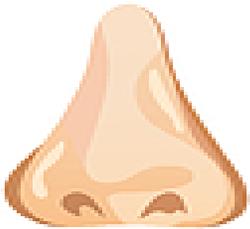
Draw pictures of things that make
light or sound.



Student Journal

First Grade- Waves: Light and Sound

Draw two pictures to go with each of the 5 senses.



Lesson 2: The Listening Walk

Length: 1- 30/40 minute session

Materials:

The Listening Walk by Paul Showers

All About Sound by Lisa Trumbauer

Large piece of paper for anchor chart

Student Journal pages 2 & 3

Performance Expectations: 1-PS4-1. Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate.

Student Grouping/Class Set Up: Whole Group

Engage: What sounds can we hear in our school? Record answers on anchor chart with the whole group. Read the book *Listening Walk* and add any other ideas the students may have after listening to the book.

Explore: Introduce the Listening Walk (student journal page 2). With a partner the students will walk around the school listening for the sounds on the chart. When they hear a sound they will color the appropriate box. If they hear a sound that is not on the chart they can add it in one of the blank boxes.

Explain: When the class returns from the listening walk, have partners report their findings to the class. Add new sounds to the anchor chart if necessary.

Elaborate: Read the book *All About Sound* and discuss any new words they heard, especially vibration. Introduce the Sound Song (student journal page 3) and sing it a couple of times.

Evaluate: Keep the student journals so that observations can be made at the end of the unit.

Science & Engineering Practices:	Disciplinary Core Ideas:	Crosscutting Concepts:
<ul style="list-style-type: none"> <input type="checkbox"/> Asking questions (science) and defining problems (engineering) <input type="checkbox"/> Developing and using models <input type="checkbox"/> Planning and carrying out investigations <input type="checkbox"/> Analyzing and interpreting data <input type="checkbox"/> Using mathematics and computational thinking <input type="checkbox"/> Constructing explanations (science) and designing solutions (engineering) <input type="checkbox"/> Engaging in argument from evidence <input type="checkbox"/> Obtaining, evaluating, and communicating information 	<p>PS4.A: Wave Properties</p> <ul style="list-style-type: none"> - Sound can make matter vibrate, and vibrating matter can make sound. (1-PS4-1) 	<ul style="list-style-type: none"> <input type="checkbox"/> Patterns <input type="checkbox"/> Cause and effect: Mechanism and explanation <input type="checkbox"/> Scale, proportion, and quantity <input type="checkbox"/> Systems and system models <input type="checkbox"/> Energy and matter: Flows, cycles, and conservation <input type="checkbox"/> Structure and function <input type="checkbox"/> Stability and change

S o u n d

to the tune of "London Bridge"

Sound is made of vibrations,
vibrations, vibrations

Sound is made of vibrations,
hmmm, hmmm, hmmm, hmmm.

(place hand on throat to feel vibration)

Pitch is either high or low,
high or low, high or low,
Pitch is either high or low,
high or low.

(Up on tippy-toes, then down to the floor)

Volume means it's loud or soft,
loud or soft, loud or soft,
Volume means it's loud or soft,
loud or soft.

(LOUD is said loudly, soft is said softly)

Sound is made of vibrations,
vibration, vibrations

Sound is made of vibrations,
hmmm, hmmm, hmmm, hmmm.

(place hand on throat to feel vibration)

The Listening Walk

Listen carefully for each of these sounds.
Color a square for each of the sounds you hear.

cough	singing	footsteps
loud speaker	talking	paper shuffling
door shutting	sneeze	shouting
pencil sharpener	phone ringing	laughing

Lesson 3: What's the Buzz!

Length: 1- 30/40 minute session

Performance Expectations: Make and use a kazoo to discover how vibrations create sound waves that travel through the air to your ear. Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate. (Standard 1-PS4-1)

Materials:

- Toilet paper tubes (from home per parent letter) with small holes precut
- waxed paper (cut into 4X4 squares)
- aluminum foil (cut into 4x4 squares)
- plastic wrap (cut into 4x4 squares)
- rubber bands

Student Grouping/Class Set Up: Partners to help with creating the kazoo. Each student makes their own kazoo.

Engage: Today we will make an instrument that anyone can play and get the buzz on sound vibrations. Vibrations create sound waves that travel through the air. Have you ever tossed a pebble or stone into the lake or a pool? Did you notice the waves created by your stone? Sound waves travel through the air kind of like the circle of ripples created by tossing a stone into the water. Today we are going to make a Kazoo to investigate vibrations that cause sound wave.

Explore: Students will make a kazoo and experiment with different kinds of sounds to see what causes the loudest buzzing.

Explain: See attached page for directions (What's the Buzz?)

Elaborate: Play it! Place the open end of the kazoo lightly over your mouth and say AHHH! What happens? Now sing or hum a tune into it. Try making different kinds of sound to see what causes the loudest buzzing.

Extensions: Touch the waxed paper with your finger while you play your Kazoo. What do you notice? Now cover the hole with your finger while you play the Kazoo. What happens? Does the hole make it easier or harder to play? Why?

Evaluate: Whole group discussion to determine if students have understood the concept that Vibrations cause sound waves that our ears convert into noise or voices.

Extension Activity: Make more Kazoos, changing one thing (called a variable). Try using tin foil or plastic wrap instead of waxed paper. Does it change anything? Make a prediction which material you think will make the loudest/quietist sound. Test it out and then check your predictions.

<p>Science & Engineering Practices:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Asking questions (science) and defining problems (engineering) <input type="checkbox"/> Developing and using models <input type="checkbox"/> Planning and carrying out investigations <input type="checkbox"/> Analyzing and interpreting data <input type="checkbox"/> Using mathematics and computational thinking <input type="checkbox"/> Constructing explanations (science) and designing solutions (engineering) <input type="checkbox"/> Engaging in argument from evidence <input type="checkbox"/> Obtaining, evaluating, and communicating information 	<p>Disciplinary Core Ideas:</p> <p>PS4-A: Wave Properties Sound can make matter vibrate and vibrating matter can make sound. (1-PS4-1)</p>	<p>Crosscutting Concepts:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Patterns <input type="checkbox"/> Cause and effect: Mechanism and explanation <input type="checkbox"/> Scale, proportion, and quantity <input type="checkbox"/> Systems and system models <input type="checkbox"/> Energy and matter: Flows, cycles, and conservation <input type="checkbox"/> Structure and function <input type="checkbox"/> Stability and change
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What's the BUZZ?

Make an instrument that anyone can play—a kazoo—and get the buzz on sound vibrations!



1 Get what You need.

- toilet paper tubes • waxed paper • aluminum foil • plastic wrap • rubber bands • scissors
- sharpened pencil • plastic comb (optional—for Dig Deeper activity on back of sheet)

2 Make a kazoo.

- Use a pencil to make a small hole about two inches from one end of the cardboard tube.
- Cut a square of waxed paper that's an inch or two wider than the end of the tube.
- Wrap the waxed paper tightly over the end of the tube where you made the hole. Hold it in place with a rubber band, making sure you don't cover the hole you made. Trim off any excess waxed paper with scissors.

3 Play it!

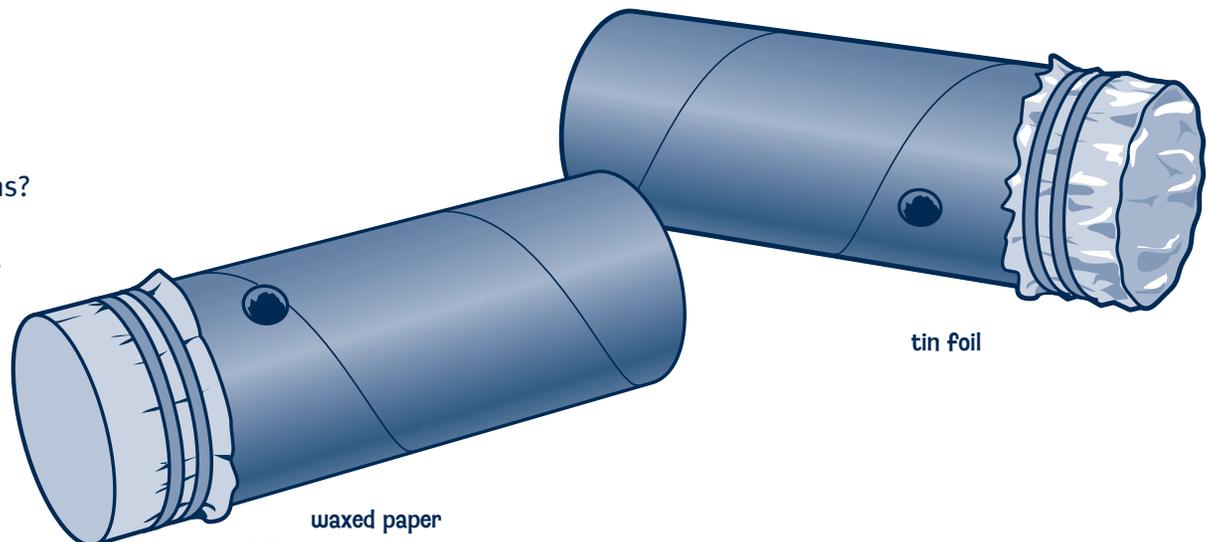
Place the open end of the kazoo lightly over your mouth and say, "AAHHH!" What happens? Now sing or hum a tune into it. Try making different kinds of sounds to see what causes the loudest buzzing.

4 Experiment.

- Touch the waxed paper with your finger while you play the kazoo. What do you notice?
- Cover the hole with your finger while you play the kazoo. What happens? Does the hole make it easier or harder to play it? Why?
- Make more kazoos, changing one thing (called a *variable*). Instead of waxed paper, try tin foil or plastic wrap. Predict which material you think will make the best sound. Test it out. Were your predictions right?

Chew on This!

All sound is made up of *vibrations* (rapid back-and-forth movement), which produce sound waves that travel through the air to our ears. When you play a kazoo, air carries the sound waves from your mouth down the tube, making the waxed paper vibrate. You can feel those vibrations if you touch the waxed paper.



Lesson 4: Making a Splash and Musical Rulers

Length: 2- 30 minute sessions

Performance Expectations: Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate. (Standard 1-PS4-1) Students will observe simple objects, patterns and events and report their observations in a simple graph.

Background: All sound is made up of vibrations which produce sound waves that travel through the air to our ears. Vibrating matter can make sound and sound makes matter vibrate causing sound waves to travel through the air.

Materials:

- tuning forks
- bowl of water
- 12 inch plastic rulers

Student Grouping/Class Set Up: Split students into 2 groups (1 adult with each group if possible)

Engage: Today we will experiment with a musical tool called a tuning fork. Prompt students with prior knowledge questions and let them practice using the tuning forks and rulers in an appropriate way. They need to be in 2 groups (Suggestion- 1 group will do “Making a Splash” one day and “Magical Rulers” the next day.)

Explore:

Group #1: Put the bowl of water on a surface where students will be able to make observations. With one of the tuning forks, hit it so it vibrates. Quickly put it in the water and observe what it does. How far did the water splash? Try the same thing with each tuning fork. Using the Making a Splash (student journal page 4) observe patterns, cause and effect and record observations.

Group #2: Using a 12 inch plastic ruler observe the difference in the sounds when the ruler is extended over the table at different lengths. Put the ruler at the edge of the table so half of it hangs over the edge. Hold the ruler down with the palm of one hand on the table. With your other hand push the end of the ruler down and let it go. Observe the vibrations of your ruler and the sound it makes. Write your observations on Musical Rulers (student journal page). Keep doing this until you can't press it down any more each time recording your results on your chart.

Elaborate: Compare your observations with a classmate.

Evaluate: Whole group discussion to determine if students have understood the concept that vibrations cause sound waves that our ears convert into noise or voices. Use attached discussion questions to lead and review of the similarities and differences that were observed with each experiment.

Science & Engineering Practices:	Disciplinary Core Ideas:	Crosscutting Concepts:
<ul style="list-style-type: none"> <input type="checkbox"/> Asking questions (science) and defining problems (engineering) <input type="checkbox"/> Developing and using models <input type="checkbox"/> Planning and carrying out investigations <input type="checkbox"/> Analyzing and interpreting data <input type="checkbox"/> Using mathematics and computational thinking <input type="checkbox"/> Constructing explanations (science) and designing solutions (engineering) <input type="checkbox"/> Engaging in argument from evidence <input type="checkbox"/> Obtaining, evaluating, and communicating information 	<p>PS4-A: Wave Properties Sound can make matter vibrate and vibrating matter can make sound. (1-PS4-1)</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Patterns <input type="checkbox"/> Cause and effect: Mechanism and explanation <input type="checkbox"/> Scale, proportion, and quantity <input type="checkbox"/> Systems and system models <input type="checkbox"/> Energy and matter: Flows, cycles, and conservation <input type="checkbox"/> Structure and function <input type="checkbox"/> Stability and change

Discussion Questions for Making a Splash:

What did you observe each time you put a tuning fork in the bowl of water?

What are some similarities that you noticed with the tuning forks?

What are some differences that you noticed with the tuning forks?

Why do you think there were changes between the tuning forks?

What conclusions can you make about this exploration?

Discussion Questions for Musical Rulers:

What did you observe each time you moved the ruler?

What are some similarities in sound that you noticed?

What are some differences in sound that you noticed?

Why do you think there were changes each time you moved the ruler?

What conclusions can you make about this exploration?

Making a Splash

Materials:

- Tuning Fork labeled A, B, C
- Bowl of water
- Colored piece of paper

Procedure:

1. Put the bowl of water on a colored piece of paper.
2. With one of the tuning forks, hit it so it vibrated. Quickly put it in the water. Observe what it does. Measure how far the water splashes.
3. Repeat #2 with each tuning fork and record observations below.

	Observations
Tuning Fork A	
Tuning Fork B	
Tuning Fork C	

Musical Rulers

Materials:

- Plastic Ruler marked 1, 2, 3

Procedure:

1. Put the plastic ruler on the table so that the edge is lined up with the first mark on the ruler.
2. Holding the ruler against the table with one hand, push the other side down gently and let go. Feel the vibration? Hear the music?
3. Observe the vibration and sound the ruler is making and record your observations below.
4. Repeat for the 2nd and 3rd mark on the ruler and record observations.

	Observations
Ruler Mark 1	
Ruler Mark 2	
Ruler Mark 3	

Lesson 5: Cup-a-Phone

Length: 2- 30/40 minute sessions

Performance Expectations:

1-PS4-1. Plan and conduct investigations to provide evidence that vibrating materials can make sound and that sound can make materials vibrate.

1-PS4-4. Use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance.

Materials:

- Paper cups and Styrofoam cups
- Cotton string (precut into 36 inch pieces)
- Fishing line
- bar of soap
- paper clips
- scissors

Student Grouping/Class Set Up: Whole Group and Partner Groups

Engage: Draw a giant web on an anchor chart and write “Communication” in the middle. Ask students for examples of how people can communicate. Examples: calling, texting, sign language, Morse code, social media, light signals, yelling, school bells, barking, movement. (Keep this web for a lesson and journal page later in the unit) Students will then be guided through the making of a cup-a-phone.

Directions: Give each student 1 piece of cotton string and 2 paper cups. The students need to poke a hole in the bottom of their cup with their pencil and put the string through it. Then they need to tie a paper clip to the end of the sting inside the cup. Repeat for the other cup.

Explore: Students need to collaborate with a partner to try out their phones. Let them explore and come up with the answers about how the phones work. Some students may need to go in the hallway to hear each other.

Explain: After students have had a chance to explore with their paper cup-a-phone bring them together as a whole group and discuss what made it possible for them to hear each other. **Key idea: vibrating materials make sound and sound can make materials vibrate.**

Engage/Explore/Evaluate: (Suggestion- 2nd 30-40 minute session) Students are now going to use different materials to design and build a device that allows them to communicate over a distance. They are going to make another phone but need to make their own decisions on materials and record their observations. It’s time for them to be scientists!

Directions: Using “I’m a Scientist” (student journal page 6) to guide them, students need to make another cup-a-phone. They will choose one variable; string length, Styrofoam cup or fishing line. Encourage them to only have 1 variable. Then they will make a hypothesis, record their observations and evidence and come to a conclusion. This is going to be used as an assessment so try not to guide students but let them explore and come to their own conclusions.

Evaluate: On the back of student journal page 6 record assessment data.

<p>Science & Engineering Practices:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Asking questions (science) and defining problems (engineering) <input checked="" type="checkbox"/> Developing and using models <input checked="" type="checkbox"/> Planning and carrying out investigations <input type="checkbox"/> Analyzing and interpreting data 	<p>Disciplinary Core Ideas:</p> <p>PS4.A: Wave Properties <input checked="" type="checkbox"/> Sound can make matter vibrate, and vibrating matter can make sound. (1-PS4-1)</p> <p>PS4.C: Information Technologies and Instrumentation <input checked="" type="checkbox"/> People also use a variety of devices to communicate (send and</p>	<p>Crosscutting Concepts:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Patterns <input checked="" type="checkbox"/> Cause and effect: Mechanism and explanation <input type="checkbox"/> Scale, proportion, and quantity <input type="checkbox"/> Systems and system models <input type="checkbox"/> Energy and matter: Flows, cycles, and conservation
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<ul style="list-style-type: none"> <input type="checkbox"/> Using mathematics and computational thinking <input type="checkbox"/> Constructing explanations (science) and designing solutions (engineering) <input type="checkbox"/> Engaging in argument from evidence <input type="checkbox"/> Obtaining, evaluating, and communicating information 	<p>receive information) over long distances. (1- PS4-4)</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Structure and function <input type="checkbox"/> Stability and change
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I'M A SCIENTIST!

Circle the variable you used:

Styrofoam cups

Fishing Line

String length

Draw a picture of your device:

How will this be different than the model we built?

Draw or explain what you observed

Did your new device make a vibration?

Yes

No

Could you hear the vibration?

Yes

No

Performance Assessment

Variable Circled and Used ___ / 1

Picture of device ___ / 1

How will this be different ___ / 1

Draw/Explain Observations ___ / 1

Yes circled ___ / 1

Yes circled ___ / 1

Total ___ / 6

Lesson 6: In the Dark!

Length: 1- 30/40 minute session

Performance Expectations:

1-PS4-2. Make observations to construct an evidence-based account that objects can be seen only when illuminated.

Materials:

- *All About Light* by Lisa Trumbauer
- Pinhole boxes
- Small figurine
- Flashlights
- Student Journal pages 7 & 8

Student Grouping/Class Set Up: Partner work and individual work

Engage: Pose a problem about being in a dark room with a friend. The room does not have windows and the lights went out. *Think about what you could use in order to be able to see your friend in the darkness.*

Explore: Have students use student journal page 7 to brainstorm ideas using pictures with labels. The students will share their ideas with the class. *Were there any ideas you didn't have in your journal?*

Explain: Explain that in order to see objects we need light. Read the book *All About Light* aloud to the class.

Elaborate: Working with a partner, the students will use the pinhole boxes to observe that objects need light to be seen. They will record findings and explanations on student journal page 8. Circulate the room as students explore with the pinhole boxes. Verify that they understand the concept that objects can only be seen when they are illuminated.

Directions:

- 1- **They need to look through into the closed dark pinhole box. Can they see the object?**
- 2- **Open the top of the box. Can they see the object?**
- 3- **Shine a flashlight into the pinhole box through the hole. Can they see the object?**

Evaluate: Student journal page 8 "Can you see it?" Follow up with class discussion of findings.

<p>Science & Engineering Practices:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Asking questions (science) and defining problems (engineering) <input type="checkbox"/> Developing and using models <input type="checkbox"/> Planning and carrying out investigations <input type="checkbox"/> Analyzing and interpreting data <input type="checkbox"/> Using mathematics and computational thinking <input type="checkbox"/> Constructing explanations (science) and designing solutions (engineering) <input type="checkbox"/> Engaging in argument from evidence <input type="checkbox"/> Obtaining, evaluating, and communicating information 	<p>Disciplinary Core Ideas:</p> <p>Objects can be seen if light is available to illuminate them or if they give off their own light. (1-PS4-2)</p>	<p>Crosscutting Concepts:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Patterns <input type="checkbox"/> Cause and effect: Mechanism and explanation <input type="checkbox"/> Scale, proportion, and quantity <input type="checkbox"/> Systems and system models <input type="checkbox"/> Energy and matter: Flows, cycles, and conservation <input type="checkbox"/> Structure and function <input type="checkbox"/> Stability and change
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In the Dark

You and your friend are in a room with no windows. The lights go out! What are some things you could use to be able to see each other?

Draw your ideas below. Don't forget to label them.

Can You See it?

When you look in the pinhole box, can you see the object?

Record your findings. Explain your thinking.

Look in the hole of the closed box.

Can you see the object? YES NO

Explain why or why not _____

Shine a flashlight in the hole of the closed box.

Can you see the object? YES NO

Explain why or why not _____

Open the lid of the box. Look in the hole of the box.

Can you see the object? YES NO

Explain why or why not _____

Lesson 7: What's that Glow?

Length: 1- 30/40 minute session

Performance Expectations:

1-PS4-2. Make observations to construct an evidence-based account that objects can be seen only when illuminated.

Materials:

- Flashlights
- Glow sticks and glow bracelets
- Paper bag
- Fireflies* by Julie Brinckloe

Student Grouping/Class Set Up: Whole Group

Engage: Put the flashlight and glow sticks in a paper bag so the kids can't see them yet. Start by setting the scene for kids. Let's pretend we're going on a camping trip in the deep woods. When night come it gets very dark. What could we use to help us see in the dark? Get the flashlight out of the bag and discuss how a flashlight illuminates and provides light. Ask if there is something else we could use that would give off its own light and help us see.

Explore: Crack the glow stick in the bag without them seeing and hold the bag closed at the top. Call a couple of kids up to peek in the bag (while you're holding it closed) to see if it's illuminated. Ask students what could be in there that caused it to be illuminated and give examples of cause and effect with darkness and lights. Example: I walked in a dark room and couldn't see so I . . . (Turned on a lamp or waited for my nightlight to light up). After they come to the conclusion that it's a glow stick, give each of them a glow bracelet and let them try to figure out what makes it illuminate.

Explain: Read *Fireflies* and explain that living and nonliving things illuminate in different ways and use their light for different reasons. Example: flashlights need batteries to illuminate, glow sticks break and have a chemical reaction.

Elaborate/Evaluate: Student journal page 9 "Illumination"

Science & Engineering Practices:	Disciplinary Core Ideas:	Crosscutting Concepts:
<ul style="list-style-type: none"> <input type="checkbox"/> Asking questions (science) and defining problems (engineering) <input type="checkbox"/> Developing and using models <input type="checkbox"/> Planning and carrying out investigations <input type="checkbox"/> Analyzing and interpreting data <input type="checkbox"/> Using mathematics and computational thinking <input type="checkbox"/> Constructing explanations (science) and designing solutions (engineering) <input type="checkbox"/> Engaging in argument from evidence <input type="checkbox"/> Obtaining, evaluating, and communicating information 	<p>Objects can be seen if light is available to illuminate them or if they give off their own light. (1-PS4-2)</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Patterns <input type="checkbox"/> Cause and effect: Mechanism and explanation <input type="checkbox"/> Scale, proportion, and quantity <input type="checkbox"/> Systems and system models <input type="checkbox"/> Energy and matter: Flows, cycles, and conservation <input type="checkbox"/> Structure and function <input type="checkbox"/> Stability and change

ILLUMINATIONS!

Color the sources of light.



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Can you think of any other light sources?

Draw and label them on the back.

Lesson 8: Camera Lens Magic

Length: 2- 30/40 minute sessions

Performance Expectations:

1-PS4-3. Plan and conduct an investigation to determine the effect of placing objects made with different materials in the path of a beam of light. [Clarification Statement: Examples of materials could include those that are transparent (such as clear plastic), translucent (such as wax paper), opaque (such as cardboard), and reflective (such as a mirror).]

Materials:

- 15 Cardboard Cameras with different lenses
- 15 flashlights (2 batteries each)
- 4 x 4 in Squares of Transparent, Translucent, Opaque and Reflective Materials
- Die-Cut Paper Cameras- 4 per student
- Glue sticks and scissors
- Student journal pages 10,11,12

Student Grouping/Class Set Up: Whole Group, partners and individual

Engage: Start by showing students an example of each of the 4 (translucent, transparent, opaque and reflective) squares. Discuss how light rays can pass through, reflect off, or are absorbed by an object and model the different materials with light rays. Model with a flashlight.

Explore: Put students into partners and give each pair a flashlight. Turn the lights off and let them explore with their flashlight using prior knowledge of what happens when light hits certain objects. After a couple of minutes pass out the cardboard cameras with different materials. Guide students to collaboratively work to see that some are translucent, transparent, opaque and reflective.

- 1) translucent objects let some light pass through
- 2) transparent objects let all light pass through
- 3) opaque objects let no light pass through
- 4) reflective objects redirect light and does not allow light to pass through

Explain: Pass out 4 die cut cameras to each student and give students a small piece of wax paper, tin foil, transparency paper and construction paper. Once students have constructed their cameras they will test them with various objects around the room and record their data on the data worksheet in their journal. Reflection is not included on the worksheet.

Elaborate: (Extension Activity) Students can share their data with others. Compare/Contrast and support their data with observations. They should all see the same results.

Explain/Evaluate: (Suggestion- 2nd 30-40 minute session) Performance Assessment in Journal "Picture This!"

Directions: Students will need glue, scissors and 1 small circle of waxed paper, transparent paper, construction paper and tin foil. They need to cut out page 11 in their student journal and put the page together on their own. See the example following this lesson. This is an assessment so other than giving the students directions on where things go, let them match up the vocabulary words with the correct camera. There is an assessment key on the back of student journal page 10. Make sure to fill it out and keep for the final assessment.

Science & Engineering Practices: <ul style="list-style-type: none"><input type="checkbox"/> Asking questions (science) and defining problems (engineering)<input type="checkbox"/> Developing and using models	Disciplinary Core Ideas: <p>Some materials allow light to pass through them, others allow only some light through and others block all the light and create a dark shadow on any surface beyond them,</p>	Crosscutting Concepts: <ul style="list-style-type: none"><input type="checkbox"/> Patterns<input type="checkbox"/> Cause and effect: Mechanism and explanation
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<ul style="list-style-type: none"> <input type="checkbox"/> Planning and carrying out investigations <input type="checkbox"/> Analyzing and interpreting data <input type="checkbox"/> Using mathematics and computational thinking <input type="checkbox"/> Constructing explanations (science) and designing solutions (engineering) <input type="checkbox"/> Engaging in argument from evidence <input type="checkbox"/> Obtaining, evaluating, and communicating information 	<p>where the light cannot reach. Mirrors can be used to redirect a light beam.</p> <p>(Boundary: The idea that light travels from place to place is developed through experiences with light sources, mirrors, and shadows, but no attempt is made to discuss the speed of light.) (1- PS4-3)</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Scale, proportion, and quantity <input type="checkbox"/> Systems and system models <input type="checkbox"/> Energy and matter: Flows, cycles, and conservation <input type="checkbox"/> Structure and function <input type="checkbox"/> Stability and change
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Picture

Definition

_____ Translucent

_____ Translucent

_____ Transparent

_____ Transparent

_____ Opaque

_____ Opaque

_____ Reflective

_____ Reflective

Total ___/8

Transparent, Translucent, Opaque

Instructional Materials:

- a flashlight
- translucent, transparent, and opaque materials found in the classroom for modeling
- small squares of transparency paper, wax paper, and tin foil
- die-cut paper cameras with the lenses removed
- large pieces of construction paper
- Data recording page

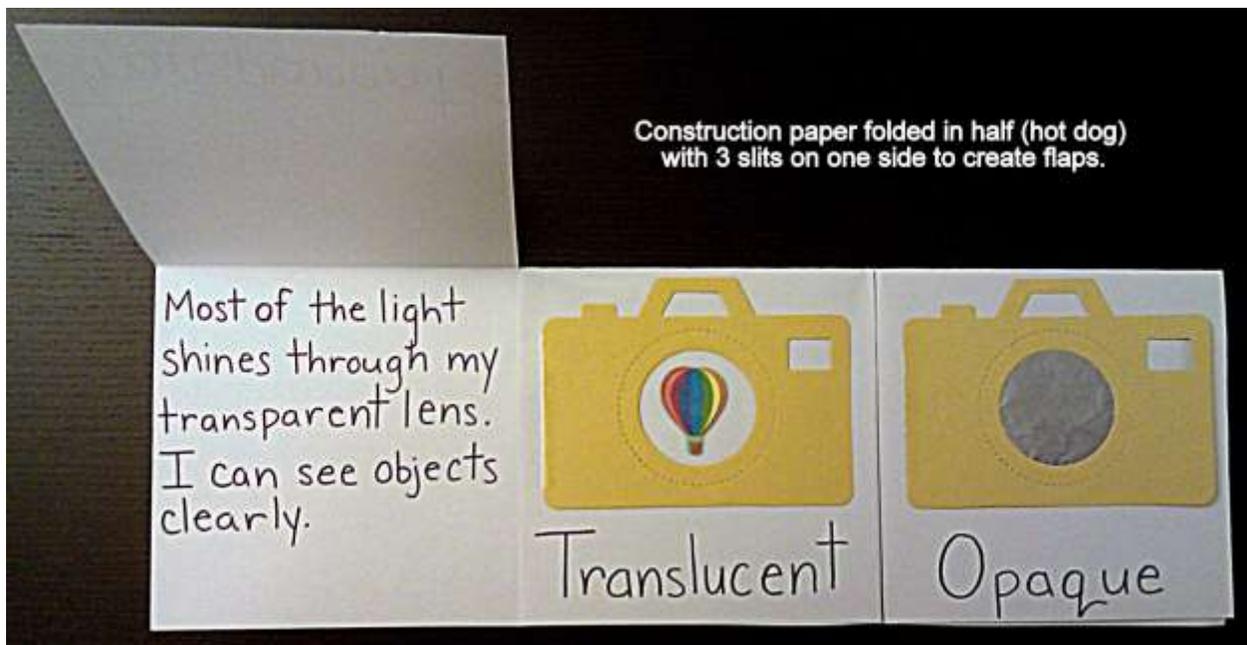
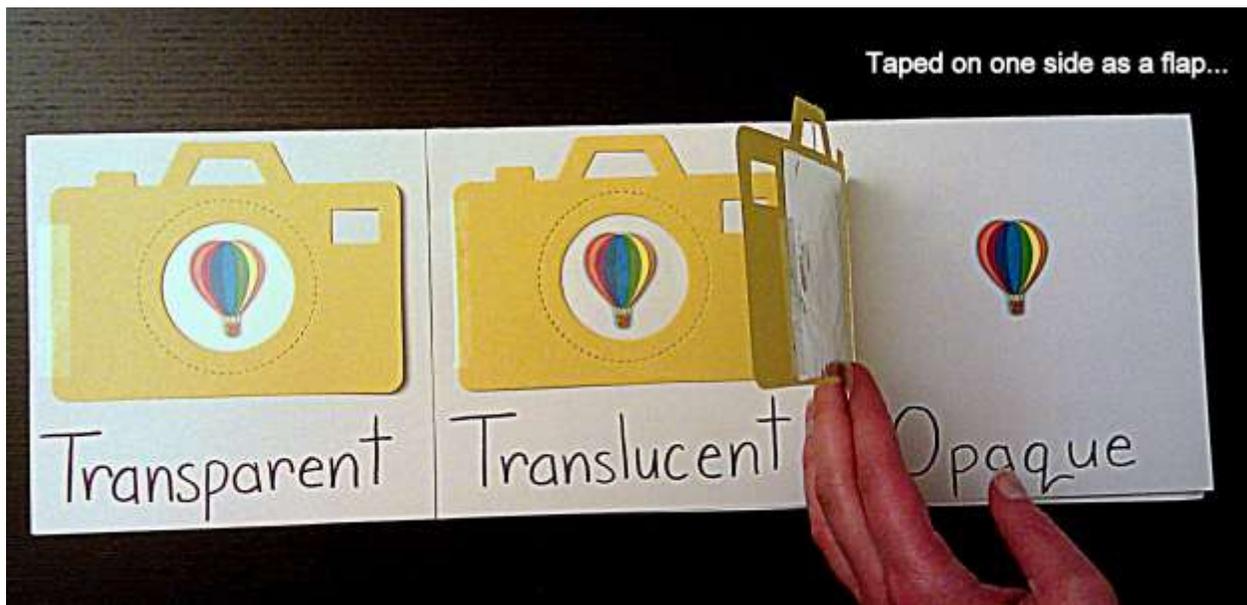
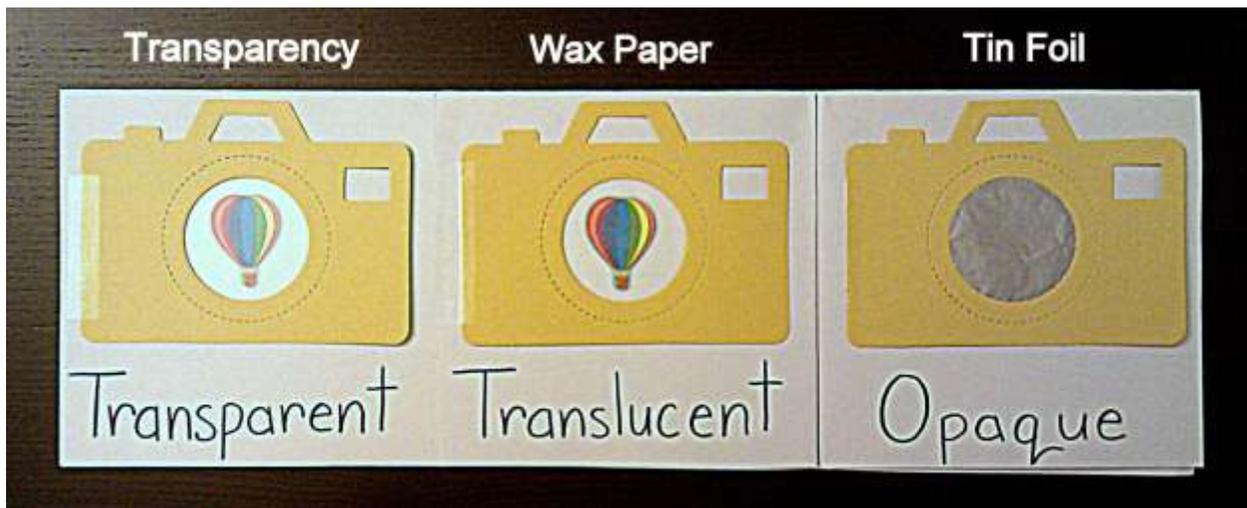
The instructor will start the lesson by having a discussion about how light rays can pass through, reflect off, or be absorbed by an object. Students will also use their prior knowledge and share thoughts about what happens when light hits certain objects. The instructor will introduce the concept of transparency and preview new vocabulary words: transparent, translucent, and opaque.

The instructor will then model how light rays react when materials of different transparencies are placed in front of the light source. The instructor will hold a brief discussion to talk about the difference between the materials and what happens when light hits them. The instructor will point out that with the transparent object, all the light passes through it. With the translucent object, some light passes through. With the opaque material, no light passes through.

Next, students will get the opportunity to experiment with light and transparency. Student will be given small squares of transparency paper, wax paper, and tin foil to adhere to die-cut cameras. Once the cameras are constructed, student will test their cameras with various objects around the room and record their data on a data worksheet.

Finally, once they are finished experimenting, the students will paste their cameras on construction paper over 3 identical images/stickers. Then they will be required to label each camera with either transparent, translucent, or opaque. Once labeled, a description of the vocab will be written. For example, the camera with a transparent lens will be labeled transparent and given the description, "When I look through my transparent lens, all light and colors shine through."







Transparent

I can see it clearly.



Translucent

**I can see it but it
looks blurry.**



Reflective

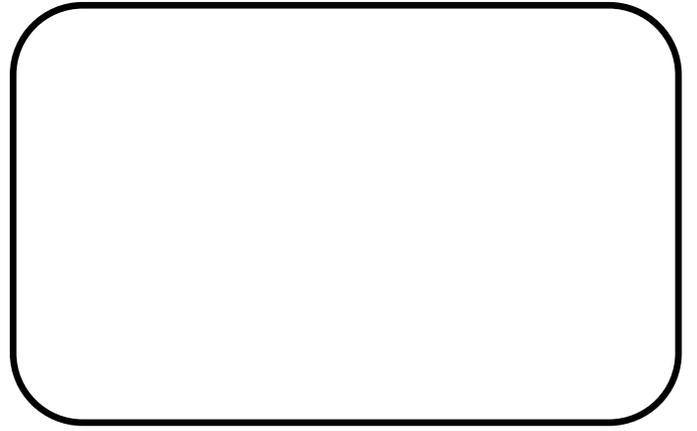
**I can see it in
a mirror.**



Opaque

I can't see it.

Picture This!



Name: _____

When I look through my camera lens...

Transparent, Translucent, and Opaque

Transparent Camera Lens

MOST or ALL Light SOME Light NO Light

Object	I can see it clearly.	It looks blurry.	I can't see it.

Translucent Camera Lens

MOST or ALL Light SOME Light NO Light

Object	I can see it clearly.	It looks blurry.	I can't see it.

Opaque Camera Lens

MOST or ALL Light SOME Light NO Light

Object	I can see it clearly.	It looks blurry.	I can't see it.

Lesson 9: Making Shadows

Length: 1- 30/40 minute session

Performance Expectations:

1-PS4-3. Plan and conduct an investigation to determine the effect of placing objects made with different materials in the path of a beam of light. [Clarification Statement: Examples of materials could include those that are transparent (such as clear plastic), translucent (such as wax paper), opaque (such as cardboard), and reflective (such as a mirror).] [Assessment Boundary: Assessment does not include the speed of light.]

- Materials:**
- Flashlights
 - Stick with kids on it
 - Student journal pages 13 & 14
 - Nothing Sticks Like a Shadow* by Ann Tompert
 - Shadows* by Carolyn B. Otto

Student Grouping/Class Set Up: Whole Group and partners

Engage: What is a shadow?

Read the book *Nothing Sticks like a Shadow*

Pose a problem: What happens when an object blocks a path of light? Discuss

Explore: With a partner students will use the puppet stick and a flashlight as an exploration to answer the question posed; what happens when an object blocks a path of light?

Circulate the room to guide students as they explore. The students will record findings on student journal page 13.

Explain: Have a whole group discussion to share what the students found and what happens when an object blocks a path of light.

Read the book *Shadows*. This nonfiction text will provide a formal explanation of shadows. It also explains how they change with the direction of the light.

Elaborate: Have the students use the flashlights and puppet sticks again to explore what happens when they change the position of the flashlight and the position of the puppet stick.

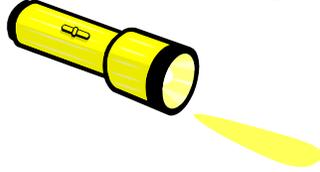
Evaluate: Students will cut out and complete student journal page 14. This page could be sent home if there is limited time. Make sure to come together to discuss their findings from page 13 and to share their mini books.

Science & Engineering Practices:	Disciplinary Core Ideas:	Crosscutting Concepts:
<ul style="list-style-type: none"> <input type="checkbox"/> Asking questions (science) and defining problems (engineering) <input type="checkbox"/> Developing and using models <input checked="" type="checkbox"/> Planning and carrying out investigations <input type="checkbox"/> Analyzing and interpreting data <input type="checkbox"/> Using mathematics and computational thinking <input type="checkbox"/> Constructing explanations (science) and designing solutions (engineering) <input type="checkbox"/> Engaging in argument from evidence <input type="checkbox"/> Obtaining, evaluating, and communicating information 	<p>Some materials allow light to pass through them, others allow only some light through and others block all the light and create a dark shadow on any surface beyond them, where the light cannot reach. Mirrors can be used to redirect a light beam. (Boundary: The idea that light travels from place to place is developed through experiences with light sources, mirrors, and shadows, but no attempt is made to discuss the speed of light.) (1- PS4-3)</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Patterns <input checked="" type="checkbox"/> Cause and effect: Mechanism and explanation <input type="checkbox"/> Scale, proportion, and quantity <input type="checkbox"/> Systems and system models <input type="checkbox"/> Energy and matter: Flows, cycles, and conservation <input type="checkbox"/> Structure and function <input type="checkbox"/> Stability and change

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Making Shadows

Make a sketch showing the shadows you made for **short**, **long**, and almost **invisible**. Put the flashlight and the path of light in the picture!

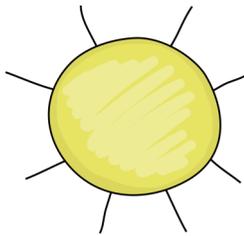


Short Shadow

Long Shadow

Almost Invisible Shadow

My Light and Shadow Mini- Book



Written and Illustrated by:

I go outside and stand with the sun
behind me. My shadow is in
_____ of me.

I play until 12:00 noon. My shadow is
very _____.

When I go inside the sun is in front of
me, so my shadow is _____
me.

Lesson 10: Reflections

Length: 1- 30/40 minute session

Performance Expectations: Plan and conduct an investigation to determine the effect of placing objects made of different materials in the path of a beam of light. (1-PS4-3)

Materials:

- 15 Mirrors with stands
- Laser pointers

Student Grouping/Class Set Up: Partners

Engage: Opening activity. Hand out the mirrors to each set of partners. Explain that these are tools and to be gentle. Let them look at them and play with them for a few moments.

Explore: Ask partners to face each other with the mirror between them. One student should be facing the shiny side of the mirror: the other student should be facing the blank side of the mirror. Ask students to raise their hands if they can see themselves in the mirror. Draw everyone’s attention to the fact that only one can see the reflection in the mirror.

Explain: Use the following questions to guide their exploration.

- If you can see yourself in the mirror, describe the mirror properties you observe. *Shiny, silver, very smooth.*
- If you cannot see yourself in the mirror describe what you see. *Dull, gray, slightly textured.*
- Can you always see yourself if you are facing the shiny side of the mirror?
- Could you see yourself in the mirror if it were very dark, such as if it were night or if you were in a dark closet?

Next Dim the lights in the room and ask student to look in their mirrors. After a few seconds, turn the lights back on.

- Could you see yourself in the mirror clearly when the lights were off?
- In addition to looking at the shiny side of the mirror what else is needed to see your reflection in a mirror? (Answer should be light)
- What are some other sources of light?
- Why do we turn on a light on at night? (Because our eyes need light to see)

Repeat these steps after handing out laser pointers. They will need to be in bigger groups and can use the mirrors to bounce the laser from one mirror to the next. Remind them that lasers should not be pointed at their friends at any time.

Elaborate: Use the laser course game for more exploration if there is time. This game can also be out in a station after kids see a model of how it is appropriately used.

Evaluate: Discuss results and why they occurred after collecting the materials.

Science & Engineering Practices:	Disciplinary Core Ideas:	Crosscutting Concepts:
<ul style="list-style-type: none"> <input type="checkbox"/> Asking questions (science) and defining problems (engineering) <input checked="" type="checkbox"/> Developing and using models <input checked="" type="checkbox"/> Planning and carrying out investigations <input type="checkbox"/> Analyzing and interpreting data <input type="checkbox"/> Using mathematics and computational thinking 	<p>Some materials allow light to pass through them, others allow only some light through and others block all the light and create a dark shadow on any surface beyond them, where the light cannot reach. Mirrors can be used to redirect a light beam. (Boundary: The idea that light travels from place to place is developed through</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Patterns <input checked="" type="checkbox"/> Cause and effect: Mechanism and explanation <input type="checkbox"/> Scale, proportion, and quantity <input type="checkbox"/> Systems and system models <input type="checkbox"/> Energy and matter: Flows, cycles, and conservation

<ul style="list-style-type: none"> <input type="checkbox"/> Constructing explanations (science) and designing solutions (engineering) <input type="checkbox"/> Engaging in argument from evidence <input type="checkbox"/> Obtaining, evaluating, and communicating information 	<p>experiences with light sources, mirrors, and shadows, but no attempt is made to discuss the speed of light.) (1- PS4-3)</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Structure and function <input type="checkbox"/> Stability and change
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Lesson 11: Go Away! Come Here!

Length: 2- 30/40 minute sessions

Performance Expectations:

1-PS4-4. Use tools and materials to design and build a device that uses light or sound to solve the problem of communicating over a distance.

Materials:

- Flashlights
- Lasers
- Tuning forks
- Kazoos
- Student Journal page 15 & 16
- Communication anchor chart from Lesson 5
- crayons
- basket of all books from the unit

Student Grouping/Class set up: Students will be working with a partner (Teacher may want to assign partners because this is going to be used as an assessment)

Engage: Begin with teacher giving nonverbal signs to students. For example: Baseball sign (tap head, hold up 3 fingers and tap both knees), Flashlight sign (flash the light on 3 times), Kazoo signal (make 2 long sounds and 2 short sounds). Tell them that all of those were signs for saying “Hi!” Ask students different ways they can say hi to their friends. Examples: Hey, Good Morning, Howdy, Friendly smile, friendly wave, sign language for hi. Discuss how we can use different signs and signals to communicate over a distance.

Review different ways to communicate using the Communication anchor chart/web from Lesson 5.

Explore: Working with partners, students need to come up with and test a way to communicate two things; “Go Away!” and “Come Here!” They can use any of the provided materials but guide them to use light or sound in some way.

Explain: Give students enough time to collaborate with their partner and decide on a code that communicates each of the commands. The teacher needs to encourage and guide them to test and practice a code for each command. They also need to record their plan in the student journal.

Elaborate: Bring the students together and choose a couple of partners to model their codes. One partner needs to communicate using the code and the other needs to be able to model the cue. Ask students to explain how they worked together and decided on the codes they have.

Evaluate: (Session 2- 30 minutes) Give them time to work for a few more minutes with their partners to practice and finish their journal page.

Evaluate: Partners need to model their way of communicating and be observed by the teacher. On the back of their “Go Away! Come Here!” journal page is a recording sheet for this assessment observation.

***Extension Activity (Suggested to be used for whole group while assessing partners)-** Ask students if they remember all of the different ways someone can communicate. Show them the web from the last session and ask them to choose 6 of those words and illustrate them in their Student Journal page 16. They can also browse the books from the theme if they finish and you are still assessing.

<p>Science & Engineering Practices:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Asking questions (science) and defining problems (engineering) <input type="checkbox"/> Developing and using models <input type="checkbox"/> Planning and carrying out investigations <input type="checkbox"/> Analyzing and interpreting data 	<p>Disciplinary Core Ideas:</p> <p>PS4.C: Information Technologies and Instrumentation <input checked="" type="checkbox"/> People also use a variety of devices to communicate (send and receive information) over long distances. (1- PS4-4)</p>	<p>Crosscutting Concepts:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Patterns <input type="checkbox"/> Cause and effect: Mechanism and explanation <input type="checkbox"/> Scale, proportion, and quantity <input type="checkbox"/> Systems and system models
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<ul style="list-style-type: none"><input type="checkbox"/> Using mathematics and computational thinking<input type="checkbox"/> Constructing explanations (science) and designing solutions (engineering)<input type="checkbox"/> Engaging in argument from evidence<input type="checkbox"/> Obtaining, evaluating, and communicating information		<ul style="list-style-type: none"><input type="checkbox"/> Energy and matter: Flows, cycles, and conservation<input type="checkbox"/> Structure and function<input type="checkbox"/> Stability and change
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Go Away! Come Here!

Materials: _____

Go Away Code:

Come Here Code:

Draw a picture of what it looks like when you communicate with your partner.



Materials- Check all that were used

- Flashlight
- Laser
- Tuning Fork
- Kazoo
- Other _____

___/1

Communication

- ___/1 Able to communicate “Go Away”
- ___/1 Able to communicate “Come Here”
- ___/1 Able to understand “Go Away”
- ___/1 Able to understand “Come Here”

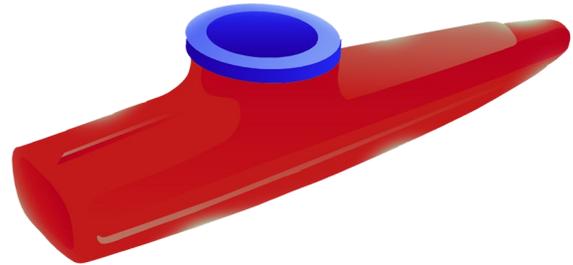
Total ___/5

Unit Assessment

1. A kazoo is a toy that makes a sound when a person hums into it.

Why does sound come from the kazoo?

- A. It can vibrate.
- B. It heats up.
- C. It makes light.



2. A tuning fork is struck and starts to vibrate. Which of these could happen next?

- A. The tuning fork becomes heavier.
- B. The tuning fork makes light.
- C. The tuning fork makes sound.

3. Why can these kids hear each other?

- A. The string vibrates.
- B. The string lights up.
- C. The string is black.



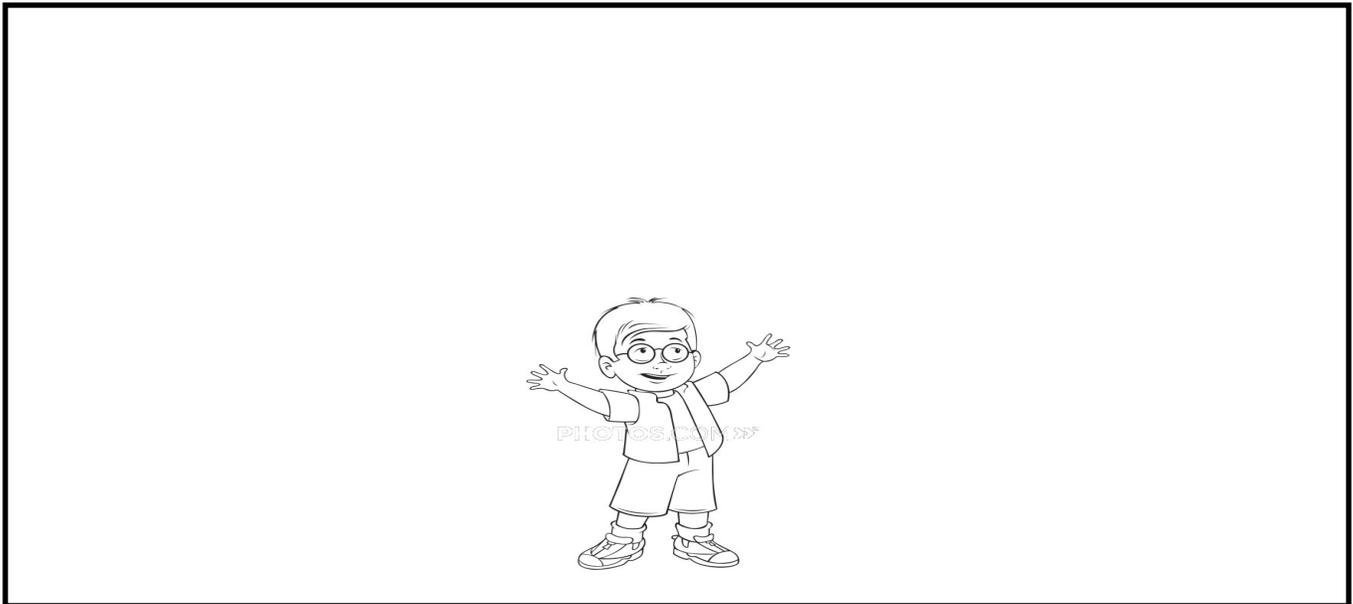
4. How is a shadow formed?

- A. When light passes through a window.
- B. When the path of light is blocked.
- C. When the light is turned off.

5. Where is a place you would be able to see your friend?

- A. A dark room
- B. A cave
- C. A room with a nightlight

6. In the box below draw the sun in the sky. Make sure to place the sun so that it will make the boy cast a shadow. Then draw the shadow of the boy.



7. Circle the materials that make sound by vibrating.



Assessment Recording Sheet

Name _____

Multiple Choice

#1 ___/1

#2 ___/1

#3 ___/1

#4 ___/1

#5 ___/1

#6 ___/2 (Draw a sun and draw the shadow on the correct side)

#7 ___/3 (Circled the kazoo, tuning fork and guitar)

Total ___/10

Performance Assessment for "I'm a Scientist!"

Total ___/6

Performance Assessment for "Picture This!"

Total ___/8

Performance Assessment for "Go Away! Come Here!"

Total ___/5

Assessment Total: ___ / 29

Notes and Observations:

Optional Resources

www.sciencekids.co.nz

- Computer Games:

*How We See
Sunlight and Shadows*

- Video Clip

Cool Sound Vibrations (33 seconds)

www.youtube.com

- Video Clip

The Magic School Bus: In the Haunted House-Sound is
Vibration (3:07)

Lesson 1

Personal History: A Timeline Exploration

Overview: Students will define and discuss the concept and the importance of recording history. Students then research a fellow classmate's history. Lastly, students apply their research skills into creating their personal historical timeline as an independent project.

Essential Question: How and why do people study history? How has your history shaped who you are today?

Key Concepts and Vocabulary:

- timeline
- chronological order
- decade
- score
- century

Structure of a Non-Fiction Text:

- biography
- heading
- glossary
- index
- table of contents

Student Performance Objectives: The students will...

- Discuss with a partner their current schema on history.
- Interview a classmate with predetermined questions.
- Analyze what makes a timeline successful/ not successful through examples.
- Create a timeline that is personal to their history.

Time Required: 2, 30 minute sessions (Personal History & Biography) & (Timeline)

Special Requirements: Cohesive time for looping classes to meet with one another for 3rd/4th grade interviews. Not necessary.

Standards:

- 16.A.1b
- 11.A2c

Assessments/ Performance Tasks:

- Interview worksheet
- Timeline project
 - Timeline Rubric

Materials needed/ Advanced preparation required:

- Illinois Our Home Lesson 1 – page 6
- Post-its or Notebook * Optional: clipboards, chart paper
- Interview Worksheet (attached)
- Timeline Template
- Rubric
- Homework Explanation for Parents * Construction Paper

Background Information:

Please see vocabulary. Literary elements may come into play during the lesson. Prior exposure may be beneficial.

Learning Activities/ Procedure:

1st Session: History and Biographies

1. Call students to carpet for a think-pair-share session. Have students find a buzz (turn and talk partner) partner that they do not know very well. Introduce KWL chart. Discuss the topic of History using a KWL chart. What do you KNOW about history? What do you WANT TO KNOW? And lastly, for the “L” we will record what we have learned!. Pose questions one at a time and record student responses on the whiteboard/ smartboard/ chart paper.
 - a. What does history mean to you? What is it?
 - b. How do people know about history?
 - c. How is history recorded? (orally, legends, written documents, computer, Facebook, movies, video, etc.)
2. Tell students that today they will be experiencing two different kinds of “history” a biography (a true story/ account of someone else) and a timeline.
3. Tell students that they are first going to do a bit of detective work and research historical information on someone else!
4. Preview the worksheet, allow time for questions, and review positive interview behavior. Give students 15 or so minutes to interview their buzz partner.
5. Have students introduce their partner biography highlighting where they live, and where they have moved from.
6. Ask students, “Did everyone come from the same place?” Nope!
 - a. Ask what kinds of things make people move from place to place?
7. Tell students that this year, we will be focusing how features of Illinois has influenced past, present, and future generations.
8. If time allows, have students write in their journal of what features of Illinois might make it a positive place to live.

2nd Session: Timeline

1. Have students list out things that have happened in the school day thus far. The activity is better if the list is out of order. (Announcements, Lunch, Tom broke his pencil, Math)
2. Have students number the order in which events took place. If they are not sure what comes first, have them order what they do know, and try to guesstimate the unknown event. (Tom broke his pencil before math but after snack...)
3. Ask students why it is important to have things go in order.
4. Explain that this is called **chronological order**.
5. Have students read as a whole class p. 6 in Illinois our Home.
 - a. Ask students to think-pair-share why they believe timelines are a useful tool in recording history.
 - b. What use do they have?
 - c. Have they seen other examples

6. Discuss the term decade, score, and century.
 - a. Relate to Abraham Lincoln's speech... Four Scores and 7 Years ago... How long ago was he talking about?
 - b. Which term are students closest to in age? (decade)
9. Have students think-pair-share and post-it things they think are good/bad about the timeline example on page 6.
10. Compare to example timelines (google or draft your own). Be sure to highlight:
 - a. Title
 - b. Spacing of dates are equal
 - c. Neatness
 - d. Illustrations make it visually appealing
11. Show an example with uneven spacing between sequencing. Have students think-pair-share why they think this might be confusing to the reader.
12. Give students 4 minutes to jot down events /memories in their mind that are memorable in their social studies notebook or paper.
13. Introduce timeline project and review rubric.
14. Pass out rough draft template and construction paper.
15. Teachers Discretion:
 - a. Spend time on rough draft
 - b. Spend time marking out a straight line with students. Model to students spacing out dates from their birthday on... 2005, 2006, 2007, 2008.
 - i. Tell students that they should mark years even if an event doesn't take place
 - ii. Be sure to emphasize even spacing between dates
16. Give students parent letter, rubric, and construction paper to take home and assign DUE DATE.

Adaptations/ Differentiation:

Construction Paper that has timeline dates printed prior to lesson.

Have life milestones cut out on paper, have students move into sequential order and paste down.

Challenge: Have students compare their timeline to a historically accurate biography/ event timeline of another. Reflect on what they did well, how could they improve, and what was similar/different.

Related Readings:

Illinois Our Home p. 6

Extension Ideas:

- Additional Interview a Friend Questionnaire
- Keep a "Classroom History" timeline throughout the year. Can be done with string and post its. Reflect on the history (big events) at the end of the year.
- Use concept of timeline during Biography unit

Resources:

Illinois Our Home

Google Images

Interviewing a Classmate



Date of Interview: _____

Name of Researcher (You): _____

Person being Interviewed(Classmate): _____

1. How old are you? _____

2. What year were you born? _____

3. Do you have any siblings? List their name and ages:

4. Where do you live ? _____

5. Have you lived anywhere else? _____

6. Why do you think your family moved to your current

house? _____

7. What is your favorite memory? _____

Personal Timeline Rubric

Name: _____ Date: _____

1. Title _____ / 1pt.

2. Chronological order of dates _____ / 3pts.

3. **At least 6** personal life events _____ / 6pts.

3. Illustrations/Pictures _____ / 2pts.

4. Neatness/Effort _____ / 3pts.

Total: _____ /15pts.

Personal Timeline Rubric

Name: _____ Date: _____

1. Title _____ / 1pt.

2. Chronological order of dates _____ / 3pts.

3. **At least 6** personal life events _____ / 6pts.

3. Illustrations/Pictures _____ / 2pts.

4. Neatness/Effort _____ / 3pts.

Total: _____ /15pts.

Homework Help: Timeline

Hello Family! As we begin our study of Illinois we are asking students to do a bit of detective work on their own personal history. We are asking that you help your child discuss important life events and if possible and **draw/collect/print off** pictures that represent the dates. Please “guesstimate” the dates/years of important life events. **We promise** not to send personal investigators to cross reference the dates 😊 . We hope that this is a reflective and fun activity that you can enjoy with your child, while reviewing the concept of sequencing and timelines. I have listed below ideas to help get you started! We have attached the rubric. Please help your child find **at least 6** life events. I have a few examples below:

- Year of Birth (Easy!)
- Year the family adopted a pet(s)
- Moving to a new house
- Memorable teachers
- Vacations
- Weddings
- First Bike
- Broken Bones (Can relate to prior idea)
- Start of a Sport/Hobby
- Birth of a Sibling ...



Please be sure that the events are memorable to your child. Yes, the Bears winning the Superbowl (long ago) was memorable, but not to your child!

8th Grade Virginia Trip – Prairie Crossing Charter School

Prairie Crossing Charter School is a constructivist, hands-on school in Illinois that is interested in creating memorable experiences for all grade levels. The Virginia Trip is an experiential learning opportunity for our 8th grade students. Since American History is the focus of the Social Studies curriculum in 7th and 8th grade, the trip is a perfect culmination of the time periods and key events studied in the Social Studies classroom, as well as topics discussed in the Science and Math curriculum. The school's environmental charter is also incorporated into various activities and sites visited. Not only is the Social Studies curriculum heavily entwined in the trip, but the Math, Science and Language Arts teachers, and the school Spanish and Art teacher, have also contributed daily questions, reflections, activities as well.

The 12-day trip involves the students visiting over 35 historical, political and environmental sites. Along with key Civil War battlefields such as Gettysburg, Antietam, and Chancellorsville, the trip includes visits to Jefferson's Monticello, historic Jamestown, Colonial Williamsburg, and Washington, D.C. While visiting each site, the students take notes based on what the tour guide tells them. They also receive daily questions that are based on the sites we visit on that particular day. Those questions and notes are checked throughout the trip for completion.

While in Colonial Williamsburg, the students are allowed to break off into groups of three or four. While in the "downtown" colonial area, their assignment is to visit four different proprietors. While there, they need to write down the materials the craftsman uses, as well as what skills or schooling they would need. The students also find out what renewable as well as non-renewable materials are being used in the process of production.

Prairie Crossing Charter School's mission statement supports the idea that education should be experienced through hands-on lessons, which has been proven to result in higher retention and understanding. Instead of learning about history and science out of a textbook or through copied notes, Prairie Crossing students can see historical sites and scientific aspects first-hand.

Besides the curricular and experiential opportunities, the Virginia Trip also requires the students to be responsible for their own belongings (in their suitcase and their daypacks) and their own spending money. An adult chaperone holds on to the majority of the students' money, and each student is given a portion for that day (typically between \$25 and \$30). This procedure insures that a student will not lose or spend all of their money too quickly, while still requiring them to budget out their day. On certain days the students need to buy lunch and/or dinner, and also have the opportunity to purchase souvenirs from certain sites that we visit.

This trip has been a key part of the 8th grade curriculum at PCCS for 10 years, and over 400 students have participated in it. Overall, the students thoroughly enjoy the experience, along with the independence, and most students mature quite a bit while on the trip. Many parents have noticed this as well.

2015 Virginia Trip

May 11 – May 22

Answer each question in complete sentences and *IN FULL DETAIL* in your notebook. Each question is worth 3 points, unless otherwise noted.

Day 1: The bus ride out East

1. Write down the following times, according to the Central Standard Time Zone:

Time we left PCCS: _____

Time we entered Indiana: _____

Time we entered Ohio: _____

Time we entered Virginia: _____

Time we entered West Virginia: _____

Time we arrived at our hotel: _____

2. Who did you sit by on the bus? What did you do to pass the time?
3. People say that, all other things being equal, spring moves north at “15 miles per day.” For example, if a flower first blooms in Grayslake on May 1st, it will first bloom in Kenosha (a town 15 miles north of Grayslake) on May 2nd. Calculate how much earlier a flower will bloom in Charlottesville, VA, than in Grayslake, IL (all other things being equal). Show your work.

Hints: For each degree of latitude, you travel about 69 miles. Grayslake is at 42° N, 88° W. Charlottesville is at 38° N, 78° W.

4. In the equation of spring moving north at 15 miles per day, the phrase “all other things being equal” is very important, because all other conditions are usually not equal. Besides latitude, explain three other factors that could affect the time at which a plant blooms.

Freedom Center

1. What was the most captivating exhibit that you saw? Support your answer with evidence.
2. Compare modern day slavery to 19th century slavery. What things are similar? What things are different?
3. Do you think the experience of 19th century slaves and the modern-day, 21st century slaves you saw in the exhibit are the same?

Day 2: Virginia Military Institute, Lee Chapel, Jackson's Grave, Grand Caverns

Virginia Military Institute

1. VMI has a code of honor. What is it?
2. Do you think you could attend a school like VMI, and survive? Why?
3. What famous saying of Jackson's is written on the wall, above the doorway to the courtyard? What does that saying mean to you?
4. Jackson was not very good at too many things, but he was good at being a military commander. Everything else (other than religion) was not that important to him. Are you like that? Are there one or two things that your life focuses on? Is that a good thing?
5. On a scale of 1 (hated it) to 5 (loved it), how would you rate visiting VMI? Why?

Lee Chapel

1. What animal is used to decorate where Lee's crypt is? Why?
2. If you could choose your epitaph (the writing on your tombstone), what would you have written? Why are those the most important things to you?
3. On a scale of 1 (hated it) to 5 (loved it), how would you rate visiting Lee Chapel? Why?
4. At the Barlow Orrey, find out when this planetarium was created.
5. What is missing from this orrery based on the solar system as we know it today?

Grand Caverns

1. On a scale of 1(hated it) to 5 (loved it), how would you rate visiting Grand Caverns? Why?
2. What was your favorite formation? Why?
3. Do you think we should visit Grand Caverns again next year? Argue your answer with at least two points.

Day 3: Monticello, Appomattox Court House

Monticello

1. How does Jefferson (and Monticello) represent what America was all about, during the 1700's?
2. What were the three accomplishments that Jefferson wanted engraved on his tombstone? Why do you think these were the most important to him?
3. How does phenology relate to Thomas Jefferson and Monticello?
4. Describe two scientific interests of Thomas Jefferson.
5. Using the half sheet paper provided, find a plant (remember, trees are plants) that looks unfamiliar to you (one that you do not think grows in Illinois). Make a DETAILED sketch, with notes to indicate size, texture and other aspects that may not be captured in your picture. USE COLORED PENCILS. Also, using the plant information sheet, answer the questions below about your plant. If any elements are not present (ie: no flowers) indicate this.
(WORTH UP TO 20 POINTS)
 - a. leaf venation
 - b. leaf edge
 - c. leaf shape
 - d. leaf placement
 - e. seed dispersal
 - f. leaf arrangement
 - g. seed type
 - h. flower arrangement
 - i. flower shape

6. On a scale of 1 to 5 (1 meaning it was a waste of time and 5 meaning it was the best), how would you rate visiting Monticello? Why?

Appomattox Court House

1. Union commanders took many of McLean's possessions after the surrender, as "souvenirs". If you had a choice, what item would you have taken, to keep forever?
2. On a scale of 1 (hated it) to 5 (loved it), how would you rate visiting A.C.H.? Why?
3. Have you bought anything really interesting so far on this trip? What is it, and what was the attraction?

Day 4: Petersburg, Pamplin Park

Petersburg

1. Consider the terrain at Petersburg. What is the soil like here? What does this tell you about the geologic history of this area?
2. While you are in the museum, find one artifact that really interests you. In your sketchbook, draw a **HIGHLY DETAILED** drawing of it. Make sure to include a caption explaining what it is, some notes about it, the date, and the reason you chose this artifact. This sketch should take you **AT LEAST 25 MINUTES**. Remember, you will be graded on effort and detail, **NOT** artistic ability. (*This question is worth 20 points*)
3. In the museum there is one artifact that is mislabeled. It is **NOT** what the sign next to it says it is. Whoever correctly identifies it to Mr. Habel will get a free lunch. *Remember, this is not easy to find. (No points for this question.)*
4. The siege of Petersburg lasted about 9 months, during the last few months of the war. Lee lost quite a few of his soldiers (about 1,000 per day by May of 1865) because they deserted. Why do you think the rest stayed with him? Would you have stayed or gone home? Why?
5. If you were to blame The Crater on one person, who would it be? Why?
6. On a scale of 1 to 5, how would you rate visiting Petersburg? Why?

Pamplin Park

1. How is Pamplin Park helping to naturally preserve the original trenches?
2. What was the name of your soldier, when you were in the museum? What regiment was he in? Give a short but detailed summary of his experience in the Civil War.
3. What did you think of our guide?
4. What was your favorite part of Pamplin Park (other than lunch)? Why?
5. What did you think of lunch?
6. On a scale of 1 to 5, how would you rate visiting Pamplin Park? Why?

Day 5: Colonial Williamsburg

1. As you walk through Williamsburg, you need to visit at least **four** different proprietors, and answer the following questions at each place you visit, IN PARAGRAPH FORM. Feel free to ask the people who work there any questions; that's their job. **The answers for each proprietor should be written in paragraph form.** A sketch of the product and process might help your explanation... *(Each set of questions is worth 10 points, for a total of 50 points; 4 proprietors = 200 points.)*
 - a. What product do they make?
 - b. What materials do they use?
 - c. What tools do they use?
 - d. What skills / schooling do they need, if any?
 - e. What procedures are used to make their product?
 - f. How long does it take?
2. How have the materials that people used in the time of Williamsburg changed compared to what we use today?
3. How have these changes impacted the environment?
4. While you are exploring Williamsburg, find a medicinal plant that we have talked about. Have one person in your group take a picture and show Mrs. Flaig to get credit.
5. Find two pieces of literature that were popular in Colonial Williamsburg. What were they and why do you think they were popular?
6. What was your favorite part of Williamsburg? Why? Where did you have lunch, and what did you have?
7. On a scale of 1 to 5, how would you rate visiting Williamsburg? Why?

Day 6: Jamestown Settlement, Chesapeake Bay Tour

1. The settlers in Jamestown had many trials and tribulations due to the environment. What are some ways that the environment caused problems for the settlers? How might they have had to change their lifestyle to survive there?
2. Describe something the archaeologists at Jamestown have found recently. (Hopefully you will be able to hear from the actual archaeologist.)
3. We are learning more and more about Jamestown all the time, because more relics and artifacts are being excavated. Is archaeology interesting to you? Could you ever see yourself doing archaeological work? Why?
4. What were the names of the three ships that brought the first settlers to Jamestown?
5. Explain how the glass that the settlers made in Jamestown got its color. Also explain how the color of the glass can be changed. Specifically mention 8 elements and/or compounds.
6. Did you buy anything interesting at the Glashaus? For whom?
7. On a scale of 1 to 5, how would you rate visiting Jamestown? Why?
8. List three things that you learned about the Chesapeake Bay as a result of your boat tour.

**Day 7: Spotsylvania Battlefield, Chancellorsville Battlefield,
Washington D.C.**

Spotsylvania

1. After the war, soldiers would often visit battlefields for a number of reasons, usually on the anniversary of the battle. However, most soldiers said they didn't like to go back to visit Spotsylvania. Why do you think that was true?
2. Could you have done what Charles Whilden did? Why?
3. Could you have done what Lewis Wisner did? Why?
4. You know that this is Mr. Habel's favorite battlefield. If you had to pick a favorite or most interesting historical place *in the whole world*, what would it be? (It doesn't have to be a place we visit.) Why?
5. Geography and weather played a key role in practically every battle fought in history. Based on what you saw and learned today, how did geography or weather affect the outcome of the battle of Spotsylvania?
6. On a scale of 1 to 5, how would you rate visiting Spotsylvania? Why?

Chancellorsville

1. The Battle of Chancellorsville is still studied at military schools today. Why do you think it is such a significant and important battle?
2. Do you think the war would have been different if Stonewall Jackson had survived the battle? Why?
3. Based on what you saw and learned today, how did geography or weather affect the outcome of the battle of Chancellorsville?
4. On a scale of 1 to 5, how would you rate visiting Chancellorsville? Why?

Washington D.C.

1. In Washington D.C., there are quite a few monuments built to key participants in our nation's history. Of all the monuments we visited, which was your favorite? Why?
2. If there was someone from our nation's history you believe deserves to have a monument built for them, who would it be? Why?
3. We are more than halfway through our trip! Do you miss anyone (or anything) back home?

Day 8: Arlington Cemetery, C & O Canal

Arlington Cemetery

1. As we walked through the cemetery, give examples of what you saw that showed respect and honor being given to those who have served protecting our country (besides the Tomb of the Unknown Soldier).
2. Do you think what happened to Lee's house during the Civil War was justified? Why? If you were in Lee's family's position, how would you feel?
3. Confederate soldiers are NOT supposed to be buried on National Park Service property. Why do you think this has happened? Do you think this is an injustice?

C & O Canal – Great Falls

1. The Canal is an example of mankind's adaptation to his natural environment. Can you think of at least two examples of other ways that people have changed their surroundings to adapt to their environment?
2. Why was a canal built literally within eyesight of (and parallel to) a large river?
3. On a scale of 1 to 5, how would you rate visiting the Great Falls? Why?
4. How are you doing with your friends? Have any of your friendships changed? (I don't need names, if you don't want to mention them.) Have you made any "stronger" or new friends?

Day 9: Harpers Ferry, Antietam Battlefield

Harpers Ferry

1. Harpers Ferry is a historic town, tucked in between the confluence of the Potomac and Shenandoah Rivers. Thomas Jefferson used to visit, and said “The scene is worth the voyage across the Atlantic.” Remember how hard it was for people to travel in the 18th century; would you agree?
2. If you could sit and talk to John Brown, right before he was executed, what would you ask him?

Antietam Battlefield

1. How did geography or weather affect the outcome of the battle of Antietam?
2. Antietam does not have nearly as many monuments as Gettysburg has. Do you think it’s important to put up monuments, or should the landscape be left natural, the way it was? Why?
3. Of the three “phases” of the battle that you saw, which was the most interesting? Why? If you had to pick a phase that was the most important, which one would it be?

Day 10: Gettysburg

1. Every year, there are more and more ticks in Virginia (also in Illinois). This is not random. Explain scientifically why you think their population might be increasing. (**Hints:** ticks like mild weather; ticks primary source of food are deer and deer mice)
2. Gettysburg is the most popular Civil War battlefield for tourists. Why do you think that is?
3. Geography and weather played a key role in practically every battle fought in history. Based on what you saw and learned today, how did geography or weather affect the outcome of the battle of Gettysburg?
4. There was only one Illinois Infantry Regiment that fought here. The first student who comes to Mr. Habel with the correct regiment number AND the Corps it was in will get free ice cream. (*no points for this question*)
5. During your battle hike today or tomorrow complete a plant sketch. Using the half sheet paper provided, find a plant (remember, trees are plants) that looks unfamiliar to you (one that you do not think grows in Illinois). Make a DETAILED sketch, with notes to indicate size, texture and other aspects that may not be captured in your picture. USE COLORED PENCILS. Also, using the plant information sheet, answer the questions below about your plant. If any elements are not present (ie: no flowers) indicate this.
 - a. leaf venation
 - b. leaf edge
 - c. leaf shape
 - d. leaf placement
 - e. seed dispersal
 - f. leaf arrangement
 - g. seed type
 - h. flower arrangement
 - i. flower shape
6. So how was Hike #1? Who were you with? Did anything interesting happen?

Day 11: Gettysburg

1. So how was Hike #2? Who were you with? Did anything interesting happen?
2. On a scale of 1 to 5, how would you rate visiting Gettysburg? Why?
3. Our trip is basically over. You have heard about this trip for a long time. Was it what you thought it would be, and what your teachers have told you it would be like? What would you tell the seventh graders about it? (Be honest!)
4. Of all the places we visited and studied, where would you say was “your spot”? Why? Remember, pick ONLY ONE, and give me a SPECIFIC place at the site we visited. Describe what you see, hear, and smell from your spot. If I had to go back and look for the SPECIFIC location you are describing, I should be able to find it.
5. Are there any places we didn’t go to on this trip that you wish we had?
6. Did you buy anything ELSE really interesting so far?

Day 12: The bus ride home

1. Write down the following times, according to the Central Standard Time Zone:
 - a. Time we left Gettysburg: _____
 - b. Time we entered Ohio: _____
 - c. Time we entered Indiana: _____
 - d. Time we entered Illinois: _____
 - e. Time we arrived at PCCS: _____
2. How much money did you start with? How much do you have left?
3. What was your favorite part or highlight? Why?
4. What was your least favorite part of the trip? Why?
5. What was the funniest thing that happened on this trip?
6. What would you suggest to make this trip better for next year?

THE QUESTIONS FOR DAY 12 ARE DUE ON MONDAY!!!

Lesson : La Ropa

3rd Grade

Goal: Learn the various names for articles of clothing

1. Copy the words from the board.
2. Recite the new vocabulary.
3. Previous vocabulary list was about parts of the body. Have children make a connection with parts of the body vocabulary with clothing vocabulary.
4. Learn how certain clothing have different names depending which country the person is located in.
5. Give them examples: “las medias” and “los calcetines”.

Once the students are comfortable with their current vocabulary words we work on the following in class and some for homework.

1. Phrase of the week is introduced. “Necesito _____”. They can fill in the blank with any article of clothing. Necesito means “I need”. “Necesito pantalones” is then translated by another classmate into “I need pants”.
2. Children are then given sentences in English in which they have to translate into Spanish. .
3. The second phrase is introduced. “Yo tengo _____”. Which translates to “I have _____”. Again, the children are asked to fill in the blank with their new vocabulary words. Then they are asked to translate sentences from English to Spanish.
4. Worksheet is given as homework. It is a crossword puzzle. The clues are the English translation of their vocabulary words. They answer is the Spanish counterpart.

Activity: The children were given construction paper to make a booklet.

The assignment requires the children to write a vocabulary word on the top of each page. Then they are to find that article of clothing in a magazine, cut it out and paste it in their booklet underneath the correct vocabulary words. Once the booklet is made it is shared with with the first and second graders.

Assessment: The assessment included the pronouns. The children have a section that allows them to match the items by writing the correct letter in the blanks provided. They are also shown a vocabulary word in Spanish and have to translate it to English. The last section shows a picture and the children have to write the name of clothing they see.

Nombre _____

Maestra/Maestro _____

3rd grade

él	nosotros	ustedes	tú	ella	ellos
yo	usted	nosotras	ellas		

Write the correct pronoun in the blank spaces provided. You may use the word bank.

1. they _____

2. _____

3. I _____

4. we _____

5. _____

6. he/she _____

7. _____

8. you (plural) _____

9. you (formal) _____

10. you (familiar) _____

Write the correct letter in the blanks provided.



11. _____

a. los zapatos



12. _____

b. la corbata



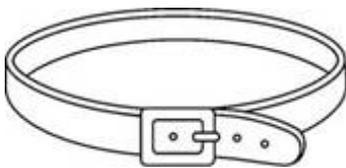
13. _____

c. la chaqueta



14. _____

d. el cinturón



15. _____

e. los pantalones

Write the correct translation in the blanks provided:

16. las botas = _____

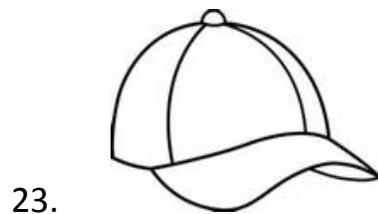
18. el gorro = _____

17. la bufanda = _____

19. los guantes = _____

Fill in the blank underneath the clothing





ACCOUNTABILITY REPORT FOR 2014-2015

Lesson: Let's go on vacation

Vamos en vacaciones

8^h Grade Lesson to be taught over 2 class periods

Student Learning Goal(s)/Objective(s): Specific learning goal(s) for students in this lesson

The students will be able to:

Share/Hold a discussion about taking a trip, including the relevant vocabulary of travel, planning an itinerary and determining destinations

Demonstrate the understanding of travel by showing flash cards and study guides of vocabulary using written vocabulary and guided pronunciation

Show a picture and ask students to identify vocabulary item

Using travel vocabulary discuss road trips, flights and destinations which may or may not grow our understanding of the natural world and which vacations are environmentally friendly.

Using a map of Madrid metro area – the students are asked to plan an itinerary using the rail system in Madrid – they will choose from

Trip 1- Parks Tour – a tour of the major green spaces in Madrid

Trip 2 – Top 10 Tourist Spots – The students will see the top 10 tourist spots in Madrid

Trip 3-Museums and Monuments – students will choose major museums and monuments to see

Trip 4- Yum-Yum Trip – Students will research locations to enjoy the best of Spanish cuisine

Trip 5- Shop till you Drop – The students will determine where the best shopping is and arrange a trip

Criteria: Trips must be completed in one day

Trips must use public transportation /shared transportation/walk as much as possible

Trips must be done inexpensively

At the end of the trip all students must meet at a centrally located restaurant for a late dinner

Materials:

-flash cards of travel vocabulary

- create a sample travel itinerary

Map of Madrid Metro

Skills/Procedures	Concepts and reasoning/problem-solving
<ul style="list-style-type: none"> -Working productively with peers -Listening during class discussion -Participating by pronouncing vocabulary, and answering questions or giving suggestions -Integrating prior knowledge of numbers, directional instructions, colors, adjectives, strengthen verb conjugations and usage 	<p>Critical thinking:</p> <ul style="list-style-type: none"> -How do we create a travel itinerary using school schedules as a model? -What makes a good vacation? -Does efficiency count in a vacation? -How can we make green choices in our travel plans?

ACCOUNTABILITY REPORT FOR 2014-2015

Instructional Strategies and Learning Tasks

Amount of time	Teaching and Learning	Description of what the teacher (you) will be doing and/or what the students will be doing
5 mins	Launch	<p>“Buenas tardes clase! Vamos en vacaciones! Ask class in Spanish who has taken a vacation and where to test known vocabulary and understanding.</p> <p>Upon receiving responses from class begin discussion about travel – different kinds of travel including ecotourism. What is it?</p>
15 mins	Instruction	<p>Using flash cards show vocabulary, practice pronunciation – write vocabulary on the board</p> <p>After initial run through of vocabulary quiz random students for acquisition</p> <p>Using newly learned vocabulary talk about time sequence of events in planning a trip – previously learned concepts of time, sequence words before, after, next, during will be practiced, numbers for flights, buses, what does it cost, when does it leave/arrive – practice of interrogatives.</p> <p>Give students verbal cues on sequencing. Yo hago mi maleta. Yo compro un boleto, Yo busco mi pasaporte. Have students identify definition and order of events in preparing for a trip.</p> <p>Using flashcards which concepts go together? Which ones are used at the beginning of a trip? Can any of these vocabulary words be made more travel friendly? One bag instead of 5? Travel shorter distances? Road trip vs air travel? Grooming products? Are they eco-friendly?</p>
10-15 mins	Structured Practice and Application	<p>-Now, explain to the students that they will be planning a trip using their learned vocabulary to a foreign destination. What do you like to do? How will you make that happen in your itinerary? How green is your vacation? How many trips did you make efficiently? Did you use public transportation? Did you support the local economy and how?</p> <p>Call on volunteers to describe their itinerary and explain why it is or isn't friendly to the environment. Ask classmates to consider how their vacation can be improved upon using opinions and information supplied by their classmates..</p>

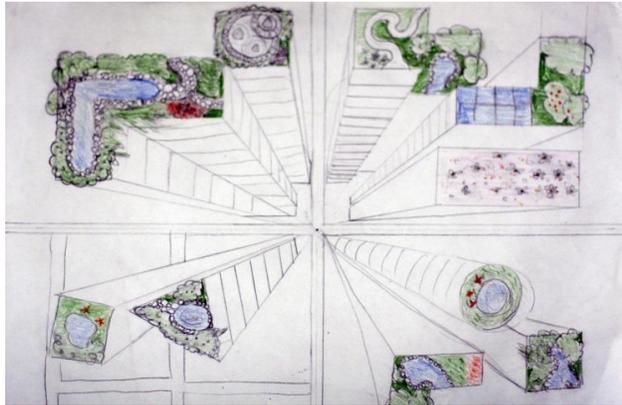
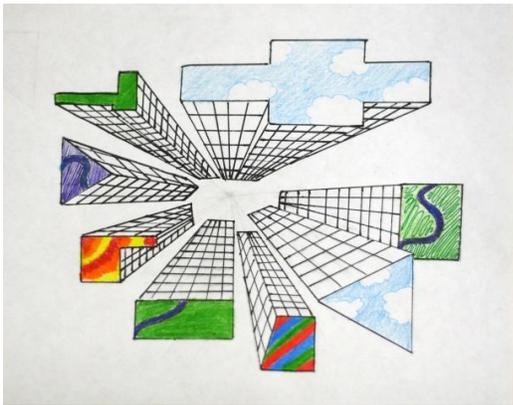
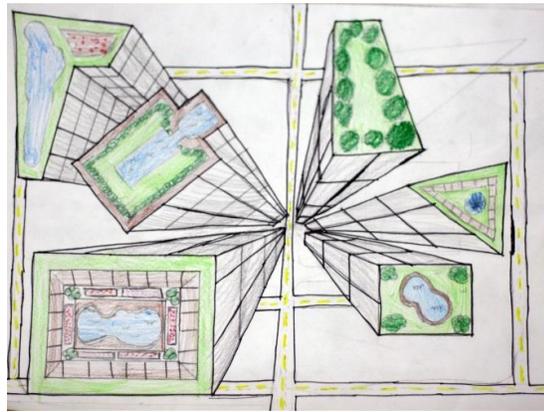
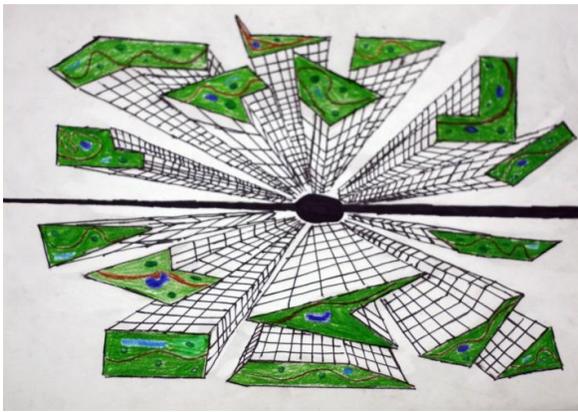
Class:7th/8th Grade

Unit: Drawing

Title and # of class sessions	Green Roof Design, 4 class sessions
Standards	25.A.3d Visual Arts: Identify and describe the elements of value, perspective and color schemes; the principles of contrast, emphasis and unity; and the expressive qualities of thematic development and sequence. 27.A.3a Identify and describe careers and jobs in and among the arts and how they contribute to the world of work. 27.B.3 Know and describe how artists and their works shape culture and increase understanding of societies, past and present.
Objectives	Students will use 1 point perspective to sketch an aerial view of a city and will learn about green roof movements in urban environments.
Concepts	Perspective Cityscapes Birds eye view Benefits of green roofs
Procedure	Students will learn how to use perspective to create a birds eye view of a city and will design gardens on the roofs. Students will learn about urban green roof design and the positive way that this new movement in city planning can greatly benefit the environment and economy. Students will expand upon their understanding of perspective and will practice in their sketchbooks connecting shapes to one vanishing point. After significant practice students will learn how to turn these shapes into city buildings as seen from above and will practice drawing windows, doors and streets that match up to the vanishing point. After creating a final drawing on a separate piece of paper students will be shown several examples of urban green roofs and the environmental benefits of transforming unused space into gardening and recreational areas. After this introduction, students will be shown how landscape designers sketch out plans for projects and will begin to plan gardening and recreation spaces atop their buildings.

<p>Assessment (s)</p>	<p>Students will be assessed on their ability to draw one point perspective drawings that use straight lines and converging meet the vanishing point.</p>
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Examples of student work:



High vs. Low Tree Lesson Plan

Kindergarten/1st grade

Angela Sylvester

Student Learning Goal(s)/Objective(s): *Specific learning goal(s) for students in this lesson*

The students will be able to:

Share/Hold a discussion about the parts of a tree (the roots, trunk, or the branches)

Demonstrate the understanding of tree parts by pointing to them on the “tree visual”

Listen to high and low pitches played on the xylophone and decide how it sounded- higher or lower.

Have the hand-eye coordination to place the paper leaves onto the different parts of the tree (high, low, or in the middle)

Skills/Procedures	Concepts and reasoning/problem-solving
-Working productively with peers -Listening during class discussion and participating by answering questions or giving suggestions	Critical thinking: -How do we know something is an opposite? -How can we match up these musical opposites with something in the environment?

Materials:

Materials needed by the teacher for this lesson.

-large tree visual clearly showing branches/leaves, trunk and roots

-xylophone (for teacher)

State Standards: Music Goal 25A, 26A

Instructional Strategies and Learning Tasks

Amount of time	Teaching and Learning	Description of what the teacher (you) will be doing and/or what the students will be doing
5 mins	<p>Launch</p> <p>How will you start the lesson to engage and motivate students in learning?</p>	<p>“Good morning class! What season are we in right now? (Fall) What happens to the leaves on the trees during fall?”</p> <p>Once answered correctly, talk about the parts of a typical tree.</p>
15 mins	<p>Instruction</p> <p>What will you do to engage students in developing understanding of the lesson objective(s)?</p> <p>How will you link the new content (skills and concepts) to students’ prior learning?</p> <p>What will you say and do? What questions will you ask?</p>	<p>Bring out the tree visual and show each of the parts talked about as a class- pointing to them on the visual.</p> <p>Sing/model the “Leaves fall down” song and teach to class, one measure at a time until learned. Drop out to see if students have it on their own.</p> <p>Play the melody on the xylophone showing students how the melody goes from high to low.</p> <p>Add movement- having students stand with their hands up high when the song starts and moving to sit down when the song ends low.</p> <p>Now ask students to cover their eyes and open their ears. With eyes covered, play a note high or low and have students point up if they think its higher or point down if it sounds lower.</p>
10-15 mins	<p>Structured Practice and Application</p> <p>How will you give students the opportunity to practice so you can provide feedback?</p> <p>How will students apply</p>	<p>-Now, explain how the high/low tree game will work. A student volunteer will come up to the front and stand next to the tree visual. Taking a paper leaf, the student will listen the place the leaf on the top branches of the tree if it sounds high, on the roots if it sounds low, or on the trunk if it sounds like its in the middle somewhere.</p> <p>-The class will assess the student by giving a thumbs up or saying “try again!”</p> <p>Call on several volunteers to come and try out the listening game.</p>

	what they have learned?	
	Assessment How will you informally assess students in this lesson?	Group informal: when assessing the volunteer student thumbs up or “try again” Individual informal: when a student comes up to place a leaf on the tree visual
	Differentiation How will you provide students access to learning based on individual and group needs?	Kinesthetic= movement, leaves Visual= modeling with my voice using the tree Aural= listening and responding to teacher and music instruments Oral= discussing with whole class participation
	Student interactions How will you structure	During instruction= students will work together comparing answers and guessing parts of the tree and assessing their peers.

Environmental Rondo using Vivaldi's "Spring"

1st-2nd Grade

Student Learning Goal(s)/Objective(s): *Specific learning goal(s) for students in this lesson*

The students will be able to:

Share/Hold a discussion about what happens in the environment when Spring arrives (birds, stormy weather, plants starting to grow....)

*Demonstrate movements to represent **Spring "happenings" (Trees grow, Birds sing, Rivers flow, longer sunny days, or Thunder Storms)***

Listen and respond to a new composer (Vivaldi) –guessing game for what season they can hear??

Understand the musical idea of Rondo Form (prior classroom knowledge)

State Standards: 25A and 26A

Skills/Procedures	Concepts and reasoning/problem-solving
-Working productively with peers -Listening during class discussion and participating by answering questions or giving suggestions -Listening and Responding to music	Critical thinking: -How do we know Spring has arrived? -How can we match up these "Spring Ideas" with movement in our bodies?

Materials:

Materials needed by the teacher for this lesson.

-“Spring” visual worksheet for students

-Recording of Vivaldi's "Spring"

-Classroom percussion instruments

-pencils

Instructional Strategies and Learning Tasks

Amount of time	Teaching and Learning	Description of what the teacher (you) will be doing and/or what the students will be doing
5 mins	<p>Launch</p> <p>How will you start the lesson to engage and motivate students in learning?</p>	<p>Explain to the class that they will hear a new piece of music by the famous composer Vivaldi. Explain that Vivaldi wrote a different song for each season of the year.</p> <p>Play the song and allow students to guess what season they think it sounds like.</p> <p>Be sure to ask them WHY they guessed their answer</p> <p>After sharing some guesses- reveal the answer; Spring!</p> <p>“What happens outside during the Spring season?”</p> <p>Record a list on the board of good Spring ideas!</p> <p>(Plants grow, Sun is out more, weather (storms), animals come out more)</p> <p>This song is in Rondo Form.</p> <p>Review the “Rondo is a Simple Form” song</p> <p>(A B A C A D A E A)</p>
15 mins	<p>Instruction</p> <p>What will you do to engage students in developing understanding of the lesson objective(s)?</p> <p>How will you link the new content (skills</p>	<p>Allow students to try to figure out what the A part of the song is when listening by having them stand when they believe the A theme has returned. (Constructivism)</p> <p>Label A as Plants or Trees Theme</p> <p>Label the B theme as Birds and allow students to listen and figure out when the “Birds theme” starts and ends (this does really sound like birds so student should be able to label this section themselves) (Constructivism)</p> <p>Label the C theme as The “River Theme”</p> <p>Label the D theme as the “Thunder Storm”</p> <p>Label the E theme as the “Rising Sun”</p>

	<p>and concepts) to students' prior learning?</p> <p>What will you say and do? What questions will you ask?</p> <p>What will students do?</p>	<p>-In small groups (5), Students will then get into groups and using the "Spring Rondo" worksheet, they will create movements for each part of the Rondo A-E (Trees, Birds, River...) –A section for each student in the group</p> <p>-Once movements have been created, groups can pick a percussion instrument to accompany their own section (drum for Thunder Storm, wood block for tree...)</p>
10-15 mins	<p>Structured Practice and Application</p> <p>How will you give students the opportunity to practice so you can provide feedback?</p> <p>How will students apply what they have learned?</p>	<p>-Students will get practice time in groups</p> <p>-Performance Assessment</p> <p>(Each group will perform their created instrument and movement Rondo accompanied by the "Spring" recording)</p>
	Assessment	Continuous Informal: assess students throughout on listening skills, understanding of music terminology (rondo form), instrument use, singing, pitch, beat...
	Differentiation	Kinesthetic= movement
	How will you provide students access to	<p>Visual= modeling with my voice and "Spring" movements</p> <p>Aural= listening and responding to teacher and music</p>

	learning based on individual and group needs?	instruments Oral= discussing with whole class participation
	Student interactions	During instruction/group work= students will work together comparing answers and creating movements they can all agree on as a group.

Fitness Unit-Lesson plan-Squat review

Subject: Physical Education

Grade: 6th

Illinois State Standards:

Goal 20.A.3a- -Regularly participate in physical activity for the purpose of sustaining or improving individual levels of health-related fitness.

Goal 20.A.3b-Identify and participate in activities associated with the components of health-related fitness.

Objectives:

1. Students will be able to review proper form and technique on the squat and then be able to apply it during the workout.
2. Students will be able to participate in a workout combining 3 exercises, demonstrating knowledge and understanding of each exercise through their movement, in a 7 minute time cap.

Generalizations:

- Warm-up- High knee skip 50ft=>10 air squats=>Slide 50ft=>20 line jumps--3x through
- Review the squat with all the students, remind them of cues:
 - a. feet shoulder width apart
 - b. hands up-block out the sun
 - c. Hips back
 - d. Superhero-stand up tall
- Talk to students about the workout. Workout is 10 air squats, 20 sit-ups, 30 jump ropes. Students will perform all 3 exercises for as many rounds as they can in 7 minutes.
- After the workout is over the students will play a short tag game of sharks and minnows.

Equipment:

- 4 mats for sit-ups
- 22 jump ropes

Section F: Updated Goals, Objectives, and Pupil Performance Standards

During the 2014-2015 school year, the Prairie Crossing Charter School (PCCS) staff continued to write ELA, Science, and Social Studies units aligned with the New Illinois Learning Standards (NILS). This is the second year of alignment. In addition, grade levels teams wrote unit assessment. This year Education and Curriculum continued to be the primary focus to improve pupil performance.

Education & Curriculum

During the 2015 school year, classroom teachers continued to write units and common assessments aligned with the Common Core State Standards (CCSS)/NILS. Teachers attended conferences/workshops at the Regional Office of Education and other outside agencies. This alignment was set in motion during the 2011-2012 school year with the 2014-2015 being the second year the English Language Arts (ELA) curriculum taught was fully aligned to CCSS/NILS. During the 2014-2015 school year, the district remained focused on instruction within the core areas of reading & writing and, in the upper grades, reading across the content areas (Social Studies and Science). Again, this focus was due to the NILS standards adopted in the 2013-2014 school year and the Partnership for Assessment of Readiness for College and Careers (PARCC) given in the by staff in February and May of 2015.

As stated, Prairie Crossing focused on writing units and common assessments. PCCS grade level teams wrote units and ELA Common assessments aligned with the NILS and the instructional pacing standards set during the 2012-2013 school year. A knowledgeable coach from the Lake County Regional Office of Education (ROE) led discussions and activities focused on writing the aligned units. Teachers participated in in-services that included identifying essential questions for units, identifying mentor and anchor texts, and writing unit and summative assessments.

This mentor led the K through 8th grade classroom teachers through the following activities:

- Review of PARCC Frameworks and expectations at each level for common assessments
- Development of ELA common assessments for each trimester in ELA
- Unit development for the Year B ELA curriculum (aligned to either Social Studies or Science standards)

Social Emotional: Positive Behavior Intervention and Supports (PBIS)

In addition to the unit writing and alignment, the staff and students of PCSS collaborated with the PBIS Committee in completing their second year as a PBIS school. The school coach attended the PBIS Leadership Conference and gained additional planning and leadership knowledge to apply during the first year implementation at our school. The members of the PBIS Committee attended continued training through Illinois PBIS Network. The School Social Worker wrote and co-taught a newly written social emotional curriculum.

Section G: Evaluation of Students' Performance

Types of Assessment, Timelines, 2014-2015

During the 2014-2015 year the following assessments were given:

Universal screenings were given to all students three times during the year (fall, winter, spring) to determine if individual students were making expected progress in the areas of reading, writing, and math. The assessments given are listed below:

Grade Level/Assessment	K	1 st	2 nd	3 rd	4 th	5 th	6 th	7 th	8 th
Given 3 times per year									
AIMS web TENS (Math)	X	--	--	--	---	--	--	--	--
AIMSweb CBM (Math Calculation)	X	X	X	X	X	--	--	--	--
AIMSweb CAP (Math Concepts)	X	X	X	X	X	--	--	--	--
DIBELS (Reading)	X	X	X	--	--	--	--	--	--
Given 2 times per year									
NWEA/MAPS (Reading & Math)	--	--	X	X	X	X	X	X	X
Fountas & Pinnell (Reading)	X	X	X	X	X	X	X	--	--
Words Their Way (Spelling)	X	X	X	X	X	X	X	--	--
SSBD (Behavior)	X	X	X	X	X	X	X	X	X
State Assessments									
ACCESS (given only to ELL students)	X	X	X	X	X	X	X	X	X
PARCC (Given 2 times in 2015)	--	--	--	X	X	X	X	X	X

*ELL students take all other assessments as per their grade level requirements

NWEA/MAPS - Northwest Evaluation Association Measure of Academic Progress

DIBELS – Dynamic Indicator of Early Literacy Skills

CBM – Curriculum Based Measurement

ISAT – Illinois State Achievement Test

Upon completion of the universal screenings each trimester, the assessment data is examined by the Director of Student Services, Dean of the K-4, Dean of the 5-8, School Psychologist, Reading and Math Tutors, and individual Classroom Teachers. Data is examined to determine each student's attainment and/or progress toward grade level academic benchmarks. Additionally, each trimester all students' behavior is reviewed by the School Social Worker, School Psychologist, and the Administrative Team. Difficulties identified in the student's academic functioning due to behavioral, organizational, and/or emotional factors are examined to determine if the student is meeting or below grade level behavior standards. Data collected from teacher files, observations, office referrals, etc. are used to make this determination. Students are then determined to be in one of three tiers. Prairie Crossing Charter School also uses a Multi-Tiered System of Support (MTSS) to approach discipline and behavior issues (Tier 1: General Behavior Expectations & Tier 2: Check In/Check Out and FBA/BIP). In general, the first two offenses of the disciplinary code will result in an intervention/consequence deemed appropriate by the Dean of the building. If a student demonstrates a third offense, which does not lead to a suspension or expulsion, the Dean of the building, an Administrative Designee, and/or the School Social Worker will assign the student to a Social Emotional Intervention Group.

Tier 1

Students meeting benchmark scores are instructed in the core classroom curriculum and are not eligible to receive tutoring services.

Tier 2 & Tier 3

Students below set benchmarks (below the grade level benchmark on the DIBELS [K-2] or AIMSweb [K-4], or below the 35th percentile on the NWEA in the content area of reading and/or math) are given additional informal assessments. Students in grades not meeting benchmark on the DIBELS and/or AIMSweb are then screened using additional assessments (Reading: Fountas & Pinnell individual reading assessments, phonemic awareness level, spelling and writing level; Math: calculations probes, in-class beginning of the unit assessment, grade level math assessment). Each grade level has different items they must complete.

A student is identified as needing tutoring when 2 or more indicators show the student is below grade level expectations. Students in grades 2-8 not meeting the benchmark of the NWEA (35%) in a subject matter are screened using additional assessments, including but not limited to: previous spring state testing score, Fountas & Pinnell reading assessments, curriculum-based measures in reading (Oral Reading Fluency, MAZE) and math (grade level probe and/or calculation probe in area of deficit) from AIMSweb. At this level, each grade level has similar items they must complete. A student is identified as needing tutoring when 2 or more indicators show the student is below grade level expectations. Students are determined eligible for Tier 2 and Tier 3 based on data collected from formal benchmark assessments and informal assessments. Students determined eligible receive instruction in the core curriculum along with additional instruction either in the classroom by the classroom teacher and/or by a tutor outside of the regular classroom. Students receiving assistance are instructed in small groups within the classroom, or in groups outside of the classroom (one-on-one and small group).

Parents of students identified as needing intervention(s) were contacted by the classroom teacher who communicated the student's area(s) of difficulty and identified the student's remediation plan to the parents. At each tier, students identified as needing intervention have goal(s) written by the classroom teacher and/or tutor. Each goal specifies the type of intervention (e.g. small group instruction in reading comprehension), the amount and duration of the intervention (e.g. three times a week for thirty minutes, for four weeks), and how the goal will be monitored and evaluated. Parent permission is obtained for students receiving tutoring outside of the regular classroom.

Information specific to behavioral or instructional assistance:

When a student is identified as qualifying for services, a meeting is set up with parents. This meeting, held in person or by phone, and is held to explain the current programs available and the specific needs of the student, to set goals and timelines for student interventions, to inform parents of activities/interventions available for home (homework activities, strategies taught in tutoring, etc.), and to obtain permission in writing from parents for students to receive services if not already obtained. Progress is monitored on each student as determined by the student's written goal.

Each student's progress data is discussed at least monthly in grade band meetings. If a student is not making progress, intervention is intensified. If needed, the student is brought to a formal Teacher Assistance Team (TAT) meeting and additional intervention(s) is selected or additional testing is completed to identify

additional student needs. Reports of student progress are sent no less than each trimester, with formal reports being shared with parents at conferences. Prior to the end of the school year a report is sent home and a meeting is held (in person or by phone) if requested by the parent to discuss a student's academic or behavioral progress to determine goals for the subsequent school year.

Benchmark Assessment Data 2014-2015

Assessment Results by Grade Level 2014-2015 - Reading

Grade Level	DIBELS Reading Fluency Fall	DIBELS Reading Fluency Spring	F & P Fall	F & P Spring	Reading NWEA Fall	Reading NWEA Spring
Kindergarten	39% FSF 39% LN	60% LN	-----	93%	----	----
1st grade	83%	61%	83%	80%	----	----
2nd grade	76% 72% 35%	59% 54%	91%	89%	74%	87%
3rd grade	----	----	76%	60%	78%	72%
4th grade	----	----	85%	91%	85%	80%
5th grade	----	----	----	80%	91%	85%
6th grade	----	----		82%	91%	87%
7th grade	----	----	----	----	90%	92%
8th grade	----	----	----	----	89%	91%

Assessment Results by Grade Level 2014-2015 - Math

Grade Level	AIMSweb Calc. Fluency Fall	AIMSweb Calc. Fluency Spring	AIMSweb Concepts Fluency Fall	AIMSweb Concepts Fluency Spring	Math NWEA Fall	Math NWEA Spring
Kindergarten	95% OC 90% NID 93% QD 90% MN 93% TEN Rec.	89% OC 90% NID 86% QD 81% MN 69% TEN Rec.	-----	----	----	----
1st grade	93% OC 91% NID 93% QD 89% MN 89% TEN Rec.	72% OC 70% NID 80% QD 72% MN 72% TEN Rec.	96% Comp	78% Comp	----	----
2nd grade	91%	65%	80%	78%	70%	85%
3rd grade	93%	85%	91%	85%	93%	80%
4th grade	96%	91%	98%	96%	91%	91%
5th grade	----	----	----	-----	89%	85%
6th grade	----	----	----	----	89%	89%
7th grade	----	----	----	----	83%	92%
8th grade	----	----	----	----	95%	94%

First Grade Reading Tutoring Results 2014-2015

	A	B	E	F	G	H	I	J	K	L	M	N	O	P	AD	AE	AF	AG	AH	AI	AJ	AK	AL	AM	AN	AO
1	Student Name	Grade	Fall AIMS- Oral Counting	Fall AIMS- Number ID	Fall AIMS- Quantity Discrim.	Fall AIMS- Missing Number	Fall AIMS- TEN Instructional Rec	Fall AIMS- Math Computation (M-Comp)	Fall Fountas & Pinnell Instructional Level	Fall DIBELS- Letter Naming Fluency	Fall DIBELS- Phoneme Segment: Fluency (NOT NORMED)	Fall DIBELS- Nonsense Word Fluency-Correct Letter Sounds	Fall DIBELS- Nonsense Word Fluency-Whole Words Read	Reading Tutoring?	Spring AIMS- Oral Counting	Spring AIMS- Number ID	Spring AIMS- Quantity Discrim	Spring AIMS- Missing Number	Spring AIMS- TEN Instructional Rec	Spring AIMS- Computation (M-COMP)	Spring DIBELS- Nonsense Word Fluency- Correct Letter Sounds	Spring DIBELS- NWF-Whole Words Read	Spring DIBELS- Oral Reading Fluency- Words Correct	Spring DORF- Errors	Spring DIBELS- Oral Reading Fluency- % Accuracy	Spring Fountas & Pinnell Instructional Level
2	Male	1	76	38	21	9	A	12	B	44	56	19	4	Y	98	48	29	15	BA	31	62	17	36	3	92	J
3	Male	1	69	27	19	3	BA	7	A-	34	23	14	0	Y	100	57	40	19	AA	39	72	19	37	2	95	G
4	Male	1	98	38	26	21	AA	7	C	52	46	20	1	Y	100	19	40	25	A	25	105	25	41	16	72	F
5	Female	1	59	36	25	18	A	10	C	37	30	30	0	Y	93	75	40	28	AA	33	96	31	85	2	98	H
6	Female	1	49	27	25	16	A	15	B	35	58	31	0	Y	85	61	38	20	A	36	98	31	70	1	99	J
7	Male	1	74	45	25	10	A	9	E	41	60	41	2	Y	90	68	37	19	A	28	98	27	60	0	100	K
8	Male	1	78	33	7	5	BA	12	C	41	47	18	2	Y	98	57	34	6	A	29	51	12	48	4	92	I

57% of the students improved their reading level according to the F & P Assessment, DIBELS NWF.

85% of the students improved their reading fluency to 90 wpm or better on a first grade passage.

Second Grade Reading Tutoring Results 2014-2015

	A	B	E	F	G	H	I	J	K	L	M	N	O	V	W	X	Y	Z	AA	AB	AC
1	Student Name	Grade	Fall AIMS-Computation (M-COMP)	Fall AIMS-Concepts & Applications (M-CAP)	Fall NWEA Math %ile	Fall Fountas & Pinnell Instructional Level	Fall DIBELS- Nonsense Word Fluency-Correct Letter Sounds	Fall DIBELS-Nonsense Word Fluency-Whole Words Read	Fall DIBELS- Oral Reading Fluency (DORF) Words Correct	Fall DIBELS ORF-% Accuracy	Fall NWEA Reading %ile	Reading Tutoring?		Spring DIBELS Oral Reading Fluency (DORF)- Words Correct	Spring DORF-Errors	Spring DORF-% Accuracy	Spring AIMS-Computation (M-COMP)	Spring AIMS-Concepts & Applications (M-CAP)	Spring NWEA Math %ile	Spring NWEA Reading %ile	Spring Fountas & Pinnell Instructional Level
2	Female	2	10	5	40	J	44	14	29	94	33	Y		73	1	99	46	19	46	56	L
3	Male	2	21	6	52	J	40	2	49	86	22	Y		87	3	97	31	18	59	54	N
4	Male	2	45	7	29	K	52	16	50	98	15	Y		116	2	98	27	11	28	38	L
5	Female	2	10	1	11	J	57	18	41	98	18	Y		69	1	99	37	11	11	26	M
6	Female	2	8	2	15	J	77	18	55	95	43	Y		68	0	100	20	9	31	56	M
7	Male	2	7	2	7	I	28	4	30	71	5	Y		36	7	84	20	8	6	4	K
8	Female	2	9	1	22	G	18	2	35	88	15	Y		47	3	94	20	6	25	22	M
9	Female	2	7	3	3	I	93	28	54	87	14	Y		85	8	91	30	15	4	12	L

44% of the students improved their reading level according to the F & P Assessment and the NWEA/MAPS.

Third Grade Reading Tutoring Results 2014-2015

	A	B	E	F	G	H	I	J	K	P	Q	R	S	T
1	Student Name	Grade	Fall AIMS-Computation (M-COMP)	Fall AIMS-Concepts & Applications (M-CAP)	Fall NWEA Math %ile	Fall Fountas & Pinnell-Instructional Level	Fall NWEA Reading %ile	Reading Tutoring?		Spring AIMS-Computation (M-COMP)	Spring AIMS-Concepts & Applications (M-CAP)	Spring NWEA Math %ile	Spring NWEA Reading %ile	Spring Fountas & Pinnell-Instructional Level
2	Male	3	● 29	● 10	● 50	N	● 35	Y		● 64	● 22	● 38	● 31	P
3	Male	3	● 30	● 3	● 87	M	● 56			● 63	● 11	● 4	● 20	P
4	Male	3	● 27	● 5	● 21	M	● 30	Y		● 55	● 24	● 32	● 33	N
5	Female	3	● 14	● 8	● 37	N	● 21	Y		● 32	● 4	● 12	● 5	O
6	Male	3	● 23	● 7	● 47	I	● 23	Y		● 15	● 8	● 38	● 33	L
7	Female	3	● 30	● 6	● 50	L	● 45			● 53	● 13	● 47	● 49	O
8	Female	3	● 26	● 7	● 87	L	● 83			● 65	● 12	● 92	● 71	P
9	Male	3	● 9	● 2	● 43	K	● 2			● 3	● 2	● 16	● 1	L
10	Male	3	● 16	● 3	● 23	N	● 37			● 31	● 15	● 56	● 58	O
11	Female	3	● 16	● 9	● 26	L	● 21	Y		● 60	● 12	● 18	● 15	M

50% of the third grade students improved their reading level according to the NWEA/MAPS assessment.

Fourth Grade Reading Tutoring Results 2014-2015

	A	B	E	F	G	H	I	J	K	L	M	R	S	T	U	V
1	Student Name	Grade	Fall AIMS-Computation (M-COMP)	Fall AIMS-Concepts & Applications (M-CAP)	Fall NWEA Math %ile	2013-2014 Math ISAT	Fall Fountas & Pinnell-Instructional Level	Fall NWEA Reading %ile	2013-2014 Reading ISAT	Reading Tutoring?		Spring AIMS-Computation (M-COMP)	Spring AIMS-Concepts & Applications (M-CAP)	Spring NWEA Math %ile	Spring NWEA Reading %ile	Spring Fountas & Pinnell-Instructional Level
2	Male	4	● 46	● 10	● 76	● 217	P	● 34	● 192	Y		● 73	● 20	● 65	● 48	R
3	Female	4	● 22	● 12	● 30	● 208	P	● 32	● 203	Y		● 59	● 14	● 17	● 25	Q
4	Male	4	● 20	● 14	● 36	● 188	R	● 42	● 194	Y		● 55	● 11	● 46	● 45	S
5	Female	4	● 19	● 9	● 57	● 225	O	● 27	● 184	Y		● 66	● 16	● 49	● 27	S
6	Female	4	● 29	● 16	● 18	● 200	O	● 13	● 187	Y		● 65	● 12	● 37	● 17	Q
7	Female	4	● 31	● 17	● 15	● 200	O	● 37	● 167	Y		● 49	● 22	● 32	● 27	T

50% of the third grade students improved their reading level according to the F & P assessment.