CURRICULUM

KLYDE WARREN PARK

Funded by

ExxonMobil

Produced in partnership with

BigThought

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TABLE OF CONTENTS

INTRODUCTION

Klyde Warren Park is not your average park space. An outdoor park is often indicative of bright and fun equipment to play on, perhaps some seating to enjoy the peacefulness that the space has to offer or to enjoy a picnic, and maybe some open space to play various sports or games. Klyde Warren Park has all of that, and much, much more. Aimed at all ages and a plethora of interests, this space has something for everyone, including the family pet!

Klyde Warren Park is a lively and active space which is privately owned and managed by the Woodall Rodgers Park Foundation. Though there are many unique features to this park, one of the things that truly sets it apart from other places of its kind is its location. It is built over the recessed Woodall Rodgers Freeway between Pearl and St. Paul Streets in the heart of Dallas, TX. The park provides a delightful and fascinating break from the hustle and bustle of the city that surrounds it, giving visitors a chance to slow down and immerse themselves in all that the park has to offer. There are also a number of options to access the park including DART, trolley, and D-Link stops nearby as well as on foot or bike with pedestrian and bike paths available.

The park can be experienced as though the visitor is moving through different "rooms" just as the designer Jim Burnett intended. Some of the unique features include, a performance pavilion, two onsite restaurants, walking trails, a dog park, a children's park, a games area, a mobile library, and mobile furniture. A positive visitor experience was the goal in the creation of Klyde Warren Park, right down to the last detail. In addition to these many exciting features, the park offers a variety of exercise classes, concerts, arts classes, and hosts number of food trucks.

As one can see, this space goes above and beyond a traditional park. It is an oasis amidst a busy urban setting, a connector for people to move throughout the heart of the city, and an amazing educational space. For example, the Reading & Games "Room", while an outdoor space, has a retaining wall that reduces traffic noise so it can be used as a classroom. This one place in the park, however, is hardly the only learning area. The entire park is a colossal learning lab for all disciplines, and the goal of this curriculum is to aid educators in providing fun, and truly educational experiences for their students when visiting Klyde Warren Park.

The curriculum is written to ensure the learning that occurs in the park transfers back to the classroom and beyond. Each lesson begins with a pre tour section that gives the instructor ideas and lessons to review prior to their trip. Next is the lesson for the tour visit. These activities will build upon the pre tour lessons so that the students can make connections in the real world to classroom learning. Lastly, there is a post tour section. This portion of the curriculum builds upon all of the prior lessons and activities and culminates in a project based on information and experiences at the park.

Also included in the curriculum are "quick bites". These are fun activities that are designed for students and educators that only have a limited time at the park, but still want to maximize the learning experience. The disciplines included in the curriculum are math, art & design, social studies, science and Physical Education. In addition, there is a writing and Physical Education component added to each lesson. These lessons were written to promote fun, educational, and interactive experiences at the park. Learning should be fun, and Klyde Warren Park provides the perfect learning space to create an unforgettable experience!

LETTER FROM

KLYDE WARREN PARK

When the visionaries behind Klyde Warren Park imagined what it would be, they pictured a gathering place where people would congregate and create traditions. After two years and roughly two million visitors, Klyde Warren Park has become an oasis in the heart of Dallas, providing connectivity between Downtown and Uptown.

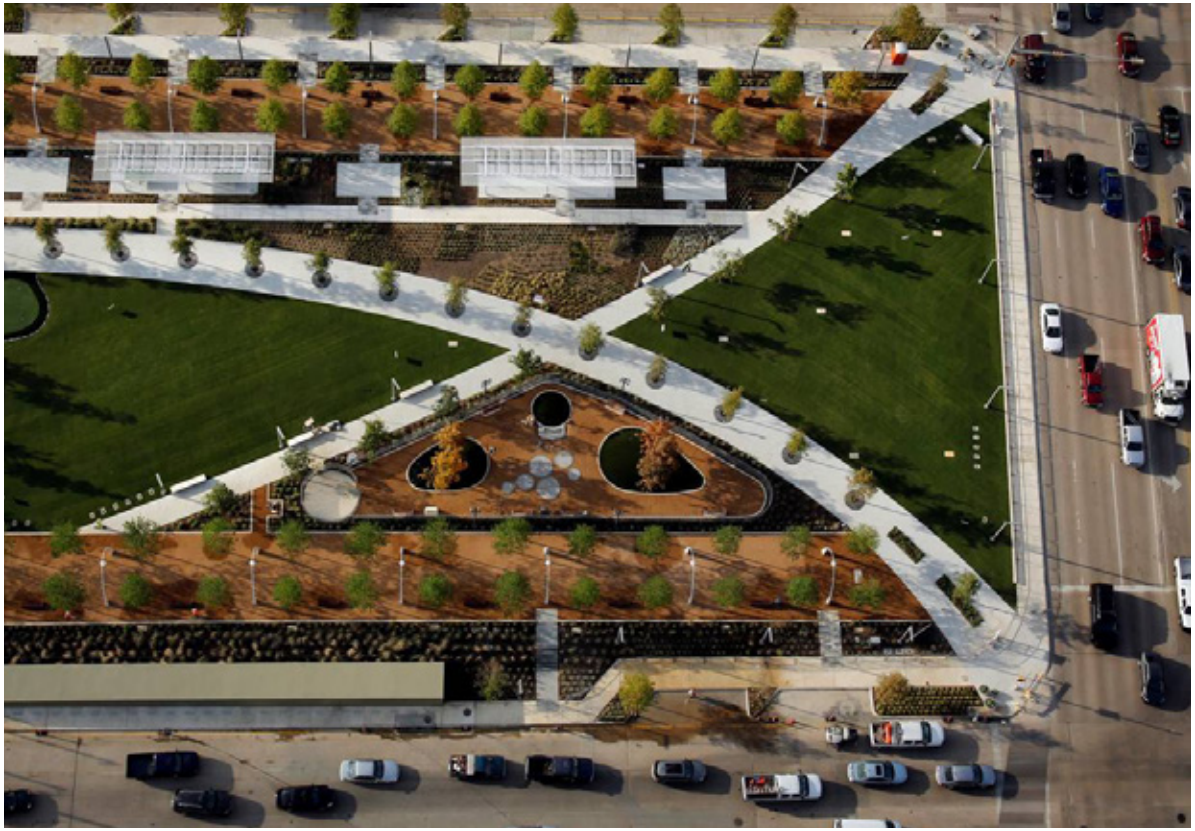
The park has quickly become a popular spot for school groups to enjoy lunch and burn off energy after visiting one of our Arts District neighbors. Beyond that, hidden beneath the lush green grass and behind the butterfly bushes, Klyde Warren Park offers many learning opportunities for students and teachers to explore. The park is a feat of engineering and design, providing a unique backdrop for engaging students of all ages in discussions on topics such as science and technology, math, visual art and design, social studies, and English/ Language arts.

We are excited to highlight these topics in the following curriculum developed in partnership with Big Thought and through the generous support of Exxon Mobil. Our hope is that by providing free access to TEKS-aligned curriculum, students and teachers will see the park not only as a place to play, but also as a place to learn. We invite teachers to use the park as their outdoor classroom for students to exercise creativity and explore their community.

Tara N. Green
President & CEO

A BIT OF HISTORY ABOUT THE KLYDE WARREN PARK AREA

One of the unique features of Klyde Warren Park is the freeway that runs underneath it. Woodall Rodgers Freeway, originally known as Spur 366, was completed in 1983. The freeway links Central Expressway (US 75) and Stemmons Freeway (I-35E), and runs through a tunnel underneath Klyde Warren Park. Among the many wonderful attributes that the park brings to the city, it serves as a bridge between uptown and downtown Dallas, creating a much needed connection.

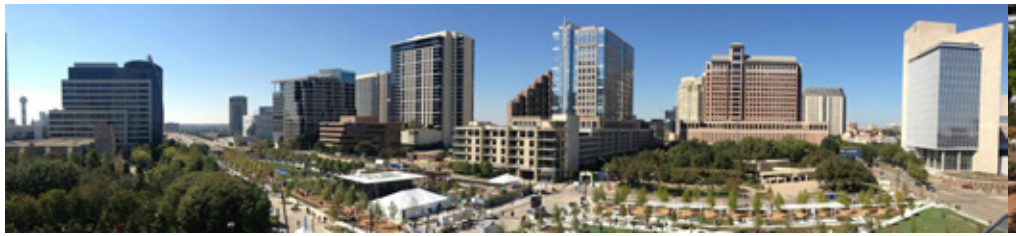


The park brings a new and exciting element to Dallas, but before Klyde Warren Park, there existed a rich community in the area known as Little Mexico. Formerly a Polish community, it was settled by a wave of Mexican immigrants beginning about 1910, and was recognized as Little Mexico by 1919. This became the center of Mexican American life up into the 1980's. Although highways and skyscrapers fill the area under and around Klyde Warren Park today, there are several remaining landmarks of Little Mexico that survived the evolution of the developing city. One of the historical landmarks closest to Klyde Warren Park is Cumberland Hill School. It was built in 1889, and it was a public school where many of Little Mexico's children went to learn every day. Some of the other places that were a part of Little Mexico include Luna's Tortilla Factory, El Fenix, and St. Ann's School. These buildings are an important part of our history, and continue to be an important part of Dallas today.

Even more important than the buildings that have made a lasting impact on the city are the revolutionaries that truly made these places special. One such person was Maria Moreno who opened her home up to the community and provided a place for a kindergarten for Mexican children. It then turned into a mission that was part of Emanuel United Methodist Church in Little Mexico, and is now the Agape United Methodist Church.

Another important historical figure was Anita Martinez. She helped manage the family business, El Fenix, and went on to become the first Hispanic city council member of Dallas. She also founded the Anita N. Martinez Ballet Folklorico in 1975.

These are just two of the examples of some of the amazing revolutionaries that have impacted this wonderful area of Dallas. Some additional and very notable examples are Julian T. Saldivar, Leslie A. Stemmons, Jerry Junkins, and Francisco "Pancho" Medrano – all whose names live on through Dallas ISD schools that bear their name in their honor.



In addition to Little Mexico, there was another community that had a deep and lasting impact on the city and its development. During the Jim Crow days of Dallas, on the other side of Pearl Street, northeast from Klyde Warren Park, was an area known as Freedman's Town. The community was established in 1869 by freed slaves on what was then the outskirts of town. Because segregation reigned during this time, African-Americans chose to build their own infrastructures, including churches and schools, in order to stay away from the white dominated cultural institutions and governments in the city.

In 1872, a railroad was built, which brought an influx of immigration and a population boost to both Dallas and Freedman's Town. In addition, it provided much needed employment to the African American population. Over the course of about 50 years, the north Dallas area thrived as a self-sustaining community; however, due to the harsh effects of segregation practices, the physical community began to deteriorate. When the construction of the Roseland Town Homes Project in the 1930's failed to meet the needs of the community, African-Americans were met with anger and racial violence when they began to move into predominantly white neighborhoods.

The construction of Central Expressway in the 1940's only made matters worse for the community of Freedman's Town due to the clearing of many residences in the area as well as the removal of a large portion of Freedman's Cemetery in order to build the expressway. Even further deepening the divide and demolition of what was left of Freedman's Town was the construction of another roadway – Woodall Rodgers Freeway – which began in 1977.

In 1982, after the houses and businesses in the areas had been cleared for the roadways, Dallas leaders began work on a plan known as "Dallas 2000". This project included the creation of what we know now as the Dallas Arts District – which is located on the south side of Klyde Warren Park.


ADVANCIAL
Botanical
Garden

Today, several important structures that served the residents of Freedman's Town are still in active use in the Arts District. Saint Paul United Methodist Church was founded in 1873, serving as both a church and school, providing space for an education that was not allowed during the days of segregation in the "white only" parts of Dallas. The current building was completed in 1923, and continues to be a staple in the community while feeding the homeless and providing services to those in need. It also became the headquarters for many of the refugees that fled New Orleans during hurricane Katrina in 2005.

In 1922, B. T. Washington High School for students of color was opened in Freedman's Town; the building was enlarged in 1952 when it was designated a technical school and again in 1976 when the school became the Arts Magnet campus for the Dallas Independent School District. Following an extensive renovation and expansion in 2008, the restored 1922 building remains the historical core and heart of the nationally recognized arts high school.

Two blocks east on Flora Street, the Moorland YMCA was the first YMCA for African-Americans in the Southwest when it was completed in 1930. Originally equipped with a gymnasium and swimming pool, the building provided 37 sleeping rooms for use by visitors to Dallas; because very few hotels were accessible to African-Americans, many prominent people, from Justice Thurgood Marshall to Muhammad Ali, stayed at the YMCA while visiting Dallas. Supporters of the YMCA included Dallas African-American leaders such as Dr. J.J. Rhoads, Judge George L. Allen, Dr. L. G. Pinkston, and A. Maceo Smith. The Moorland YMCA became an important cultural, educational and community center for African-Americans and played a key role as a neutral meeting place during the Civil Rights Movement. Today the renovated building serves as home to the renowned Dallas Black Dance Theatre, providing administrative, rehearsal and teaching facilities for the company.

On these very grounds some of Dallas' richest histories were born, as well as some of the city's most intriguing and impactful citizens. As you walk through the beautiful space that is Klyde Warren Park, think about the historical influences which helped to grow the area in to what it is today, and what role you can play to make a positive impact on its future.

References
VVelin, Gabriel. 2010. "Dallas Freedman's Town: One Community's Preservation Within a Gentrified Environment." The Eagle Feather 7. doi:10.12794/tef.2010.154.

3rd GRADE LESSONS

ART & DESIGN

MATH

PHYSICAL EDUCATION

SCIENCE

SOCIAL STUDIES

ART & DESIGN

BIG IDEA

DESIGN YOUR OWN PLAYGROUND!
The students will study the different design elements that make the playground at Klyde Warren Park unique and then create their own designs for a playground.

PRE-TOUR TEACHING

Have a discussion with the students about playgrounds that they like or have been to. Some questions to kick start the conversation might include:

- What makes a playground fun?
- What are some of your favorite things to do on your school playground?
- If you could create and design your own playground, what are the top 3 things that you would include?

Divide the students up into small groups of 2-3. Have them create a sketch of their "dream" playground. Let them use their imagination and be as creative as they can be! Keep these drawings for the project that they will do after the field trip to Klyde Warren Park.

TOUR TEACHING

MATERIALS:
SKETCH BOOKS, PENCILS

01

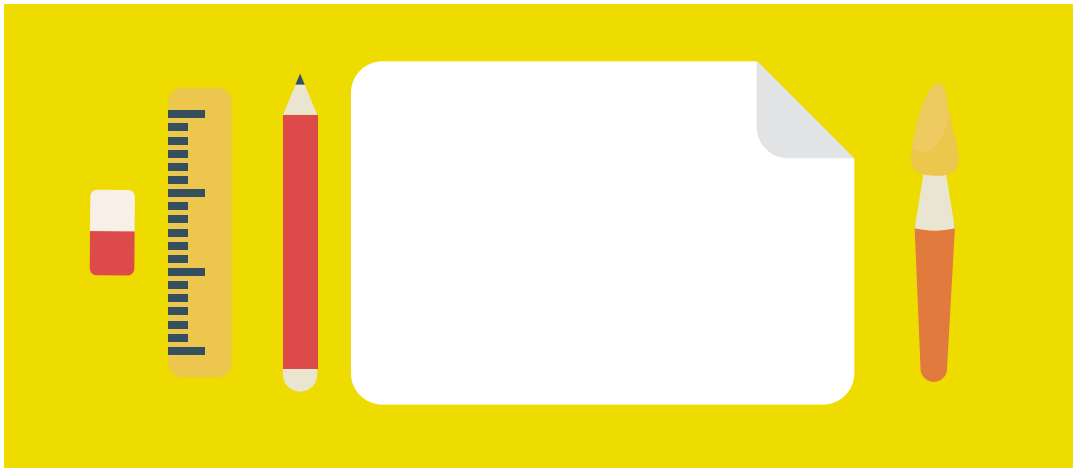
Have the students get back into the same groups that they were in when they created their mock dream playground in the classroom. Make sure that one of the students has a sketch pad, or some sort of paper along with a pencil so that they can sketch and take notes.

02

Take the students to the children's area of Klyde Warren Park, and let them explore. Instruct them to take notes or make sketches of the things that they see in the playground that they like the most. Also, ask them to write down anything that they might not like, or would change. Tell them to use their "artist's eye" and look closely at everything in the area. Encourage them to pay attention to any of the elements of art or principles of design that you have discussed previously in class when exploring the design of the playground.

Point out things to the groups such as:

- The eye catching design of the entrance to the play area
- The shapes of the equipment
- The colors used inside the play area
- The artificial grass that was used (instead of real grass so that it can handle the heavy foot traffic)
- The "bouncy" walkway
- Drinking fountains for needed hydration
- Hand washing station
- Water area (placed at the back of the play area to be out of the way of the other children playing)
- Bathrooms
- Artificial hilly terrain



POST-TOUR TEACHING

01

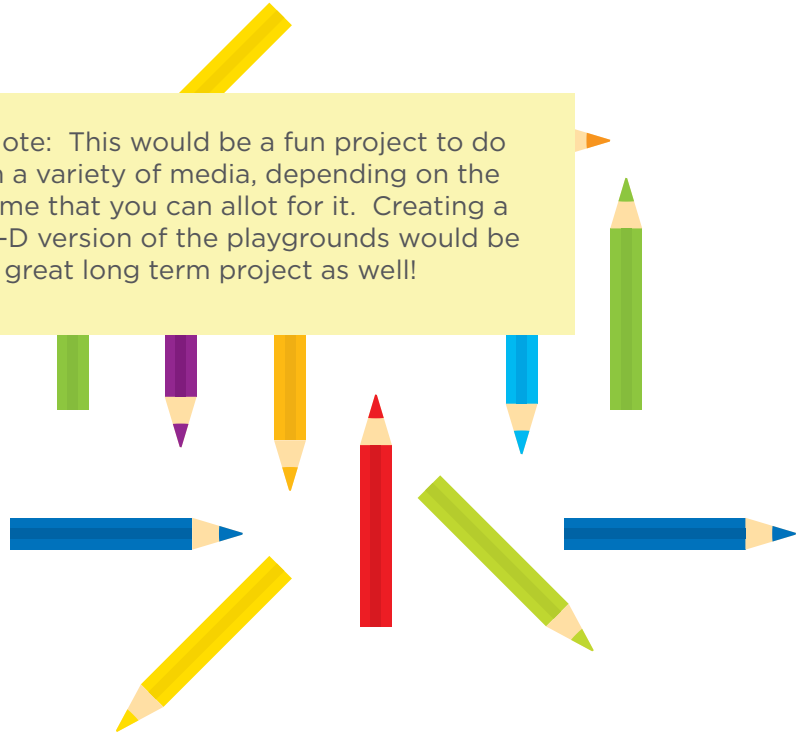
Once you are back at the classroom, have the students gather in their groups once more. Pass back the initial sketches that they created for their "dream playground". Instruct them to compare them to the sketches and notes that they made while at Klyde Warren Park. Have them talk about the following questions in their groups:

- What kinds of things did you find at Klyde Warren Park that inspired ideas for your dream playground?
- What kinds of landscape would you include in your playground? Why?
- What colors would you use in your playground?
- What shapes would you use in your playground?
- What kinds of materials would you use to build your playground?
- What would your entrance look like?

02

Give the students a large sheet of drawing paper to draw the final version of their "dream" playground. They can use markers or colored pencils to add color to their work. When everyone has completed the project, allow each group to present their designs to the class. Encourage the students to ask questions and make positive comments or possible suggestions to the groups presenting.

Note: This would be a fun project to do in a variety of media, depending on the time that you can allot for it. Creating a 3-D version of the playgrounds would be a great long term project as well!



ELA COMPONENT

In addition to their art work, the groups should write a description of their playgrounds. They can explain to the viewer the reasons behind their artistic choices such as the shapes, colors, and materials that were used. Hang the descriptions next to the playground designs if possible.

QUICK BITE

Have the students look closely at the elaborate and eye catching entrance into the children's area of the playground. What is it about this design that grabs your attention? Ask the students to draw their own design for an entrance. Have them think about the following questions:

- What would you do to grab people's attention?
- What colors would you use?
- What shapes would you use?
- Would you include sound?

Have them share their sketches with their peers. This might also be something that could be fun to talk about on the ride back to the school.

PE COMPONENT

Talk to students about the benefits of having playgrounds for children in parks (i.e., a chance to exercise and release energy). Teach them about the relationship between heart rate, fitness, and overall wellness. Instruct them on the proper way to check their pulse and provide them with the information that a healthy heart rate for people their age is between 127 bpm and 196 bpm (beats per minute). During the exploration of the Children's Park, encourage them to sporadically check their heart rate. If they find that they are below 127 bpm, they should try to move faster in order to get the most benefits from exercise. If they are above 196 bpm, they should be sure to take lots of rests so that they don't overload their hearts.

TEKS

01

PERCEPTION
(B) Identify art elements such as color, texture, form, line, space, and value and art principles such as emphasis, pattern, rhythm, balance, proportion, and unity in artworks.

02

CREATIVE EXPRESSION/ PERFORMANCE
(A) Create artworks based on personal observations and experiences.

04

RESPONSE/EVALUATION
(A) Identify general intent and expressive qualities in personal artworks.

MATH

BIG IDEA

PRE-TOUR TEACHING

- As a class discuss what the students already know about perimeter and area.
- Have the students turn to a partner and discuss how perimeter and area are related to one another. Make a web on the board to display your ideas, and have the students add to the web as they come up with them.
- Ask questions such as:
  - What is a unit of measurement?
  - How do we measure the perimeter of a given shape?
  - How do the sizes of the units of measurement affect the total perimeter when measuring?
  - What could we use if we didn't have a ruler to measure the perimeter of our classroom?
- As a class decide (take a vote, brainstorm ideas) what could be used at the park to measure length.
  - Leaves, walking steps, rocks, etc.
- After coming to a decision have the students pair up into partners and give each student a Perimeter Recording Sheet.
- Students can fill in the 'unit used to measure length' section of the recording sheet.

TOUR TEACHING

MATERIALS:
PERIMETER RECORDING SHEET, CLIPBOARD, PENCIL

After arriving at the park, take a tour as a class. Decide on an area of the park that you would be able to measure.

- Discuss what shape you will be measuring. Is this section of the park shaped like a rectangle? A triangle?
- Have the students draw a sketch of the borders of the area you will be measuring.
- Make sure the students have access to the unit of measurement they will need to complete their task. Give them time to find a leaf, rock, etc.
- Partners will work together to find what they believe is the perimeter of the park. Students will need to complete the first page of their recording sheet at this time.
- The teacher can monitor for understanding and help students with any questions they may have.

POST-TOUR TEACHING

Students will come together as a class to create a dot plot displaying the results of their perimeter recordings.

- The teacher can model a dot plot on the board to check for understanding. Working as a class, the students will compile their data to show the most frequently found perimeter.
- Space for working through the problems is found on the third page of the Perimeter Recording Sheet.
- A map of the park with measurements is included at the end of this lesson so students can compare their estimates with actual park dimensions.

QUICK BITE

Geometry Search - On the back of the recording sheet the students have a geometry search that they can do while at the park. Students should try and find as many real world three-dimensional objects as they can. Once they have found the shape in real life they are able to sketch their sighting on the recording sheet.

ELA COMPONENT

Have students write about their experience.

- On the last page of the Perimeter Recording Sheet there are several questions that students may answer to expand upon their visit to the park.
- Working with their partners or independently, students should use complete sentences and short paragraphs to answer the questions.
- Teacher may guide students thinking by facilitating a group discussion of the questions.

PE COMPONENT

Use your own feet to measure length! Walk the perimeter by touching ankle to toe and counting how many steps make up the perimeter of the area. Remind students to maintain their balance by keeping tummies tight and hands out. For an added physical challenge, tell students to keep their heads up and eyes forward instead of looking at their feet.

TEKS

3.4

(A) solve with fluency one-step and two-step problems involving addition and subtraction within 1,000 using strategies based on place value, properties of operations, and the relationship between addition and subtraction

(E) represent multiplication facts by using a variety of approaches such as repeated addition, equal-sized groups, arrays, area models, equal jumps on a number line, and skip counting

3.5

(A) represent one-and two-step problems involving addition and subtraction of whole numbers to 1,000 using pictorial models, number lines, and equations

3.6

(A) classify and sort two- and three dimensional figures, including cones, cylinders, spheres, triangular and rectangular prisms, and cubes, based on attributes using formal geometric language

(C) determine the area of rectangles with whole number side lengths in problems using multiplication related to the number of rows times the number of unit squares in each row

3.7

(B) determine the perimeter of a polygon or a missing length when given perimeter and remaining side lengths in problems

3.8

(A) summarize a data set with multiple categories using a frequency table, dot plot, pictograph, or bar graph with scaled intervals

PERIMETER RECORD SHEET

Perimeter in the Park Lesson, Grade 3

GROUP MEMBERS:

Sketch of Park:
Sphere, cube, rectangular prism, triangular prism, cone, cylinder

Unit Used to Measure Length (rocks, leaves, footsteps, etc.):

Shape of Park:

Predicted Perimeter:

Partner 1 Measurement:

Partner 2 Measurement:

Final Perimeter:

GEOMETRY SEARCH

Can you find any of these shapes in the real world around the park? Draw a sketch of the real world shape and get a bonus!

Sphere

Cube

Triangular prism

Cone

Rectangular Prism

Cylinder

CREATE A DOT PLOT USING DATA

Using the data that your class collected, create a dot plot:

What perimeter was found most often?

Were there any outliers in the data?

Using your findings, is there any way that you could find the exact perimeter in feet and inches? How so?

THINK AND RESPOND

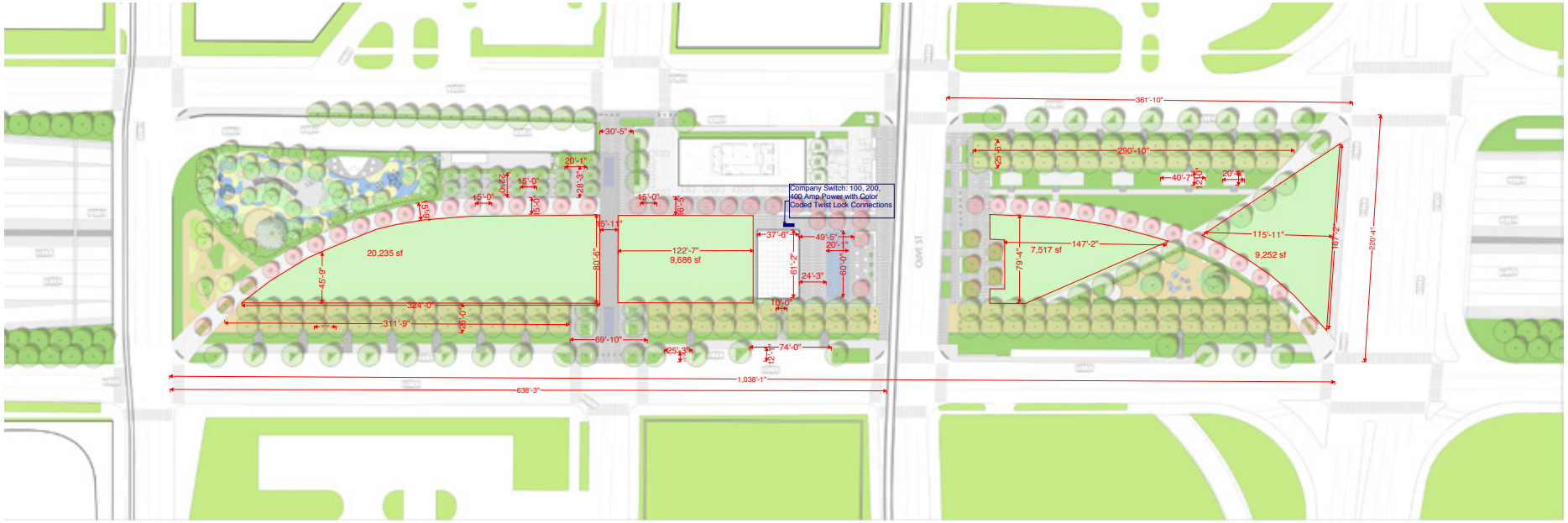
With the class or a partner, answer the following questions using complete sentences.

1. Did everyone in the class find the exact same perimeter? Why or why not?

2. What do you think would have happened if we chose different units of measurement? Would you have found the same perimeter? Why?

3. Is there any way to use the perimeter you found to find the area of the section of the park?

Klyde Warren Park Site Plan with Measurements



PHYSICAL EDUCATION

BIG IDEA

OLYMPICS RELAY
Students complete an Olympic Relay while learning about Olympic Events.

PRE-TOUR TEACHING

Ask students to create a table on a piece of paper; label one side “Things I know about the Olympics” and label the other side, “Things I’d like to know about the Olympics”. Have students brainstorm in groups to complete the table and discuss. Show the students a clip from the Olympics. Instruct students to research the origin of the Olympics on their phones or computers and share what they learned with the class. Allow students to make Greek costumes such as tunics, cloaks and crowns to be worn during the relay (over their clothes preferably). Show them pictures of ancient Greece to inspire their designs. Don’t forget to make the torch to kick off the Opening Ceremony! Playing music (if you are able) is a great way to get the students excited too.

TOUR TEACHING

MATERIALS:
WHISTLE, 5-8 HURDLES, 4-6 FOAM NOODLES, 4-6 BEAN BAGS OR NERF FOOTBALLS, MEASURING TAPE, STOPWATCH

Set up 4 relay stations (events) around the perimeter of the Ginsberg Family Great Lawn with several adult supervisors. Demonstrate or describe what the students will do at each station (event) before beginning the relay. Number each station 1-4 so students will know which station to complete first. You may choose to have an adult supervisor record distances for students at each station, or you may choose to create a scorecard so that the students may keep track of their achievements at each station. Either way, the students will enjoy knowing how well they did at each event.

OPTION 01

Break the students into groups of 4 and place one student at each station. On the whistle, the student at station 1 completes the event and runs to tag his teammate at station 2. This continues until the 4th teammate crosses the finish line. The team with the fastest time wins.

OPTION 02

Start all the students at station 1 and tell them to go on the whistle. Each student proceeds through the events. The student with the fastest time wins.

OPTION 03

If you have enough supervision, or mature enough students, run this activity similar to an actual track meet in which distance and times are calculated and a winner is declared based on his or her performance in each of the 4 events.

STATIONS

STATION 01

Hurdles - You may use several makeshift hurdles, but be sure they are not higher than the average student's knees.

STATION 02

Javelin - Students throw a foam noodle as far as they can in the manner of a javelin.

STATION 03

Discus - Students throw a bean bag or Nerf football as far as they can in the manner of Discus.

STATION 04

Long Jump - Students complete a two-footed jump from a starting line trying to jump as far as possible. Give them 3 chances and record the best jump.

POST-TOUR TEACHING

Hold an awards ceremony. Make 1st, 2nd, 3rd place podiums out of milk crates or boxes. Award gold, silver, and bronze medals to students whose scores are highest. For a less competitive option, make a winners circle out of a hula hoop and honor each participant with a gold medal.

ELA COMPONENT

Students can create a poster about what they learned while researching the origin of the Olympics. Tell them to choose a theme and title for the poster such as “Ancient Greek Clothing” or “The Olympics: Then and Now”. They should paraphrase and summarize what they learned, include pictures, and site the sources they used.

QUICK BITE

Students may observe the amenities in the park such as the game tables and Dog Park. Ask them to invent a new Olympic Event that could be done right here in Klyde Warren Park. Tell them to think about how a winner would be determined in this event.

TEKS

3.1

Movement
(B) Demonstrate proper form and smooth transitions during combinations of fundamental locomotor and body control skills such as running and jumping safely in dynamic situations.

(J) Demonstrate key elements in manipulative skills such as underhand throw, overhand throw, catch and kick such as position your side to the target.

3.5

Physical Activity and Health
(A) Use equipment safely and properly

BIG IDEA

YOGA IN THE PARK
Students will experience the ways in which yoga reduces stress and builds strength.

PRE-TOUR TEACHING

Create a free GoNoodle account at www.gonoodle.com. Choose one of the yoga-based activities for the students to follow along. You may choose to have a class discussion before or after you do the activity. Ask the students to tell you what they know about yoga. Ask for volunteers to demonstrate any yoga poses that they might already know. You will want to compile and familiarize the children with about 14 yoga poses before heading to the park. This will be the "list" mentioned later in the lesson. Students may use electronic devices or classroom computers to search for images of yoga poses, or they can create their own. Tell them that the best way to remember the poses is to learn or give a name to each one that makes sense. For example, the Bridge is when you lie on your back and make a bridge with your spine. Another way to help students remember each pose is to have them draw pictures. Put the students in pairs and have them draw each other as they attempt to perform the pose. They may take these drawings to the park to help them. Another option could be for you to print off images ahead of time and give them to the students to memorize and practice safely in class. There are several readily available handouts online.

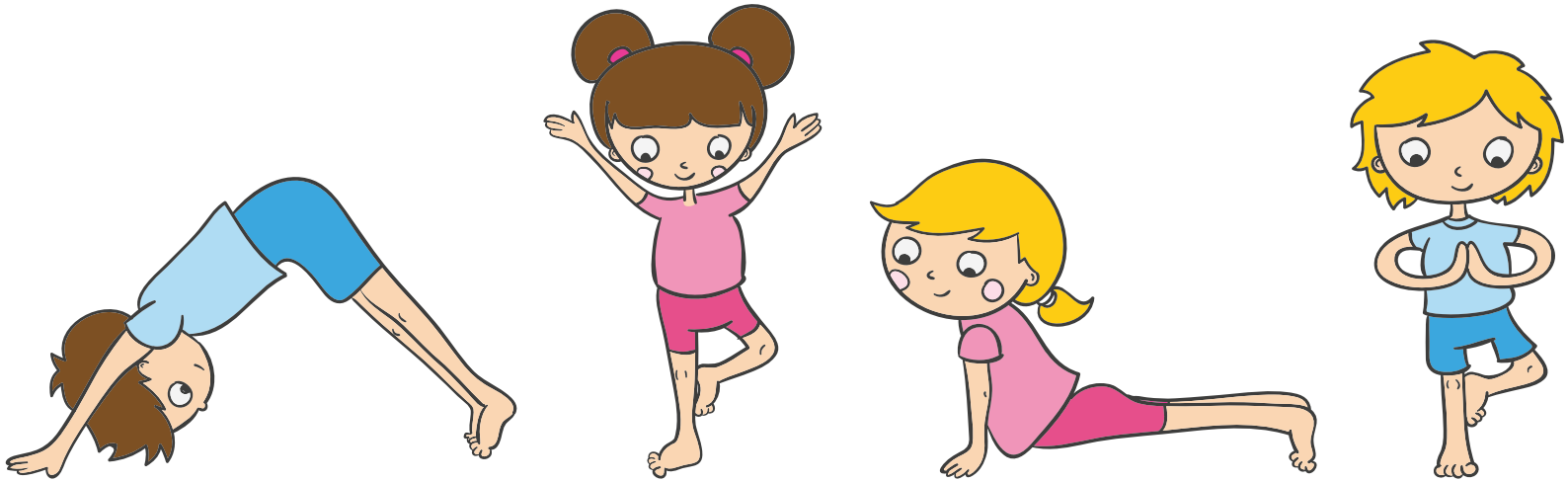
Inform the students that all types of Yoga require focus, patience, and the ability to focus on your breathing and clear your mind. Each pose should be held between 20-30 seconds. Tell them it's important they have good posture and keep their stomach muscles taut at all times. Encourage them to persevere. If they lose balance and fall, no problem! Just get back into the pose and try again. Tell them they will be executing these poses when they get to the park. Students may need an extrinsic motivator for this one (they may be too shy)-offer a reward for the best Yogi in the group that day.

TOUR TEACHING

MATERIALS:
YOGA MATS FOR EACH STUDENT

Proceed to East Lawn or Ginsburg Family Lawn. Spread the yoga mats out so that each student has enough space to move freely without coming into contact with anybody else. Don't let them spread too far, though! You want them to be able to hear you when you speak in your calm and relaxing "yoga" voice. You may play soft, slow music if you have the capability.

Tell the students to sit in Sukhasana (traditional yoga pose with legs crossed, palms up and thumb and middle finger slightly touching). Tell them to listen to the sounds around them, focus on their breathing, and clear their minds. At this point, either you or another student can call out a new yoga pose from the "list" you assembled in class. Poses should be held for about 20-30 seconds before switching poses.



POST-TOUR TEACHING

Ask students to discuss how they felt before, during, and after Yoga in the Park. Ask them to determine the benefits of doing an activity like Yoga on a regular basis. Answers could include stronger muscles and bones, flexibility and greater range of motion, a strengthening of the immune system, stress relief, and muscular-skeletal pain relief (i.e. back pain).

QUICK BITE

Ask students to get in groups and discuss the various ways in which they cope with the stress in their lives. Tell them to examine their answers by asking themselves the question, "Are these healthy or unhealthy ways to cope with stress?"

ELA COMPONENT

During the Post Tour Teaching portion of the lesson, have students make 3 vertical columns on a piece of paper. Label the columns "Before", "During" and "After". Tell the students to use at least two complete sentences to describe how they felt during each stage of the Yoga in the Park activities. Give the table a title and hang the tables in the classroom.

TEKS

3.3 **Physical Activity and Health**
(C) Participate in appropriate exercises for developing flexibility.

3.4 **Physical Activity and Health**
(D) Identify principles of good posture and its impact on physical activity

3.7 **Social Development**
(B) Persevere when not successful on the first try in learning movement skills.

BIG IDEA

BEANBAGS AT MIDNIGHT

Students will explore the differences between aerobic and anaerobic fitness.

PRE-TOUR TEACHING

In the classroom, introduce the students to the terms aerobic exercise and anaerobic exercise. Do this by asking them to compare the 100-meter dash and a marathon race. Which one would you consider to be more difficult? You may use a Venn diagram to illustrate the similarities and differences of these two activities. Give the students the definitions below and then refer to the Venn diagram to make changes or additions.

Aerobic exercise- requires oxygen, and can be sustained for longer periods of time.

Anaerobic exercise- does not require oxygen, and causes the heart to beat harder and faster. Cannot be sustained for a long period of time, utilizes large muscle groups.

Tell the students that they will participate in two challenges at Klyde Warren Park and they will have to decide which is aerobic exercise and which is anaerobic exercise.

TOUR TEACHING

MATERIALS:
ONE BEANBAG FOR EACH STUDENT, MEDIUM SIZED BOX OR BUCKET, CONES

ACTIVITY 01

MIDNIGHT

This game is a sprinting game--an anaerobic activity. It needs high energy in short bursts.

Proceed to Ginsburg Family Great Lawn or East Lawn. Create a large, rectangular perimeter using cones. Designate a child as 'it'. This student will chase the other children. 'It' stands on one end line, while all the other children stand on the other end line. All the children will yell out to 'it', "What time is it?" 'It' may say 5 o'clock. Since 'it' said 5 o'clock, all the children take 5 steps towards 'it'. Next, the children will say again, "What time is it?" If it says 8 o'clock, the children will take 8 more steps towards 'it.' Continue with this pattern. When the children say, "What time is it?" and 'it' says midnight, 'it' must chase all the children back to the starting end line. Any child tagged now becomes a helper to 'it', and will stand on 'its' end line to help chase the other children on the midnight command.

ACTIVITY 02

BEANBAGS

This game is an aerobic activity.

Proceed to Jane's Lane. Inform the students that one lap equals once around the main path on the perimeter of the park. Tell them they will be running three laps. Each time they complete a lap, they must throw their beanbag, using an underhand throw, at the box in the middle of the park. After they throw, children must go into the middle to retrieve their beanbag, pick it up, and return back to the track all without stopping their run. Once back on the track, children should begin running another lap from the place where they threw their beanbag. Children should continue in this pattern until they complete all three laps. Another option is to award students points each time they make their beanbag in the box. Winner receives a small award. A fun, less competitive alternative is to let the kids keep their scores private.

POST-TOUR TEACHING

Look at the Venn diagram again when you are back in the classroom. Ask students to tell you which activity completed in the park is aerobic exercise and which is anaerobic. Split the students into groups and have them create aerobic or anaerobic games for their classmates.

ELA COMPONENT

Ask students to make an Acrostic poem. Have them write the word aerobic or anaerobic vertically on a piece of paper. Encourage the kids to think about how their bodies felt after each of the activities in the park. They should choose an adjective for each letter of the word. They may decorate their poems. These can be hung in the classroom.

TEKS

3.4

Physical Activity and Health
(B) Distinguish between aerobic and anaerobic activities

QUICK BITE

Tell the students to list all of the activities in which people are engaged at Klyde Warren Park. Tell them to label each activity as being either aerobic or anaerobic. Inform them that a good fitness routine includes both aerobic and anaerobic exercise. They will probably notice that the bulk of the activities on their lists are labeled as aerobic exercise. Ask them to brainstorm ideas for activities that could be implemented in the park that are anaerobic exercises. One example you could suggest is an outdoor weightlifting gym.

SCIENCE

BIG IDEA

FORM & FUNCTION

Plants and animals in nature are often shaped the way that they are in order to do a job. For instance, squirrels climb trees so they have specially shaped claws to help them. Plants have jobs too: they need to gather sunlight with their leaves, store and transport water in their stems and grow seeds to make more plants. They grow colorful flowers to attract bees to help spread their pollen. These leaves, stems, roots, seeds and flowers can come in all shapes and sizes, depending on the habitat where the plant is found.

The colors are beautiful to our eyes, but did you know they also help bees find pollen? Bees use pollen to make honey, a yummy food that we enjoy as well! Lots of flowers are yellow or purple, a color honey bees find especially attractive. Some flowers have lines and patterns on the flower that help the bee find exactly where the flower keeps its pollen.

The shapes of leaves are another example. Trees use sunlight to help them grow very big. Many tree leaves are broad and flat. This broad, flat shape helps them to gather sunlight so they can grow many stories tall.

PRE-TOUR TEACHING

Engage students in a discussion about the basic parts of a plant and what each of those parts does to benefit the plant (Part 1). Then, use the questions in Part 2 to explore how and why plants look and function differently.

1. **Parts of a plant**
   Review the basic parts that most plants have in common. (Leaves, stems, roots, seeds, flowers)

- Where they are on the plant

- Their functions (roots take in water and nutrients, stem supports plant and transports waters and nutrients to and from leaves, leaves are the solar panels of the plant because they collect sunlight to turn into energy, flowers attract pollinators in order to make seeds, seeds fall to the ground or are dispersed by animals or wind to make more plants)

2. **Talk about how these parts may look different among plants**
   Compare and contrast plants from different ecosystems: Rainforest plants, aquatic plants, forests and desert plants, etc.

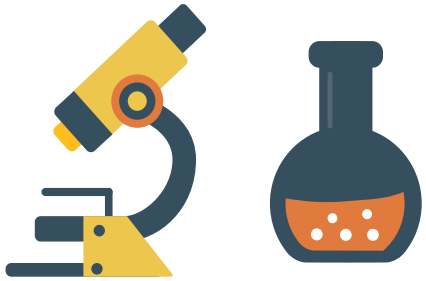
- How are they alike? Reinforce what all plants have in common. (basic parts and all need sunlight and water)

- How are they different? (Leaves are bigger/ smaller, cactus have leaves modified into spines, large trees versus small plants, etc.)

- Why are they different? For example: A cactus lives in the desert. It needs to store as much water as it can because it doesn't rain often. Cacti have hollow bodies to store water. Their leaves are modified into spines so they can protect their water from thirsty animals. It rains a lot in the rain forest. Plants that live there have adaptations to allow all the rain to drip down points on their leaves. Some of them have very large leaves to collect as much sunlight as possible because it is shady near the forest floor. Trees in the rainforest grow very tall and many organisms can live in and on them, even other plants!

- What is a pollinator? (talk about why plants need them to help spread their pollen to make seeds, what different kinds of animals can be pollinators, how insecticide meant to save plants from plant-eating pests can hurt bees and why pollinator gardens are important to attract and support pollinators)

Texas doesn't get as much rain as other parts of the country, so plants that don't need a lot of water can live here. They have special adaptations to hold as much water as possible. You can see a lot of these plants in Klyde Warren Park.



TOUR TEACHING

Scavenger Hunt
Supply close-up pictures of certain plants with a checklist and challenge the students to find the plant based upon the picture. Students could draw a picture of the whole plant next to the close-up photo. Have students write down the physical characteristics that they notice about the plant, any facts that they might already know, as well as some questions that they might have about that specific plant. When you gather back together at the park, allow the students to share their drawings and findings with their peers.

Similarities and Differences
Have students spot similarities and differences among the plants that they find.

- Do some have spiky leaves?
- Do some have flowers while others do not?
- Which ones are very tall and which ones are very small?
- Why don't all of these plants look the same?
- Which ones have seeds that you can see?
- Which plants were listed as being important to birds? How and why?
- Which plants were listed as being important to native bees? How and why?
- Which plants were drought resistant? Why is this important?

Investigation question:
Based on all the information students collect, what habitats do they think the most of the plants in Klyde Warren Park live in naturally?
Plant listing information from:

- eFloras.org (Flora of North America)
- United States Department of Agriculture
- Wildflower.org
- DavesGarden.com
- Wikipedia.com

POST-TOUR TEACHING

- Could we group the plants we found at Klyde Warren Park into different habitats? What would they be? What else could live in those habitats?
- What habitat/ecosystem is Dallas in? Why is it important to save water by planting plants that don't need a lot of water?
- Have students draw a picture or create a big mural of different ecosystems with appropriate plants. Later you can add animals to the mural that would live in the ecosystems.
- Have students use their insect count data from the "Quick Bite" to create a bar graph of the number of butterflies and bees they found in different areas of the park. Determine which area had the highest amount of butterflies and which area had the highest amount of bees. What could be some reasons that there were more butterflies or bees in one section of the park than another?

ELA COMPONENT

Have students write about their favorite plant that they learned about at Klyde Warren Park. They may need to conduct additional research about the plant. They could include:

- Its scientific and common names
- Where it lives naturally (geographic location and ecosystem)
- Is it beneficial to animals? How?
- Can people use this plant for something? (Food, clothing, medicine, etc.)
- Does it have special adaptations for surviving in its natural ecosystem?
- Why they found this plant interesting.

They could present this information in one of the following forms:

- A very short story with a fictional plot that is built around all of the above information
- A poem that includes descriptive words about the plant as well as the above information
- An informational report
- A how-to for birds, animals or pollinating insects to find the plant and use it for food, nesting material or pollination.

QUICK BITE

Bee the Pollinator

Have students find all of the plants that are flowering in the park. Some plants will flower in different seasons than others. They will need to draw a quick picture of the flower in a "Pollinator Garden" sheet and collect the name.

Insect Count

Scientists often count the number of insects in an area to estimate the health of an ecosystem. Your students can do that too. Have them split up into groups of three and have each student in a group responsible for counting one type of insect. One student could count the number of butterflies they see, another could count the number of bees, and another the number of flies or other insects. This can be scaled to be as detailed (identifying via pictures and counting certain species of butterflies and bees common to the Dallas area) or as simple (just counting bees and butterflies) as wanted.

PE COMPONENT

Be the Plant
Have the students create a dance that represents their favorite plant. How does it stand? Pretend your arms and legs are parts of the plant. Do they wave in the breeze? Are they low to the ground? Are they very, very tall? Do they have spines stick out to protect the plant?

Establish one or more "Be the Plant" stations in the park where students strike a pose like their favorite plant. Have an adult take their picture and tag it with #KWP or #betheplantKWP to help promote the park and its curriculum.

TEKS

2.0

(A) plan and implement descriptive investigations, including asking and answering questions, making inferences, and selecting and using equipment or technology needed, to solve a specific problem in the natural world;

(C) construct maps, graphic organizers, simple tables, charts, and bar graphs using tools and current technology to organize, examine, and evaluate measured data;

(D) analyze and interpret patterns in data to construct reasonable explanations based on evidence from investigations;

(F) communicate valid conclusions supported by data in writing, by drawing pictures, and through verbal discussion.

9.0

(A) observe and describe the physical characteristics of environments and how they support populations and communities within an ecosystem;

10.0

(A) explore how structures and functions of plants and animals allow them to survive in a particular environment.

PLANT SCAVENGER HUNT INFORMATION
SHRUBS

AGAVE HAVARDII
Harvards Century Plant

Soil: Dry
Water: Low
Sun: High

These amazing desert plants can live for fifty years! Before the plant dies, it needs to spread its seeds, so it sends up a huge stalk of flowers which can be 15 feet tall! The plants store water in their lobed leaves.

AGAVE UNIVATTA (lophantja)
Thorn Crested Agave

Soil: Low
Water: Dry
Sun: High

This agave plant can store water in its lobed leaves and puts up a single flower stalk right before it dies, though it isn't as tall as the Century Plant. It is found in the Rio Grande Plains and Central Texas.

AGAVE
Mr. Ripples

Soil: Dry
Water: Low
Sun: High

This species of agave has wavy edges which give it its interesting species name. Although originally from dry areas of Mexico, this succulent does well in the Texas heat. It stores water in its leaves and has very sharp spines.

AGAVE TOUMEYANA VAT BELLA

Soil: Dry
Water: Low
Sun: High

This species of agave is native to Central Arizona occurring on rocky hillsides and highland desert. They have flowering stalks like other agaves but can withstand colder temperatures.

The species forms dense clumps of rosettes, rarely more than 50 cm high. Flowering stalks can reach 3 meters, bearing greenish-white flowers

HESPERALOE PARVIFLORA

Red Yucca

Soil: Sandy Loam to Dry
Water: Low
Sun: High

This agave has beautiful red flowers that attract hummingbirds. Like other agaves, this plant stores water in its leaves. Deer like to eat the fruit and foliage.

LEUCOPHYLLUM FRUTESCENS

Purple Sage

Soil: Rocky, Well-Drained soil
Water: Moderately low
Sun: Sun, Part-shad

These flowers bloom after enough rain has fallen. Butterflies lay their eggs on this plant and their caterpillars love to eat the foliage.

MYRICA CERIFERA

Soil: Moist
Water: High
Sun: Sun, Part shade

Often found along swampy stream beds and in marshes, this plant was used by Native Americans to treat fevers and stomachaches. This woody shrub attracts birds which eat the berries and butterflies who visit the blooms in spring.

SALVIA LEUCANTHA

Soil: Sandy
Water: Low
Sun: Full Sun

This drought resistant plant is native to tropical forests of Mexico and the beautiful flowers attract bees, butterflies and hummingbirds.

YUCCA ARKANSAS

Soil: Dry
Water: Low
Sun: Part Shade

A native to Texas and the surrounding states, this small member of the Yucca family is popular with landscapers. It grows in gravely soils at the edge of open fields. Beautiful bell like flowers open slowly attracting pollinators.

PLANT SCAVENGER HUNT INFORMATION
GRASSES

ERAGROSTIS CURVULA
Weeping Lovergrass

Sun: Full to Partial Shade
Water: Medium
Soil: Coarse, Dry

This drought resistant plant is actually native to Southern Africa but does very well in the climate of North Texas. Its complex root system keeps dry soil in place and it is used as forage for livestock. It was first planted in Stillwater, Oklahoma in 1935.

MISCANTHUS SINENSIS
Silvergrass

Sun: Full
Water: Medium
Soil: Varies

Native to Eastern China, this grass serves as nesting material for some Asian paper wasps. It does well in North Texas dry summers and is drought resistant.

ANDROPOGON VIRGINICUS
Broomsedge Blue Stem

Water: Medium
Soil: Moist Sandy
Sun: Part Shade

This grass is used by birds and vulnerable native bees for nesting materials. Deer forage on the grass and birds eat its seeds. Caterpillars of the Zabulon Skipper butterfly use this grass for food as they grow up and the adults visit the flowers for nectar.

Native to the Southern Great Plains and Eastern United States

MUHLENBERGIA CAPILLARIS
Gulf Muhly

Sun: Full to Partial shade
Water: High
Soil: Moist Sandy

This grass is native to the Eastern half of the United States. It grows well along borders of roads and in plains or woods with rocky soils. It is drought and disease resistant and provides shelter, cover and nesting sites for native birds.

MUHLENBERGIA LINDHEIMERI
Lindheimer Muhly

Sun: Full
Water: Medium
Soil: Dry or Moist well drained limestone.

Native to the Edwards Plateau of Central Texas, this grass is drought resistant and can grow very large. It is often found near streams in soil high in calcium in its native range.

MUHLENBERGIA REVERCHONII
Seep Muhly

Sun: Full
Water: Medium
Soil: Dry or moist, does best in loamy limestone seeps

This bunching grass is native to limestone plains soils of Oklahoma and Central Texas. It is often used in prairie restoration and is highly deer resistant.

NASSELLA TENUSSIMA
Mexican Feather Grass

Sun: Full
Soil: Well drained
Water: Low

This plant is especially interesting because it occurs naturally in southwestern North American and Southern South America with no populations in between. It is found in the mountainous region of West Texas and is drought resistant.

POA ARACHNIFERA
Texas Blue Stem

Soil: Moist Loams
Water: Medium
Sun: Full to Partial Shade

Native from Texas to Southern Kansas, this cool season grass provides foraging for wildlife. Birds and small mammals eat the seeds and butterflies are attracted to its small flowers.

SETARIA SCHEELEI
Southwestern Bristlegrass

Sun: Part Shade
Soil: woodland and disturbed urban soils
Water: Low to Medium

Native in to North Central Texas to Arizona and Mexico, this grass can be found in limestone canyons, open forests and side yards in the city. When found near streams it can be habitat for marsh birds and water fowl. Butterflies lay their eggs on this grass and small mammals eat their seeds.

SORGHASTRUM NUTANS
Indian Grass

Soil: Dry to Moist, rich
Water: Medium
Sun: Sun to Part Shae

This grass is native to tall grass prairies of the Northern United States and Canada and can be found as far south as Mexico. It provides nesting material for birds and seeds for small mammals to eat. It supports native bees by providing nesting structures.

PLANT SCAVENGER HUNT INFORMATION
PERENNIALS

Millefolium
achillea yarrow

Soil: Dry
Water: Medium
Sun: Full to Part Shade

It was used in antiquity to stop blood flow from wounds. Flowers May through June. This plant is very important to native bees and also attracts beneficial pest-eating insects to gardens.

Symphyotrichum oblongifolium
fall aster

Soil: Dry to Moist
Water: Low, Drought tolerant
Sun: Full to part shade

Flowers August through November. This plant is native to the Eastern Great Plains and is important for native bees and useful for attracting beneficial insects to control pests in the garden.

Coreopsis grandiflora
coreopsis

Soil: Sandy Soils
Water: Low
Sun: Part Shade

Blooming in May and June, this plant is eaten by the caterpillars of certain species of butterflies.

Conoclinium greggii
Silver mist

Soil: Dry
Water: Medium
Sun: Sun to Part Shade

Found in West Texas along stream beds and seasonally flooded plains. Blooms March through November. This flower attracts Queen butterflies in the fall and is the larval host for the Rawsons Metalmark. (http://www.butterfliesandmoths.org/species/Calephelis-rawsoni)

Physostegia virginiana
obedient plant

Soil: moist, humus rich soil
Water: Medium
Sun: Sun to Shade

This flower blooms August through November and is an especially important source for nectar to autumn butterflies and hummingbirds. This plant is important for the health of wetlands.

Lantana montevidensis
trailing Lantana

Soil: Dry
Water: Medium
Sun: Variable

This trailing plant is native to South America and can serve as drought tolerant ground cover with blooms most of the year.

Rudbeckia fulgida
black eyed susan

Soil: various moist soils
Water: Medium
Sun: Full

Birds are attracted to the seeds of this popular flower which blooms from July through October. Native Bees find it particularly important for late summer nutrition and it improves the health of wetlands.

Llatris spicata
blazing star

Soil: moist, woody, slightly acidic
Water: Medium
Sun: Full

This unique flower attracts butterflies, birds and hummingbirds to gardens and is especially valuable to native bees and Bumble Bees. Native to woody openings and marshes of the South Eastern United States.

Salvia farinacea
mealy blue sage

Soil: moist and slightly acidic
Water: Low
Sun: Full

Blooms throughout the summer, attracting hummingbirds and butterflies while serving as important nectar source to native bees. Native to meadows and Prairies of Central and West Texas.

Dietes iridioides
African iris

Soil: Poor to fair
Water: drought tolerant
Sun: Dappled shade to full sun

This lily is Native to Africa, but does well in the climate of North Central Texas. Though the plants bloom from spring to late summer, each flower only lasts one day.

Melampodoum leucantham
Blackfoot daisy

Soil: Dry slightly acidic
Water: Low
Sun: Full to Part Shade

Native to South Central United States, this drought tolerant plant blooms March through November, attracting native bees, butterflies and other insects to its nectar and birds to its seeds.

Echinacea purpurea
Purple cone flower

Soil: Dry
Water: Medium
Sun: Full to part shade

Blooming April through September, this prairie flower attracts native bees, butterflies and hummingbirds. This flower is native to the South Central United States and is said to be a natural anti-biotic.

Perovskia atriplicifolia
Russian sage

Soil: Poor, chalky
Water: drought tolerant once established
Sun: Full

This plant is native to central Asia, but does well in the Texas climate. A popular addition to gardens, it is cut back significantly in winter to encourage flowering on its new growth in spring.

Equistrum hyemale
Horsetail reed

Soil: variable, well draining
Water: can tolerate prolonged wet conditions
Sun: Full to part shade

This interesting and ancient plant has been around since before the age of the dinosaurs. Sometimes called scouring rush because people used to tie the stem segments together to make cleaning brushes. They provide good cover for birds in wetlands and along stream margins.

Phlox pilosa
prairie philox

Soil: Dry, slightly acidic
Water: Low
Sun: Full to part Shade

The flowers attract long-tongued bees, butterflies and skippers March through May. This flower is also an indicator of a healthy wetland.

Salvia gregii
gregg's salvia

Soil: dry
Water: Low
Sun: Full to part shade

Beautiful red flowers bloom from March through November attracting bees and hummingbirds. This highly drought tolerant plant is native from Central and west Texas.

Scutellaria suffrutescens
texas skullcap

Soil: Well drained
Water: Low
Sun: Full

This drought resistant plant bears flowers from late spring to mid fall resembling tiny helmets.

Verbena bipinnatifida
prairie verbena

Soil: Dry to Moist
Water: Low
Sun: Part Shade

Blooming from March to October, this flower is common to open areas throughout the state of Texas. Pollinators frequent the flowers for nectar and birds are attracted to the seeds.

1 Barbara & Steve Durham Family Playground
2 Children's Park
3 Jane's Lane
4 Ginsburg Family Great Lawn
5 The Dallas Morning News Reading and Games Room
6 Chase Promenade
7 Hart Boulevard
8 Nancy Collins Fisher Pavilion
9 Muse Family Performance Pavilion
10 Southwest Porch
11 Moody Plaza
12 East Lawn
13 The Commons presented by Cigna
14 My Best Friend's Park

Savor, full service restaurant
Relish, walk-up kiosk
Food Trucks
Restrooms
Family Restrooms
Game tables
Game carts
Butterfly Garden

Pedestrian Entry
Handicapped Entry
Drinking Fountains
Bike Rack
M-Line Trolley
D-Link
Information kiosk
Emergency phone

SOCIAL STUDIES

BIG IDEA

Twenty-first century learners are expected to possess the following four skills: critical thinking, communication, collaboration, and creativity. Along with these noble goals, our students need to understand how these core foundations work together for the common good of a community.

PRE-TOUR TEACHING

To introduce the concept of the common good, read aloud the picture book, The Promise, by Nicola Davies. As kids listen and think about the theme of the story, ask students to reflect on a time in their lives when they were asked to "pay it forward" or give back. In small groups, students will think about ways they can contribute to the greater good in their own communities. Focusing on the idea of "planting seeds" of hope, students will discuss how Klyde Warren Park represents investing in the community. They can read a brief article about the Tree Trust foundation and compare the article to the picture book.

TOUR TEACHING

The students will participate in a Common Good Scavenger Hunt. With a partner or small group, the children will explore several areas of the park looking for signs, artifacts, and designated spaces designed for the common good of all visitors. For example, when students come across the Complimentary First Aid Kits, they might discuss how these medical supplies benefit all park visitors because it prevents the spread of disease and provides needed resources in case of emergency. If students have devices, they can snap a picture of these items and record a brief explanation of how they benefit the common good of the citizens who visit the park. If electronics aren't permitted, students may sketch the items in a notebook and write a caption describing how they relate to the common good of all park visitors. Students should document a minimum of seven items and justify how each entry illustrates the concept of the common good.

POST-TOUR TEACHING

Each group presents the items they collected representing the common good. They can create a slideshow or I-movie of their items, narrating how each artifact improves the lives of all visitors at the park. They can also include suggested park improvements such as complimentary snacks or lemonade. During the presentations, students will give examples of how their collection represents serving the common good of a community.

ELA COMPONENT

Students will create a collage promoting the “Common Good” of a community. They can include famous quotes about citizenship as well as photos from their field trip to Klyde Warren Park. Each child will write a persuasive paragraph encouraging members of a community to consider how their choices impact others. They can include examples and suggestions for future park improvements.

PE COMPONENT

Ask the students how the theme of the “Common Good” in communities relates to good sportsmanship in competition. Have the students brainstorm a list of character traits that a good sport displays. Choose a quick activity such as Red Rover or Freeze Tag and tell the students that you are looking for your “Good Sports”.

QUICK BITE

During your lunch break, locate examples of "Common Good" items present at Klyde Warren Park. Jot them down in your notebook and converse with a partner about why these items represent the "common good" of the community. What other things would you add? Which items are necessary for an enjoyable park experience? A few suggestions are listed below to help you get started.

- ❑ Complimentary Wi-fi
- ❑ Movable Chairs and tables
- ❑ Concrete and gravel pathways
- ❑ Drinking fountains to quench thirst
- ❑ Performance stages and pavilions
- ❑ Warning Signs: "Caution: Area may be slippery when wet."
- ❑ Free books and newspapers from the Dallas Morning News
- ❑ Posted list of weekly activities
- ❑ Free to Play equipment and game carts

TEKS

3.12

Citizenship
The student understands the impact of individual and group decisions on communities in a constitutional republic.

a. Give examples of community changes that result from individual or group decisions

b. Identify examples of actions individuals or groups can take to improve the community

c. Identify examples of nonprofit/or civic organization and explain how they serve the common good

4th GRADE LESSONS

ART & DESIGN

MATH

PHYSICAL EDUCATION

SCIENCE

SOCIAL STUDIES

ART & DESIGN

BIG IDEA

NATURE IN DESIGN

PRE-TOUR TEACHING

Review some images of architecture or design that reflect nature in their appearance. A great example of this is in the work of famous architect Frank Lloyd Wright. Use the following link to visit his website and peruse a number of architectural designs that incorporate nature in a number of ways.
http://www.franklloydwright.org/
Have the students call out or write down the different ways that they see nature in the architecture and designs of the examples that you show. Some questions to create discussions might include:

- How are these different than our school building or other buildings that you see each day?
- How are they similar?
- How is nature reflected in the buildings and spaces that you see in these examples?
- How is nature reflected in the buildings that you see each day?

Remind the students that the design of a space includes the architecture as well as the landscape around it, such as the trees, flowers, and other greenery that surrounds buildings. In addition, ask them to think about all of the senses when looking at nature in design. What would it smell like? Sound like? Feel like?

After talking with the students about these examples, share with the students some information about the designer of Klyde Warren Park, James Burnett. Burnett creates landscape and designs that appeal to the senses. His goal is to create relationships between landscape and architecture.

Look at some examples of his work with the students on his company's website (http://www.ojb.com/). There are photos of various projects that the company has done that incorporate nature in design, including images of Klyde Warren Park.

While looking at the images, particularly the ones from Klyde Warren Park, start a conversation with the students about how Burnett's designs reflect nature. Some questions to create discussions might include:

- How is nature incorporated or reflected in these spaces?
- What colors do you see?
- Do the colors in the buildings reflect nature? If yes, how?
- Do the colors in the furniture reflect nature? If yes, how?

Take the students on a walk outside of their school building. Ask them to look for examples of nature in the architecture of the building as well as the design of the area around the school.

- Are there plants? If yes, what kinds?
- What colors are used in the building?
- What about the playground?

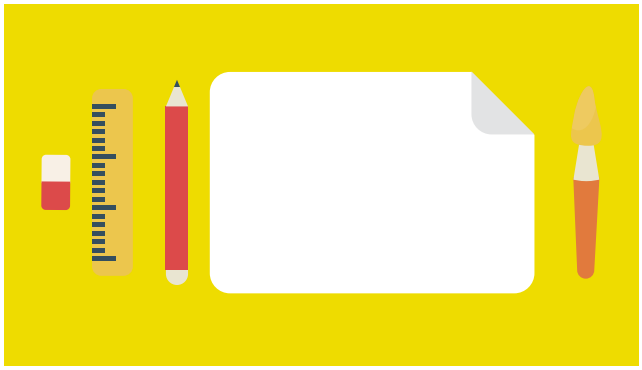
TOUR TEACHING

MATERIALS:
SKETCH BOOKS, PENCILS

Make sure each student has a sketch book or some paper and a pencil. Walk the students around the park, and ask them to keep an eye out for any examples of nature that they see incorporated into the design of Klyde Warren Park. Remind them of the examples of the park that they discussed the previous day from the website of the designer, James Burnett, and have them keep an eye out for each of those.
In addition to the many obvious examples of nature in the design of the park, talk to the students about how designers pay attention to the smallest of details when they have a theme, such as nature. Some examples of this to point out at the park might include:

- The reflective surfaces of many of the buildings and forms at the park such as the chrome that is used in many of the pillars, buildings, and the pavilion roof. Their surfaces literally reflect the grass and plants that are all around them.

- In addition to the chrome reflective surface of the roof of the performance pavilion, there are shapes etched within the chrome that resemble the branches of trees.



- These same tree shapes are seen in the chairs at Savor, the restaurant in the park.

- The furniture in the park, such as the chairs and tables, are various shades of green – colors that are associated with nature.

Have the students play a game to see who can discover the most examples of nature in design at the park. Make sure they sketch each example that they find, and write a quick explanation of what it is that they are referring to.

If there are a large number of students in the class, it might be easier to place them in small groups while they search for examples. If you want, you could provide a small prize to the group that finds the most!

POST-TOUR TEACHING

Once you are back in the classroom, ask the students to bring out their sketches that they created at Klyde Warren Park of the examples of nature in design that they found. They will use these as inspiration and references for the project that they will create.

Instruct the students that you are going to give them a large photograph of their school building. (Make sure the photograph you provide includes the building and part of the landscape. It might be fun to have photos from different parts of the building as well.)

The students will create a new design for their school that incorporates nature in the design. Be sure that they think about the landscape as well. Have them keep the same building, but add things to it to include nature. Encourage them to be as creative as possible with this – it can even be fantastical. For example, you might show them some images of landscape and design in the work of Dr. Seuss. Remind them to think about all of the senses when they create designs for the school and surrounding landscapes.

This can be done in the medium of your choice, ranging from a simple colored pencil drawing to a sculpture, or even a large class project. Hang the finished works in the school where others can see them!

ELA COMPONENT

Have the students describe the elements of the designs that they create for their school building and landscape in a paragraph. Have them answer the following questions in their writing:

What elements did you add to the school/landscape that include nature?
What are you most proud of in your design?
How were you inspired by your visit to Klyde Warren Park in your design?
What might you do differently next time?

QUICK BITE

Go on a "texture in nature" scavenger hunt. Have the students explore the park and look for different textures that they see. They can do a quick sketch of the objects that they find and write the types of textures that they are. If possible, they could do some rubbings of some of the textures to take with them.

PE COMPONENT

Play a game called “Statues”. Students dance while music is playing (or you may use a verbal cue such as “stop” and “go”). When the music stops, the students must form their bodies into a “statue”. If anybody moves, giggles, or makes a sound during the “stop” phase they are out of the game. Tell the students they should try to make their statues look like the buildings they see near Klyde Warren Park. If you or the other students can guess which building the student is imitating, they get one free pass and get to stay in the game the next time they are supposed to be out.

TEKS

2.0

CREATIVE EXPRESSION/ PERFORMANCE

(B) design original artworks

3.0

HISTORICAL/ CULTURAL HERITAGE

(A) identify simple main ideas expressed in art;

4.0

RESPONSE/EVALUATION

(A) describe intent and form conclusions about personal artworks

MATH

BIG IDEA

FUN WITH FOOD TRUCKS

PRE-TOUR TEACHING

As a class discuss what the students already know about saving money and creating a budget.

Have the students brainstorm with a partner what uses there could be for creating a budget when going out in the real world.

Ask questions such as:

- Why would having a budget help you when going shopping?
- Do you think having a budget is necessary when spending money?
- What happens if you don't have enough money to buy something?
- What happens if you have more money than is necessary to buy something?
- How do you figure out how much change you would get back from a transaction?

On the board, brainstorm and come up with ideas for what a healthy and balanced meal would look like. They can brainstorm on their Spending Recording sheet at this time.

Display for the class, or refer to, www.choosemyplate.gov. You can also show them the Healthy Plate diagram to help spark ideas.

Present to the class their task. They will be given a pretend budget of $40.00. (You can change this budget based on ability or time restraints.) The students will be put in partners or groups and given the assignment of "shopping" at the food trucks. They will not actually buy any food from the food trucks, but will need to look at all of the food truck menus to find items that would complete a balanced meal.

TOUR TEACHING

MATERIALS:
SPENDING RECORDING SHEET, CLIPBOARD TO WRITE ON, PENCIL

After arriving at the park, take a tour as a class. Take a walk past the food trucks and see what options are available.

- Have the students look at the menus and the prices listed.
- Allow the students to work in their partners or group, filling out the Spending Recording Sheet.
- Have a color copy of the Healthy Plate diagram with you at the park to answer any questions they may have.
- Encourage them to “spend” as much money as they can without going over budget.
- Students must not go over the given amount in their budget. If they stay under, they must determine the amount of change they would receive in return.

POST-TOUR TEACHING

Students will come together as a class to share the meals that they created from the food trucks.

Ask questions such as:

- Was it difficult to find food that was healthy?
- Was the healthy food more or less expensive than unhealthy food?
- Were you able to stay within your "budget"?
- Have the students share with the class how they calculated the change that they would receive from the food trucks.

ELA COMPONENT

On the last page of the Spending Recording Sheet there are several questions that students may answer to expand upon their visit to the park.

- Working with their partners or independently, students should use complete sentences and short paragraphs to answer the questions.
- Teacher may guide students thinking by facilitating a group discussion of the questions.

QUICK BITE

Geometry Search
On the back of the recording sheet the students have a geometry search that they can do while at the park. Students should try and find as many real world lines and angles as they can. If they find one of the given angles or pairs of lines, they can record them. Give a reward to the group who finds the most!

PE COMPONENT

Students will explore parallel and perpendicular lines using various movement patterns. Choose various landmarks around the park such as My Best Friend's Park or Hart Boulevard. Call out a combination of a movement pattern and trajectory for the students to demonstrate. For example, you could say, "Complete one-footed hops perpendicular to Hart Boulevard!" Another example is, "Skip parallel to My Best Friend's Park!" The students who complete the movement correctly get to stay in the game. Warn the students that when moving perpendicularly to a landmark they should be careful to watch for "traffic".

TEKS

4.1

(A) - apply mathematics to problems arising in everyday life, society, and the workplace

B) – use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution;4.1(E) – create and use representations to organize, record, and communicate mathematical ideas;

4.2

(E) - represent decimals, including tenths and hundredths, using concrete and visual models and money

4.4

(A) - add and subtract whole numbers and decimals to the hundredths place using the standard algorithm

4.6

(A) - identify points, lines, line segments, rays, angles, and perpendicular and parallel lines

(C) - apply knowledge of right angles to identify acute, right, and obtuse triangles

(D) - classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines or the presence or absence of angles of a specified size.

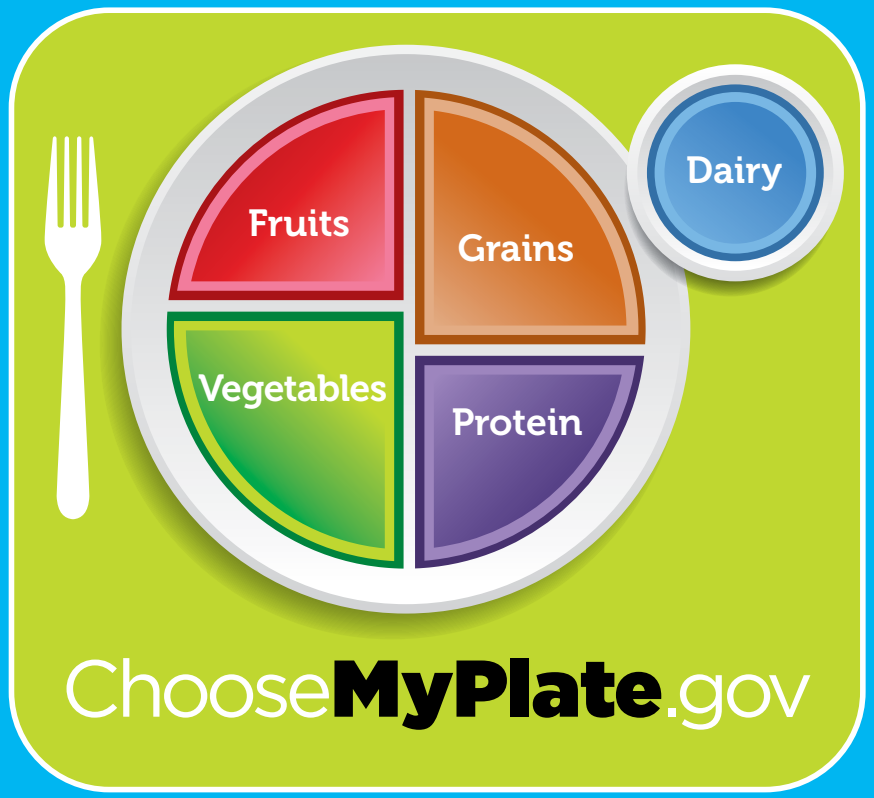
4.10

(B) - calculate profit in a given situation

(C) - compare the advantages and disadvantages of various savings options

(D) - describe how to allocate a weekly allowance among spending; saving, including for college; and sharing

What's on your plate?



Before you eat, think about what and how much food goes on your plate or in your cup or bowl. Over the day, include foods from all food groups: vegetables, fruits, whole grains, low-fat dairy products, and lean protein foods.

Make half your plate fruits and vegetables.

Make at least half your grains whole.

Switch to skim or 1% milk.

Vary your protein food choices.

SPENDING RECORD SHEET

Klyde Warren Park Curriculum – Fun with Food Trucks Lesson

GROUP MEMBERS:

MONEY BUDGETED:

Menu Item	Food Truck Name	Price
TOTAL:		

Brainstorm of a Healthy Diet:

Change Received:

GEOMETRY SEARCH

Can you find any of these shapes in the real world around the park? Draw a sketch of the real world shape and get a bonus!

Right Angle

Obtuse Angle

Acute Angle

Parallel Lines

Perpendicular Lines

Line Segment

THINK AND RESPOND

With the class or a partner, answer the following questions using complete sentences.

1. Did everyone in class select the same foods to complete their healthy meal? Why or why not?

2. Was it difficult for you and your group to stay on budget?

3. Why do you think having a budget is important in everyday life?

PHYSICAL EDUCATION

BIG IDEA

WATER RELAYS
Students learn about group collaboration while getting wet.

PRE-TOUR TEACHING

In the classroom, give students a team challenge. The "Marshmallow Challenge" (easily found if Googled) is a popular activity for kids so that they can learn how to communicate and collaborate with peers. Introduce the words "collaboration", "compromise" and "negotiation". Ask the students to imagine what the world would be like if people did not learn to use these skills. Ask them to identify times in their life in which they have used these skills with other people in order to achieve a goal. Inform the students that they will have to demonstrate those skills today at the park.

TOUR TEACHING

MATERIALS:
2 BUCKETS WITH A "FULL" LINE INDICATED, 2 CUPS OR LARGE SPONGES, 2 LARGE SPOONS.

Proceed to the fountains near the Moody Plaza or near the Children's Park. Split the students into two teams. Each team makes a single file line with the front person within reach of the water. Students must face forward the whole time and may not turn around and must follow the rules for each relay or risk disqualification. It is recommended that students stand at least an arm length apart. Use Poly Spots if you have them. Tell the students there are 3 relays they will complete and the team with 2 out of 3 wins will be the Water Relay Champion.

RELAY 01

The bucket is placed behind the last person in line and the cup or sponge is given to the first person in line, who fills it with water. Tell the students their goal is to fill up the bucket first by passing the cup over their head to the person behind them; the next person then passes it between the legs. The pattern continues until the last person dumps the remaining water in the bucket. The last person then takes the empty cup to the front, replaces the first person in line and continues the relay until the bucket fills. Everyone in line must back up and occupy the position behind them.

RELAY 02

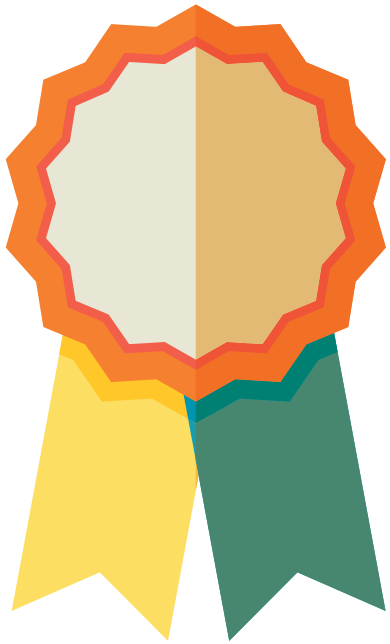
The same as Relay 1, but now the cup or sponge is passed in a different manner. The first person in line will pass the cup with both hands by keeping his feet in place and rotating his torso left; the second person will repeat this process by rotating her torso to the right. This pattern continues until the end.

RELAY 03

The same as Relay 2, but instead of using a cup or sponge the students use large spoons. The bucket at the end of the line must be replaced with a cup.

POST-TOUR TEACHING

Provide the students with superlative categories and ask them to nominate team members. Examples could be “Best Leader” or “Most Enthusiastic”. Be sure to match the number of superlative categories with the number of students on each team and instruct the students to choose one student (from their own team) for each category including his or her own name. Explain to the students that when every person in a team contributes their strengths to achieve a goal, that is when the best collaboration takes place. Tally the votes and be sure to award everybody with a superlative. Hold a small awards ceremony. Ribbons or certificates can be awarded to each team member.



ELA COMPONENT

Ask students to keep a journal. Inform them that it will be kept confidential if they wish. Instruct them to respond to the following question, “How well did your team collaborate during the Water Relays? What would you have your team do differently next time? Did you ever feel frustrated during the relay? If yes, why? Tell them to support their ideas and write in complete sentences.

QUICK BITE

Students can play a quick game of "Doctor Doctor" in which the students form a circle and hold hands. Without letting go of hands, students tangle themselves into a knot. The designated "Doctor" tries to untangle them. This could be presented as a supplementary exercise in teamwork.

TEKS

4.1

Movement
(C) combines shapes, levels, pathways, and locomotor patterns smoothly into repeatable sequences.

4.2

(B) identify ways movement concepts such as time, space, effort, and relationships can be used to refine movement skills.

4.7

Social Development
(D) demonstrate effective communication, consideration and respect for the feelings of others during physical activities such as encourage others, allow others equal turns, and invite others to participate.

BIG IDEA

IMMUNE SYSTEM TAG

Students learn about the immune system while practicing locomotor movement patterns.

Tell the students they will need to know these terms if they are going to play the game at Klyde Warren Park. Have them learn the definitions with partners and feel free to implement fun memory or review games you might know to help in this process. "Memory" is an easy one. Make flash cards and place them facedown on a table in a grid. Have students match the vocabulary word with its definition. If they don't get a match, the cards are flipped back to heir original position and the next player tries to make a match. Use any supplemental visual aids you might have to show how the body systems work together to keep us well and free from sickness.

PRE-TOUR TEACHING

Give the students the definitions for the following words.

*Virus
A microorganism that grows slowly in your body and can make you sick.

*Bad Bacteria
A microorganism that grows quickly in your body and can make you sick.

*Antibodies
Chemicals made by white blood cells that destroy or weaken bad bacteria and viruses.

*Bronchi
A tube by your lungs that may catch germs and cough them out.

*Good Bacteria
Bacteria in or on the body that does not make you sick.

*Stomach Acid
Acid in the stomach that may kill germs that enter the mouth.

*Antibiotic
Medicine that will kill bad bacteria in the body.

*White Blood Cells
Cells that fight against germs in the body.

*Villi
Tiny hairs in the nose that catch germs, dust and dirt.

*Skin
The first line of defense for the body.

TOUR TEACHING

MATERIALS:
WHISTLE, CONES, NOTEPADS AND PENS FOR EACH STUDENT; TWO RED SIGNS FOR THE BAD GERM TAGGERS (VIRUS AND BAD BACTERIA); EIGHT GREEN SIGNS FOR THE GOOD TAGGERS (ANTIBODIES, BRONCHI, GOOD BACTERIA, STOMACH ACID, ANTIBIOTIC, WHITE BLOOD CELLS, VILLI, AND THE SKIN).

Proceed to Ginsburg Family Lawn or the East Lawn for this activity. All the students begin in a scattered formation in a defined area using the cones. Remind them to stay in their personal space while playing the game. Remind them to look where they are going at all times so that they don't step on anybody who is "sick". Remind them to tag with two fingers only on the back or shoulder. Select at least two students to carry the red signs. They are the microorganisms that may make you sick (virus and bad bacteria).

The students will perform a movement chosen by the teacher (best not to choose running for this one). When tagged by a red sign tagger, the student gets sick and must lay on the floor. They must think about what made them sick and decide which green sign tagger will make them well. They then call out for that green tagger and go back into the activity when they are well. Select new taggers after a few minutes of play and designate a new locomotor movement. Examples of locomotor movement patterns are walking, hopping, skipping, one-footed hopping, backwards walking, etc.

POST-TOUR TEACHING

Back in the classroom, put students in pairs. Have a set of vocab cards for each pair of students (the words above). Students will play "Heads Up" to further cement their understanding of the terms. Cards are placed face down in a stack. One student picks up a card without looking at it and holds it to her forehead. The other student must describe the word, but may not use the term that is written on the card. One point is awarded for every correct guess. Students keep track of their own team's score. Do not allow the students more than 2 guesses for each card. Students may pass if they get stuck and replace the card on the bottom of the pile. Provide a small award for the team with the most points at the end of 3 minutes.

ELA COMPONENT

Students try to use the new vocabulary words in a sentence. Another option is to create a group sentence in which each student in the room contributes one word to the sentence as the teacher writes the sentence on the board. The challenge is to try to use the new terms in the sentence in fun and silly ways while still being used in the correct context.

QUICK BITE

Students compile a list of places in the park where they think bacteria might grow and be transmitted to people. Who can make the longest list in 5 minutes? Allow students to explore a designated area of the park freely (such as the Children's Park) and call them back using a whistle in exactly 5 minutes.

TEKS

4.1

Movement
(A) Demonstrate changes in speed during straight, curved, and zig zag pathways in dynamic situations.

4.2

Movement
(C) Make appropriate changes in performance based on feedback

4.4

Physical Activity and health
(B) Participate in moderate to vigorous physical activities on a daily basis

BIG IDEA

80'S WORKOUT VIDEO

Students will learn about 4 components of fitness while making an 80's workout video/skit

PRE-TOUR TEACHING

Find a fun, vintage 80's workout video on YouTube to show the students. There are several good ones out there, but be sure to pre-screen to ensure appropriateness. Tell the students that each of the components of physical fitness can be observed in this video. Teach the students the definitions below and then watch the video again to see if they can identify them. Ask students to list activities or exercises that improve each component of fitness.

Muscular Strength: The ability to lift a given amount of weight exactly one time. An example of an activity that promotes muscular strength is power lifting, or moving furniture.

Muscular Endurance: The ability of a muscle or group of muscles to work continuously without tiring. Examples include sit ups, push ups, pull ups.

Cardiovascular Endurance: The ability of the heart and lungs to provide oxygen rich blood to the working muscles. Examples include swimming and jogging.

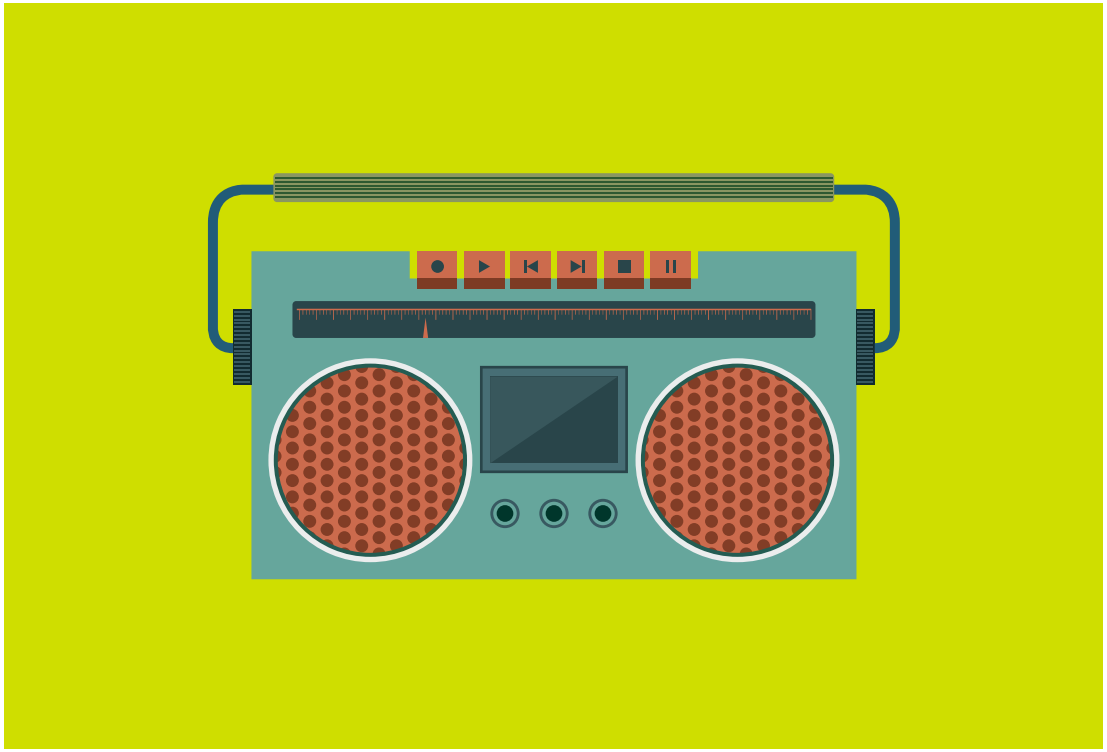
Flexibility: The ability of the joints in the body to move easily to allow for muscle movements and stretching.

Before beginning the Tour Teaching portion of the lesson, tell students that they will be creating their own 80's workout videos today in the park. Provide them with some excellent 80's workout gear such as headbands and legwarmers to inspire them. If you plan ahead, you can encourage kids to bring their own costumes from home. Let them use their cell phones to record the video and find appropriate 80's music. Give them a specific amount of time and expect regular check-ins. Set high expectations for student conduct while at the park as this activity allows the students a lot of freedom and requires self-monitoring. Make the activity a contest and give an award to the best video.

TOUR TEACHING

MATERIALS:
ANYTHING FROM THE 1980'S ERA SUCH AS COSTUMES, BOOM BOXES, OR VIDEOTAPES PLUS CELL PHONES WITH RECORDING CAPABILITIES (OPTIONAL)

Break students into groups of 3-4. Make sure each group contains a member with a cell phone with video recording capabilities. Give the students about 10 minutes to meet with their group to make a plan. One idea is to assign each group one of the components of fitness on which to focus. Students should use this time to decide where they are going to film, what music (if any) they are going to use, which role each person will play, and what kind of exercises they are going to include in the video. Encourage students to be creative. Remind them that as long as they are moving their bodies, they are improving one or more of the fitness components. Give students a specific amount of time and tell them they should be finished with their video at this time.



POST-TOUR TEACHING

Each team can share their video. If possible, have students upload the videos onto your computer so you can project them for the class to see. Another idea (if technology is not agreeable) is to have students perform their 80s video in front of the class like a skit.

ELA COMPONENT

As students are watching each other's videos or skits, have them identify each group's assigned fitness component by writing it down in a table format. If no component was assigned, have students determine which of the 4 components was improved the most in the exercises the group chose for their video. One of the columns can be designated for students to explain why they chose their answer in order to promote higher-level thinking.

QUICK BITE

Have students look around the park and observe people doing various types of exercise. What are current workout trends such as yoga and CrossFit? Compare and contrast the ways the media depicted fitness in the 80's and now in the 21st century. What is different? What is the same? What do you imagine a "fit" person will look like in the year 2040? Why?

TEKS

4.3

Physical Activity and Health
(B) Name the components of health-related fitness such as strength, endurance, and flexibility

4.4

Physical Activity and Health
(C) Identify methods for measuring cardiovascular endurance, muscular strength and endurance and flexibility

SCIENCE

BIG IDEA

PLANT AND ANIMAL RELATIONSHIPS

Students will explore plant and animal relationships, including life cycles of plants and insects

PRE-TOUR TEACHING

Ideas in the Classroom
Start thinking about plant and animal relationships, introduce pollination and life cycles of plants and butterflies. Introduce the concept of a food web, producers (plants) and consumers (animals)

Pre-lesson Poll
Have your students come up with a few words as a class describing how they feel about insects.

Student Brainstorming
What ways do plants and animals interact? Things like birds build nests in trees, some animals eat plants, bees visit flowers for pollen, insects can live inside of plants, some plants need animals to eat their seeds so they get spread around by the animal's poop, some plants make seeds that can hitch a ride on your socks or an animal's fur to travel to far off places, and some plants need animals to help spread their pollen around so they can make seeds.

Introduce real world examples:
Talk about some relationships that happen in nature between plants and animals. Animals can use plants for all types of things: as housing, as food, to impress a mate, and as a place to lay their eggs (some butterflies and moths need a specific kind of plant on which to lay their eggs). Humans use plants too: for food of course, but also for clothing, building materials, medicine and even some types of plastic. Plants can use animals as well, mostly for seed dispersal and pollination.

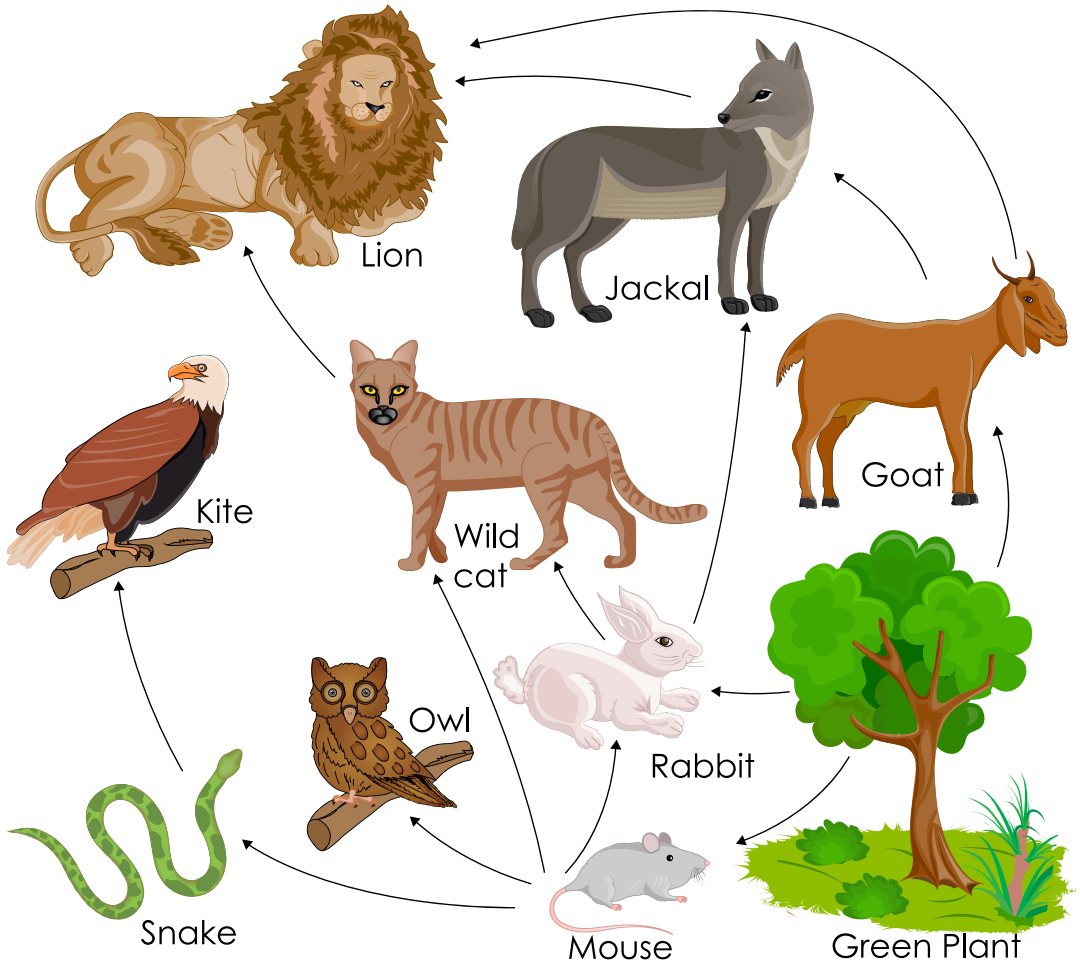
What is Pollination?
Pollinators to the rescue! Insects, birds and even some mammals can be pollinators! A pollinator is any animal that helps plants get their pollen to the right places so they can make seeds. The great thing is that pollinators have a pretty "sweet" deal, because a lot of them are looking for the flowers anyway so they can eat some of the pollen or drink the sugary nectar produced by flowers. So, as they are going from plant to plant looking for a nutritious snack, they are spreading pollen the whole way, helping all the plants make seeds. The familiar honeybee has this pollination thing down to an art. It collects a little pollen from each flower and takes it back to the hive to make honey to feed the whole colony. Humans benefit from this relationship as well, as any student who has ever tasted delicious honey can tell.

There are a lot of very interesting pollinator relationships out there including: Orchids shaped like bees, giant flowers that smell like rotting meat to attract flies, and tiny pollen eating mammals in the rainforest. These are all considered special

adaptations to take advantage of the process of pollination. Some beetles, butterflies, hummingbirds and humans can also be considered pollinators!

Once a plant is pollinated, it can produce seeds. Some plants just let their seeds drop, others need to find ways to help their seeds get to new places. It is good for the seeds to travel to new places, because this means that there will be more plants growing in more places, instead of a bunch of plants all growing in one place...but how do they get there? Plants can't just grow legs and walk over to a new place, can they? They have to rely on wind, animals or humans to help them get there! Lots of seeds "hitch a ride" on an animal's fur or your socks. Other seeds are dispersed when a gust of wind blows them off of their parent plant. Humans can travel very far distances very quickly, and often we take seeds with us without thinking of it, such as our food (peach pits, apple cores, etc.) or unnoticed on our clothes.

Food Webs
Animals and plants also have relationships built on finding a meal. Using a food web, we can track who eats what in nature. Plants use energy from the sun to produce their own sugars, so they belong to the group we call Producers. Animals cannot make their own food. Instead, they have to consume (eat) plants, so they belong to the Consumer group. Practice making simple food webs with familiar plants and animals.



TOUR TEACHING

Scavenger Hunt

Find the flowering plants. Depending on what season you visit Klyde Warren Park, more or less flowers may be in bloom.
Draw the flowers and the plants that any insects or birds are on and use some descriptive words to describe them. What are the flowering plants called? Can you smell the flower (be careful)? What does it smell like? What kind of animal do you think could pollinate this flower? Did you see any pollinators like insects or birds visiting this flower?

Find the plants that are producing seeds.
Draw the seeds and the plants that any insects or birds are on and use some descriptive words to describe them. What are the plants producing seeds called?

How do you think these seeds could be dispersed?
There should be a closing activity wherein the flowers and seed producing plants are further discussed. How are their seeds dispersed and how are the flowers pollinated? Who found the most seed producing plants?

Insect Count

Which area of the park is most attractive to pollinating insects?
Scientists often count how many species of insects they see in a certain area over a certain amount of time. This can tell them a lot about the health of an ecosystem. Fourth graders can do this too!

Supplies:
- A simple laminated sheet with a visual ID key of some common butterflies and other insects that visit the park (or are local to Dallas) should be provided to students.
- Stopwatch
- Pencils or hand held push counters

Steps

1. Students should be split up into groups of several students each covering specific areas (would be helpful if they were previously enumerated) of the park.
2. Students should begin looking for insects in their area and practice trying to ID insects for a few minutes with the key
3. One student will start the stop watch for a set amount of time (five to ten minutes should be more than enough time). Alternatively, the groups could do two sets of five minutes each.
4. The students will attempt to ID and count all of the insects they see in the allotted amount of time.
5. Students will re-group to discuss their results and compile a group tally of insects. During this time, students could learn about the certain butterflies that lay their eggs on specific plants in the park.

Discussion Questions

- Which area had the most insects? Why do you think?
- What is the most abundant pollinator in the park?
- How could our data be incorrect? (Maybe some of the same individuals traveled from student group to student group and were counted more than once)

Plant Listing Information
eFloras.org (Flora of North America)
United States Department of Agriculture
Wildflower.org
DavesGarden.com
Wikipedia.com

POST-TOUR TEACHING

1. Have students use their insect count data to create a bar graph of the number of certain types of butterflies and bees they found in different areas of the park. They could compare and contrast honeybee counts with other insect counts. Discussion about the vulnerability of honey bees could fit here.

2. Post lesson poll: Again, have your students come up with some words describing how they feel about insects. Are the words different? How did their perceptions change? See ELA component for a continuation of this concept.

3. Have students do another insect count at their school or for an assignment at their house or a nearby park. They can just count the number of butterflies, bees and "other" insects to keep it simple. The instructor could create a similar simple key to conspicuous butterflies and insects of North Texas for the students to use. If the school has a garden of some sort, that would be a good setting. The class can compare the data from the school with the data from Klyde Warren Park in the form of bar graphs or pie graphs.

- Talk about factors that could influence the reason why there are more or less of one type of insect in one of the locations (Rural versus city locations, diversity of plants, nearness of water, etc.).

- The class can also upload their results to an actual online 'bioblitz" database such as iNaturalist, thus actually contributing to scientific data. Introduce the term "citizen science," because that's what you are doing!

4. Have students contribute to a class flower collection by pressing flowers in the pages of a heavy book. Students can also contribute seeds to a seed collection. They need to try and find out the name of the plants the flowers and seeds came from. You could talk about the concept of a seed bank here, since you are sort of creating your own!

ELA COMPONENT

- Have students write about how their perception of insects was changed by their experiences at the park.
- Have students write a light research paper about their favorite pollinator. Include where it lives, what plant it pollinates, a little bit about the life history and life cycle of the plant and the pollinator.
- Write a short story about a day in the life of a pollinator. Use descriptive words and include factual information the student learned during this section.
- Write a self-help passage for a plant that wants to attract a pollinator or spread its seeds about but isn't quite sure how to do it. Suggest versions of the adaptations learned about during this section and provide examples.
- Write a poem describing a relationship between a plant and an animal that includes some factual information learned from the section.
- Imagine a world far in the future where plant and animal relationships are much different than they are today. Describe a relationship that could develop between a plant and animal that would be beneficial to both organisms.

QUICK BITE

Students will do a quick observation and draw a picture of all the requirements they can identify that an organism, such as a bug, would require to survive. The students can then compare their drawings with those of their peers and see if they thought of something that their friends might not have!

PE COMPONENT

Materials Needed: Flag football belts with three different colors of flags, plastic sacks for each student, large numbers of ping pong balls or small foam shapes (any small non-food item that is easily cleaned up which students can pick up to fill their sacks).

Food Chain Game!

Explain to the students that they are going to be playing grasshoppers, frogs and hawks in a food chain game. Scatter most of the ping pong balls or other small items over the area, and explain that the items represent plants that grasshoppers eat. Divide the students equally into three groups, and distribute grasshopper flags to one group, frog flags to the second group, and the hawk flags to the third group.

Give each "animal" one "stomach" or plastic sack. Explain that when the game starts, the grasshoppers will try to eat ping pong plants (put ping pog balls in their bags), the frogs will try to eat grasshoppers (by tagging them) and hawks will try to eat frogs (also by tagging them). When a frog tags a grasshopper, it takes the grasshopper's "stomach" and the grasshopper player leaves the game. When a hawk tags a frog, it takes the frog's "stomach" and the frog leaves the game. Emphasize that grasshoppers can only feed on the ping pong plants on the ground, and that frogs can only feed on grasshoppers, and hawks can only feed on frogs, and that animals that are eaten must wait on the sidelines. (Frogs can eat more than one grasshopper, and hawks can eat more than one frog.) If a student's sack is empty at the end of the round, he or she is out because they have died from starvation!

Announce that the round will last until all of one kind of animal are eaten. Talk to the students about whether or not they think this food chain is balanced. Ask them to record the data from each round on a data table. If not, ask them to think about how the game can be changed to make for a more balanced and sustainable food chain. Allow the students to be a different animal after several rounds.

Remind students that ALL ping pong balls MUST be picked up when the game is finished. You could offer a small prize to the grasshopper who can fill his or her "stomach" up with the most ping pong balls while cleaning.

TEKS

2.0

Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and outdoor investigations.

(B) collect and record data by observing and measuring, using the metric system, and using descriptive words and numerals such as labeled drawings, writing, and concept maps.

(C) construct simple tables, charts, bar graphs, and maps using tools and current technology to organize, examine, and evaluate data.

(D) analyze data and interpret patterns to construct reasonable explanations from data that can be observed and measured.

(F) communicate valid, oral, and written results supported by data.

4.0

Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry.

(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, pan balances, triple beam balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observation of habitats of organisms such as terrariums and aquariums.

9.0

Organisms and environments. The student knows and understands that living organisms within an ecosystem interact with one another and with their environment.

(A) investigate that most producers need sunlight, water, and carbon dioxide to make their own food, while consumers are dependent on other organisms for food.

(B) describe the flow of energy through food webs, beginning with the Sun, and predict how changes in the ecosystem affect the food web such as a fire in a forest.
supported by data.

10.0

Organisms and environments. The student knows that organisms undergo similar life processes and have structures that help them survive within their environment.

(A) explore how adaptations enable organisms to survive in their environment such as comparing birds' beaks and leaves on plants.

(C) explore, illustrate, and compare life cycles in living organisms such as butterflies, beetles, radishes, or lima beans.

INSECT LIST

TIGER SNOWTAIL

JUNE BEETLE

EUROPEAN HONEYBEE

LADYBIRD BEETLE

CICADA

BLACKWING DAMSELFLY

SOCIAL STUDIES

BIG IDEA

VALUING
the Voices of all Texans

Texas is a diverse state full of unique voices. In an effort to help students understand the contributions of people of various racial and ethnic backgrounds, the children will observe individuals, families, and groups at Klyde Warren Park. Using Found Poetry, they will explore the rich cultural heritage of an urban area.

PRE-TOUR TEACHING

Read aloud the modern picture book, Voices in the Park by Anthony Browne or show the students the video on YouTube. Browne tells this story through four distinct voices that are intricately connected. Students should think about how class, prejudice, control, hope and friendship determine the perspectives of the four characters. Lead a class discussion about point of view and ask the kids to think about how individual experiences alter the way we see the world. Explain to the students that when they go to Klyde Warren Park they will be observing human interactions, items found in nature, and park signage.

TOUR TEACHING

Provide each student with an index card and a pencil for capturing snippets of talk. Tell the students that whenever they hear or see a word that is unusual, beautiful, funny, or otherwise interesting to write it down on the index card. They could write down what they hear people saying to each other or words they see written on signs throughout the park. Instruct students to travel with partners or small groups as they explore various areas including Jane's Lane, the Reading & Games Courtyard, and the Children's Park. Tell them to return to the Storytelling Tree after about 20 minutes of observations. Following the guidelines outlined on the Read, Write, Think website, instruct students to compose a Found Poem to share with their classmates. If time allows, have individuals or groups read their poems from the Story Telling tree platform.

**Some students may choose to use an electronic device to capture notes.*

POST-TOUR TEACHING

Ask the students to reflect on the various languages, comments, and words spoken throughout Klyde Warren Park. What racial and ethnic groups did they observe? How do cultural differences make Texas a rich state? What are some events the park could hosts to help promote cultural celebrations such as Cinco De Mayo, Oktoberfest, or the Strawberry Festival?

Have students individually or collectively write a letter to the Woodall Rodgers Park Foundation recommending cultural celebration ideas.

ELA COMPONENT

Revisit the Found Poem activity in the classroom, allowing students time to further develop their poems and present them to their classmates.

PE COMPONENT

Tie in the theme of diversity by focusing on acceptance of individuals with physical disabilities. Ask students to think of several different types of physical disabilities. Then tell them they are going to do an activity in which they are blindfolded to mimic individuals who are blind. Tell students they must make a square with their bodies by lying on the ground and they must do this while blindfolded. Students may communicate verbally and with light touching, but they may not see the other students. It's a good idea to have a few seeing "helpers" on the sideline to help guide the blindfolded students. You should be patient during this activity. Resist the urge to step in and fix their mistakes. Give them a time limit if the activity begins to take too long. Even if they are unable to successfully make a square, they should be able to express empathy for people who do not have the ability to see.

QUICK BITE

Below is a list of interesting words or phrases found on signs throughout Klyde Warren Park. During your lunch break, scurry around the park looking for similar words, phrases, or ideas. Capture as many words as you can in five minutes and create a short Haiku about your visit.

- ❑ Courtesy
- ❑ Respect
- ❑ Cool Swag
- ❑ Botanical
- ❑ Free To Play
- ❑ Comply
- ❑ Be Aware
- ❑ Croquet
- ❑ Smoke Free Zone
- ❑ Health & Wellness
- ❑ No Cost
- ❑ Prohibited
- ❑ Equipment
- ❑ Guest Services Staff
- ❑ Performance Pavilion
- ❑ Dedicated
- ❑ Philanthropy
- ❑ No High Heels

TEKS

4.19 The student understands the contributions of people of various racial, ethnic, and religious groups to Texas.

4.22 The student communicates in written, oral, and visual forms.

C. express ideas orally based on research and experiences

5th GRADE LESSONS

ART & DESIGN

MATH

PHYSICAL EDUCATION

SCIENCE

SOCIAL STUDIES

ART & DESIGN

BIG IDEA

DESIGN YOUR OWN PARK

Students will study the different design elements that make Klyde Warren Park unique, and then create their own designs for a park.

There are calendars with lists of different activities happening throughout the year on the website as well that you can show the students.

Break the students up into groups of 2-3 and have them brainstorm what they would include in their own "dream park". For now, just have them write their ideas down. Encourage them to be as creative as possible. Tell them to think about features as well as activities, just as you discussed regarding Klyde Warren Park.

PRE-TOUR TEACHING

Have a discussion with the students about parks that they like or have been to. Some questions to kick start the conversation might include:

- What makes a park fun?
- What is your favorite thing to do when you go to the park?
- If you could create your own park, what are the top 3 things that you would include?

Show the students some slides from Klyde Warren Park. There are some great photos on their website (http://www.klydewarrenpark.org/). Talk about some of the unique features of the park as well as the activities that they offer. Some of the features include:

- Performance Pavilion
- Savor and Relish restaurants
- Walking trails
- Dog park
- Children's park
- Games area
- A mobile library
- Splash areas

Some of the many activities that they offer include:

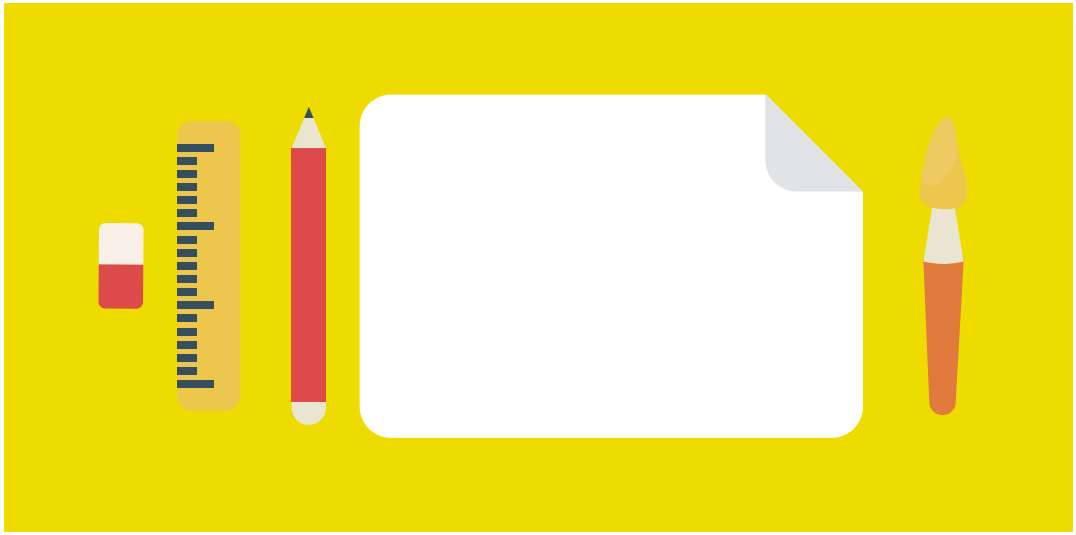
- Yoga and other exercise classes
- Storytelling
- Concerts
- Drawing classes
- Music classes
- Science classes
- Drum circles

TOUR TEACHING

Make sure that each student has a sketch book or some paper as well as a pencil. Tour the entire park with the students, stopping at each of the various "rooms" within the park to allow them to experience all of the activities. This will, of course, depend on how much time you have to spend at the park, but try to take in as much of the space as possible. As you tour the park, ask the students to take notes and make quick sketches of their favorite parts of the space. Would they change anything about it? Is there something that they think should be added? Does there appear to be a "theme" to the design?

As you walk around, point out to the students the way that the park utilizes the large white arches with the hanging spheres to highlight the walkway that surrounds the park. The shapes add a wonderful visual element, and they also serve as an important marker that direct the visitor along the walking pathway.

This part of the lesson should be focused on the students having fun and truly experiencing what the park has to offer. For the project, they will be designing their own park, so they need to have a strong understanding of all of the different things that Klyde Warren Park has to offer, and how they might go about building upon those ideas.



POST-TOUR TEACHING

For their project, the students will design their own "dream" park. You can either break them back up into the groups that they were in during the pre-tour lesson, or have them work on their own.

Using their sketches from Klyde Warren Park for inspiration, instruct the students (or groups of students) to begin by brainstorming the features that they would include in their park. Would they break it up into "rooms" like Klyde Warren Park, or would they go about it a different way? Would they have separate areas for smaller kids? Would they incorporate some sort of design to help move visitors through the park like the arches at Klyde Warren Park?

Encourage the students to be as creative as possible with this. Remind them to think about balance, design, and other elements and principles that you have covered with them throughout the year. The medium for this project is up to the instructor, and the time that can be allotted for it. For example, this could be as simple as a colored pencil drawings, or as challenging as a three dimensional project. If possible, display the "dream" parks in the hallway so that other classes can experience the students' visions for their spaces!

ELA COMPONENT

In addition to each park design, instruct the students to write a paragraph that describes their park. What features did they include? What activities will be offered at their park? What is their favorite part? What was their biggest obstacle in creating this?

PE COMPONENT

Ask the students to "test" all of the options for physical activity in Klyde Warren Park such as the game tables and the Children's Park. Ask them to record their data on a data sheet ranking the physical activities in order from most favorite to least favorite. Encourage them to include their favorite activities in their "dream park".

QUICK BITE

While at the park, ask the students to think about a sculpture that they would design to place in the park. Have them create a quick sketch of their sculpture in their sketch books. Instruct them to think about what the park is used for and all of the features and activities that are available in the space when designing their sculpture. Where would they want it to be placed? What would it be made of? What would it look like? How big would it be?

If possible, when you return to the classroom, have the students create a more detailed drawing, painting, or 3-D model of their sculpture sketch.

TEKS

1.0 PERCEPTION

(B) identify in artworks that color, texture, form, line, space, and value are basic art elements and that the principles such as emphasis, pattern, rhythm, balance, proportion, and unity serve as organizers.

2.0 CREATIVE EXPRESSION/ PERFORMANCE

(A) combine information from direct observation, experience, and imagination to express ideas about self, family, and community.
(B) compare relationships between design and everyday life.

4.0 RESPONSE/EVALUATION

(A) analyze personal artworks to interpret meaning.

MATH

BIG IDEA

DATA OF THE PARK

PRE-TOUR TEACHING

As a class discuss what the students know about taking a survey and collecting data in the real world.

Have the students turn to a partner and discuss what they think they might see at the park.

Ask questions such as:

- What do you expect to see today at the park?
- Do you think there will be plants and animals at the park?
- What living things do you expect to see at the park today?
- How could we collect data about what we see at the park?

Have the students brainstorm as a class while making notes on their Data Recording Sheet. Try to come up with as many living things that you might see at the park.

Some ideas would include different types of animals, different types of plants, people.
Vote as a class and decide on about 6 different categories of living things that they will be looking for at the park.

Divide the students into partners or groups and assign each group a living organism to be on the lookout for at the park. Assign them the task of collecting data by using tally marks to create a frequency chart of the organisms that they see.

TOUR TEACHING

MATERIALS:
DATA RECORDING SHEET, CLIPBOARD TO WRITE ON, PENCIL

After arriving at the park, take a tour as a class. Point out some examples of living things that the students see as they walk around.

Have the students double check to make sure they know the assigned organism that their group will be on the lookout for.

Allow the students to work with their partners or group, filling out the Data Recording Sheet.

Walk around to monitor and check that they are able to find their assigned organism.

Encourage them to discuss with their partner(s) and make sure they both agree on the frequency they are tallying.

POST-TOUR TEACHING

Students will come together as a class to compile their data into one total frequency chart. They will use this data to create a bar graph as a class. Ask questions such as:

- Did you and your partners agree on the frequency that you saw the living organisms?
- What was the most frequently found organism?
- Was anyone unable to find their assigned organism?
- After compiling and synthesizing the data, the students will take the information and create a bar graph.

They can answer the graph and fraction questions that are found on the Data Recording Sheet.

ELA COMPONENT

Have students write about their experience; on the last page of the Data Recording Sheet there are several questions that students may answer to expand upon their visit to the park.

Working with their partners or independently, students should use complete sentences and short paragraphs to answer the questions.

Teacher may guide students thinking by facilitating a group discussion of the questions.

QUICK BITE

Geometry Search: On the back of the recording sheet the students have a fraction search that they can do while at the park. Students can try and find as many fractions in real life as they can. They should also be able to reduce the fraction if it is possible. Give a reward to the group who finds the most!

PE COMPONENT

Physical Fraction Challenge! Tell the students that you are going to challenge them to demonstrate an understanding of fractions through physical activity and word problems. For each "round" choose a different captain who is responsible for helping the students display the proper fraction. Below are some examples of challenges for each round, but you will have to modify the numbers given based on the number of students participating. You can award a prize for each round completed within a given amount of time.

ROUND 01

½ of the class does jumping jacks and ½ of the class completes mountain climbers.

ROUND 02

2/3 of the class run in place and 1/3 of the class should stand on one foot.

ROUND 03

¼ of the class does sit-ups and ¾ completes push-ups.

ROUND 04

1/8 of the class attempts handstands and 7/8 of the class tries headstands.

ROUND 05

5/5 of the class put your hands in and we'll finish with a cheer!

TEKS

5.1

(A) - apply mathematics to problems arising in everyday life, society, and the workplace

(C) - select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems

(D) - communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate

(E) - create and use representations to organize, record, and communicate mathematical ideas

5.3

(I) - represent and solve multiplication of a whole number and a fraction that refers to the same whole using objects and pictorial models, including area models

(L) - divide whole numbers by unit fractions and unit fractions by whole numbers

5.9

(A) - represent categorical data with bar graphs or frequency tables and numerical data, including data sets of measurements in fractions or decimals, with dot plots or stem-and-leaf plots

(C) - solve one-and two-step problems using data from a frequency table, dot plot, bar graph, stem-and-leaf plot, or scatterplot

DATA RECORDING SHEET

GROUP MEMBERS:

Brainstorm of Living Things at Park:

My group is in charge of surveying:

_____

_____

_____

_____

_____

FREQUENCY CHART

Living Organism	Frequency Seen

FRACTION SCAVENGER HUNT

Do you see fractions around you? Can you find fractions of people or things in the park? Ex: 12/20 students in our class are boys, 2/5 squirrels are in the tree, etc. Can you reduce the fraction? Find four and get a bonus!

Fraction Found:

Picture:

Reduced Fraction:

Fraction Found:

Picture:

Reduced Fraction:

Fraction Found:

Picture:

Reduced Fraction:

Fraction Found:

Picture:

Reduced Fraction:

CREATE A BAR GRAPH USING DATA

Using the data that your class collected, create a bar graph displaying your results. If you need more room you can make the graph on another sheet of paper.

Total number of living organisms observed:

_____

What living organism was found most often?

_____

How could you write this observation as a fraction?

_____

What living organism was found least often?

_____

What living organism was found least often?

_____

THINK AND RESPOND

With the class or a partner, answer the following questions using complete sentences.

1. Were you surprised by the results of the data collected at the park? Why or why not?

2. Did you find any living organisms at the park that weren't on our list?

3. What circumstances might occur that would change the results of the data?

PHYSICAL EDUCATION

BIG IDEA

MyPlate TAG
Students will learn about the ways the food groups help the body perform physical activity while playing a silly game.

PRE-TOUR TEACHING

In the classroom, show students the MyPlate guide. www.choosemyplate.com Discuss each of the food groups and have the students tell you what they know about each. What kinds of foods are in each group? Why is it important to eat foods in this group?

Break students into five teams. Assign each team a food group from MyPlate. Tell them that they will be creating large cards for the taggers to use during the game at Klyde Warren Park. Cards must include 3 important items; a picture representing the food group, a benefit of choosing foods from this group, and one activity that the person tagged will complete before rejoining the game (You may want to give the teams the following information instead of leaving it up to them). When they are finished, ask them to share what they created with the rest of the class.

Grains: Provide energy. Run in place for 5 seconds.

Vegetables: Help your vision. Make binoculars with your hands for 5 seconds!

Fruit: Helps improve your skin and ability to cool yourself off during exercise. "Vogue" for 5 seconds to show off your lovely skin! (You may need to demonstrate this one).

Milk: Builds strong bones and muscle. Smile wide and show your healthy teeth for 5 seconds!

Meat and beans: Builds strong muscles. Flex those muscles!

TOUR TEACHING

MATERIALS:
5 PINNIES OR COLORED ARM BANDS, CONES, MYPLATE POSTER OR PROJECTION, 5 LARGE CARD STOCK SHEETS, OR CARDBOARD PREFERABLY IN 5 DIFFERENT COLORS.

Proceed to the Ginsburg Family Great Lawn or the East Lawn and create boundary lines for the perimeter of the game. Taggers will be wearing pinnies and carrying the two-sided cards made in class. One side of the card shows a picture that represents a food group and the opposite side of the card has a picture of the benefit, along with the assigned activity. When the student is tagged, she must stop and perform the activity shown on the card of the tagger and then return to the game. Remind students to tag with two fingers only on the back or shoulders. Talk to your students about good sportsmanship and following the rules of the game. Change taggers periodically.

After about 10 minutes, take the cards away and see if the students can complete the game without looking at the cards.

POST-TOUR TEACHING

Play a game of four corners. Place the cards in various locations around the classroom. Tell the students that you will describe each group. They must move to the corner of the room that most closely matches your description. Encourage them to think for themselves and not just "follow the herd". To make it a competition, break students into two teams and award points for each individual who moves to the correct corner. The winners may be given a healthy reward like an apple or orange.

QUICK BITE

Instruct the students to look at the menu at Savor, the restaurant in Klyde Warren Park, as well as the food trucks. Remind them to be respectful to the patrons and the workers at these places of business. Ask them to identify how healthy the meal options are based on the MyPlate Guide. Are there any food groups that are served more often than others? Are there any food groups you didn't see represented on these menus? Why do you think this is the case?

ELA COMPONENT

Give the students several blank MyPlate Guides and ask them to create healthy meals for their families for one or two days. Encourage them to think about all different types of foods other than what their families normally eat. Urge them to ask questions and inquire about whether or not the foods they eat are healthy. Allow them to use the internet or library for research on this topic.

TEKS

5.4

Physical Activity and Health
(F) Identify the relationship between optimal body function and a healthy eating plan such as eating a variety of foods in moderation according to U. S. dietary guidelines.

BIG IDEA

PUZZLE CHALLENGE

The students will work cooperatively to achieve a goal while focusing on teamwork!

PRE-TOUR TEACHING

A fun way to conduct this lesson is to keep the puzzles hidden from the students until after you introduce the theme of teamwork. Emphasize the concept of teamwork throughout the Pre-Tour Teaching and tell them that they will be expected to work together in a team challenge at KWP (all the while keeping it a secret). Show them a video clip entitled, "Kid President-Pep Talk about teamwork and leadership." When the video is finished, ask the students what the word teamwork means to them. What do you expect your teammates to do or not do? How can you be sure that you are being a good teammate? Ask the students to make a list of qualities that a good teammate should have. Another idea is to split the students into their teams before leaving to the park so that they might create a team name or chant. Encourage them to sit together on the bus. Tell them this is called "team bonding."

TOUR TEACHING

MATERIALS:
WHISTLE, 4-5 IDENTICAL PUZZLES WITH APPROXIMATELY 20-30 PIECES (LARGER PIECES ARE PREFERABLE TO SMALL PIECES.)

Separate everyone into teams of 5 (or as evenly as you can). Line each team in parallel lines. At the front of each line at an even distance, place the puzzles on the lawn.

On your whistle, each person at the front of the line rushes to his or her team's puzzle. They will have one minute to try to arrange as many puzzle pieces as possible. After one minute, blow the whistle. That teammate's turn is up and he will run to the end of the line. The next person in the front of the line makes the next attempt to arrange the puzzle.

Another idea is to allow two students to work the puzzle together, or allow for a period of "overlapped" time between transitions so that the student currently assembling the pieces can have a few moments to collaborate with the "new" puzzle piece assembler before returning to the end of the line.

The first team to properly assemble the puzzle wins!

POST-TOUR TEACHING

Create a self-evaluation tool for the students to complete. Ask the students to reflect on the puzzle challenge. Were you a good teammate during the challenge? What do you wish you could improve for next time? Did your team communicate well? Remind them that they are evaluating their own team's performance during the activity and not the performance of the other teams. Ask the students if they discovered a method for success while they working together. If so, ask them how they were able to discover it? The answers will probably have to do with communicating with one another. Tell the students that good communication is the key to a successful team.

ELA COMPONENT

Students can write "Kudos Cards" for one another. Give the students index cards or scrap paper and ask them to reflect again on the puzzle challenge. Did you see anybody (on any of the teams) do anything particularly awesome? Did somebody stand out as a good leader? Was anybody's enthusiasm contagious? Tell the students to write a compliment in 3-5 sentences on one side of the card and the person's name on the other side. Put all of the Kudo Cards in a basket and deliver them during lunch one day.

QUICK BITE

Have the students explore the park in teams and identify any examples of people that are cooperating. Ask them to guess what the people are trying to achieve. If two people are playing foosball or ping pong, is that an example of cooperation? Why or why not?

TEKS

5.1

Movement
(L) Demonstrate combinations of locomotor and manipulative skills in complex and/or game-like situations such as pivoting and throwing, twisting and striking, and running and catching.

5.5

Physical Activity and Health
(C) Describe the importance of taking personal responsibility for reducing hazards, avoiding accidents, and preventing injuries during physical activity.

BIG IDEA

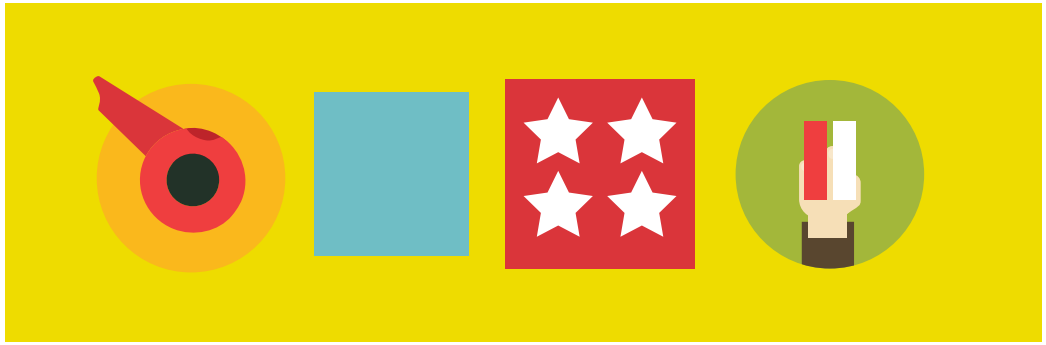
FOURTH OF JULY FITNESS

Students learn about the importance of cardiovascular fitness while celebrating Independence Day.

PRE-TOUR TEACHING

Provide a brief history of how Independence Day began focusing on the American Flag's design and what each part represents. Ask the student to form groups and create a "word web" in which they brainstorm ideas about what the word freedom means to them. Ask the students how they celebrate the 4th of July with their families. If there are students who do not celebrate Independence Day in their families, ask them to share how their families celebrate special occasions. You may also consider having the students cut the paper for Station 3 and blow up the balloons for Station 2 (see below).

TOUR TEACHING



MATERIALS:
2 LONG JUMP ROPES, A WHISTLE, ONE BALLOON AND STRING FOR EACH STUDENT, STRIPS OF RED AND WHITE CREPE PAPER (ABOUT 2 FEET LONG), RECTANGLES OF BLUE PAPER, AND A BOX OF WHITE STARS.

There are 3 stations set up. It is recommended to set up these stations on the Ginsburg Family Great Lawn or the East Lawn. The stations will be numbered 1, 2, 3 and the students will rotate every 5 minutes when they hear the whistle. You may also use music as the signal if you have the capability to play it loud enough for the students to hear clearly at all 3 stations.

STATION 01

Jump into July - Students chant "J-U-L-Y" while jumping rope. When one misses on the letter "J", they are to jump as high as they can while the rope continues turning. If a student misses on "U", the rope turners make it "unders" which is not swung over head, but swung low under the feet. If one misses on "L", the jumpers will try to leap frog between jumps. If one misses on "Y", the rope turners make the rope "yank" quickly on the ground (this is also known as hot peppers).

STATION 02

Firecrackers - Everyone ties a balloon around their ankle; each tries to step on another's balloons and break it while keeping theirs from getting popped. It is best to create a boundary line for this station and require students to remain in-bounds.

STATION 03

Flag building - Split students into 2 teams; each team member will take turns running up to the container to get one item of either red and white paper strips, blue paper squares or stars. The student will then run back to the designated flag-building area and try to build the flag. The first team that builds their flag first is the winner. A small prize could be awarded to the teams if they finish the station. If the weather is windy, bring glue and a large piece of butcher paper and have students glue the pieces to it.

POST-TOUR TEACHING

After the stations are complete, ask the students which station was the most tiring. Explain to students that when we move faster than we normally do for an extended period of time, we are improving our cardiovascular endurance. Explain to them what cardiovascular endurance is and why it's so important for healthy fitness levels. Show a diagram of the heart and lungs if you can. Tie in the 4th of July Freedom theme by reminding them that they have the freedom to choose their favorite fitness activities. As long as they are moving, they are becoming stronger!

ELA COMPONENT

Following the Post Tour discussion, have students write down their fitness goals for themselves, including a list of the activities they plan to do and how often they plan to do them. Ask them to include a paragraph which explains which activities will improve their cardiovascular endurance.

QUICK BITE

Students can complete an activity scavenger hunt at the park. Provide the students with a list of activities one might see people doing at the park such as Frisbee, put-put golf, foosball, playing catch, etc. Tell the students to put a check next to the item on the list if they see anybody at the park doing that activity.

TEKS

5.1 (J) jump a rope using various rhythms and foot patterns repeatedly.

5.3 (B) Identify appropriate personal fitness goals in each of the components of health-related fitness.

5.4 (A) Relate ways that aerobic exercise strengthens and improves the efficiency of the heart and lungs.

5.7 (A) Follow rules, procedures, and etiquette.

SCIENCE

BIG IDEA

ADAPTIVE TRAITS

Adaptive traits help organisms survive in many different habitats.

There are different kinds of traits. They can be inherited or learned. These adaptive traits can help animals survive in deserts, rain forests and even the middle of a large city like Dallas.

As humans continue to build large cities and change animals' habitats in many ways, in what ways may they change animal behavior? What kinds of adaptive traits would make it easier for an animal to fit in in the big city?

PRE-TOUR TEACHING

Introduce terms such as inherited and learned, trait and behavior. A trait tends to be some physical adaptation that is inherited, such as plumage color. A behavior may be inherited or learned. A section on animal adaptations to extreme environments (very cold, very hot, very high altitude, very deep ocean, etc.) could be introduced here.

Student Brainstorming
Have the students build a concept map of examples from nature or their own observation or reading that could fit in one of the following categories:

- Inherited trait
- Inherited behavior
- Learned behavior

Introduce real world examples:
Sometimes different groups of organisms find ways to work together to better the chances of survival of both of their species. This is called symbiosis or co-adaptation. Pollination is a great example. Bees visit flowers and collect pollen to make honey while spreading pollen to different flowers so that the plants can make genetically healthy seeds. The plant's DNA will pass on to its seeds the inherited "code" that makes the pollen that will attract bees. When the seed grows up, bees will come visit it, just like its parent plants. When the queen bee in the bee colony lays her eggs, she passes down the inherited bee behavior of visiting lots of flowers. She also passes down the inherited trait of special pouches to store pollen on the legs and in the stomach.

Without these inherited behaviors and traits, bees wouldn't be able to pollinate flowers and they wouldn't be able to make delicious honey!

Birds Example:
Birds are often good teaching examples because they have some shared traits (feathers, beaks) that have lots of variations that serve as adaptations to very diverse environments. A stunning visual resource for using birds as a learning tool for adaptations is David Attenborough's masterpiece: Secret Life of Birds.

Inherited traits common to all birds:
(have students try to brainstorm these first and then help them out)

- Feathers
- Beaks
- Eggs

Birds have variations among these common inherited traits:

- Types of feathers
  - Ducks have oily water proof feathers to help them swim
  - Penguins have air trapping, water proof feathers for insulation against the cold water
  - Vultures have strong feathers that help them glide on air currents

- Types of beaks (introducing the Galapagos finches here would be fantastic)
  - Crushing beaks for eating nuts (cardinal)
  - Ripping beaks for eating flesh (hawks)
  - Long thin beaks for harpooning fish (heron)
  - Cross bill beaks for prying open nut casings (crossbill)
  - Tweezers- like for manipulation (wrens)
  - Chisel like for chipping away wood (woodpeckers)
  - Some birds have more than one of those physical adaptations on their beaks, so they are able to a lot of things with it. (Crows and grackles)

- Nest building - nests can be very different
  - Robins
  - Swallows build mud nests under bridges or in caves
  - Pigeons and doves don't really build complicated nests. (Some birders say white wing doves cross two sticks and they're done. Pigeons tend to nest in crannies of buildings. Many hundreds of pigeons can live on a sky scraper like the ones you will see from Klyde Warren Park.)

- Mate attracting behaviors
  - Songs – although research shows some birds "learn" songs from listening to their parents, many of the vocalizations that birds emit are instinctual
  - Dances – birds may learn some key moves through their life time, but the instinct to dance to attract a mate in some birds is inherited
  - AMAZING EXAMPLE: Barrow birds build complex structures and arrange tidbits they find in the forest or from people's homes into aesthetically pleasing piles to impress the females.

Learned traits of birds:

- Foraging behavior
  - Some birds are better learners than others
  - Finding food in the city
    - House sparrows and grackles hanging out at the dumpster or near outside tables at a patio restaurant.
    - Using cars at stoplights to crush nuts

- Finding nesting materials
  - Stuffing, string, etc.
  - Pigeons and other birds use city buildings much like the "cliffs" they evolved on

Life Cycles: Insects have very interesting life cycles. Introduce the difference between complete and incomplete lifecycles. Butterflies are a great example of complete life cycles. Adult butterflies lay their eggs on plants and they hatch into caterpillars. The caterpillars eat voraciously and grow very quickly. When they reach a certain size, they wrap themselves in a chrysalis which they make out of saliva and leaves. Over many days they transform slowly into an adult with three body segments, four wings and six legs. Once the process is complete, the butterfly hatches out of the chrysalis and flies away to find some delicious nectar to eat and a mate. Talk about the different body parts of caterpillars and adult butterflies, mentioning the differences in mouthparts related to the different foods they eat. Mention that these complete life cycles with different stages is an example of an inherited trait, an adaptation meant to lower the competition between different life stages of butterflies for the same food source.

TOUR TEACHING

Full Bioblitz

Supplies:
Laminated sheets with a simple visual ID key of:
Common butterflies, bees and other insects that visit the park (or are local to Dallas)
Birds common to the park including a few migrants
Stopwatch
Pencils, dry erase markers if laminated sheets have built in tallies or hand held push counters

STEP 01

Have each group of students discuss and agree upon a hypothesis stating which area they predict will have the most different kinds of organisms. They are going to identify the most "biodiverse" area of the park.

STEP 02

Send split groups up into different areas of the park. In each group, you will have students responsible for different things:

- Bird count (ID cards or some pre-teaching required)
- Basic insect count (ID cards or some pre-teaching required)
- Plant Identification
- Time keeping and "extra eyes"

STEP 03

After tallies have been taken, students should make a chart showing how many of each kind of animal were in each area of Klyde Warren Park. Using this chart, students should be able to accept or reject their original hypothesis. It is important to mention to the students that even if their original hypothesis was rejected, they are still doing science. Trial and error is used in order to discover information with science.

USING THE DATA

If time permits at the park, a large tally on a white board over a layout of Klyde Warren Park could be taken and data recorded later for classroom use. Discussion questions listed below could be introduced at the park and/or taken back to the classroom:

Data could also be taken back to the classroom and a chart created. Students should be able to discern certain types of information from this chart such as in the following discussion questions:

Which area had the highest number of a certain organism?
Which area had the lowest number of a certain organism?
Were any organisms found only in one area?
Which area had the most pollinators?
Which area had the most birds?
Were any organisms always found in correlation with another certain type of organism? (Specific bee and specific type of plant, specific city bird and area close to food, etc.)

You can use the data from the park as a jumping off point to talk about how certain animals are adapted to use certain resources.

Plant Listing Information

eFloras.org (Flora of North America)
United States Department of Agriculture
Wildflower.org
DavesGarden.com
Wikipedia.com

POST-TOUR TEACHING

Have students design an experiment they could do to find out something about animal relationships by using the data from Klyde Warren Park or gathering new data about plants and animals around their school, a neighborhood park or at their home. A list of investigation questions for the student to choose from may be offered or students may come up with questions on their own if they are cleared with the teacher. Options for this include:

Forming groups to design, conduct and present the results of the experiment. For this project, research questions may need to be assigned to the groups to offer some guidance.

ELA component option: Have individual students design, conduct and report results of an experiment. This would be a research paper.

Have students choose one of the following:

Compile an insect collection. There are many resources to help guide the student in the proper capture, preservation and display of insects. Student should provide scientific and common names of insects and note any interesting adaptations they

Go on a bird walk at a park with your family or during a certain day designated by the teacher at the school grounds. Count the different kinds of birds you see. Do research about the birds. What do they eat? Do they migrate? Where do they live?

Compile a plant collection. You can go to a park or collect from the school or near your home. Try and identify the plants by matching pictures online. Give the scientific and common name of the plant, in which geographic locations they are native and interesting adaptations they may have.

The class can also upload their results to an actual online 'bioblitz" database such as iNaturalist, thus actually contributing to scientific data. Introduce the term "citizen science," because that's what you are doing!

ELA COMPONENT

- Write a poem about a learned or inherited behavior or trait they observed at Klyde Warren Park
- Write a short story about how an animal might have learned a behavior to help it survive in the city.
- Write a paper about a household pet listing and comparing/contrasting inherited traits and behaviors their pet exhibits.
- Do research on a certain adaptation exhibited by a certain animal

PE COMPONENT

Break students into small groups and assign them a species (or let them choose). Tell the students that they will be assigned the task of acting out the lifecycle of this species in a short performance. Encourage them to be dramatic and utilize their bodies' ability to twist and curl and bend. Tell them to experiment with different movement patterns in which they make themselves look both large and small. Another idea is to make these performances silent and allow the rest of the class to guess which species they are trying to depict such as in a game of charades. Give the students enough time to plan their performance and practice before showing it to the rest of the class. If students need more information about their species' lifecycles, allow them to use electronic devices for research.

QUICK BITE

Animal Behavior Scavenger Hunt
Have students observe animals and attempt to deduce if the traits that they notice are inherited or learned.

Have them make a list of animal behaviors first and then when coming back to discussion, have the group talk about whether or not they are inherited or learned in a group responsible for counting one type of insect. One student could count the number of butterflies they see, another could count the number of bees, and another the number of flies or other insects. This can be scaled to be as detailed (identifying via pictures and counting certain species of butterflies and bees common to the Dallas area) or as simple (just counting bees and butterflies) as wanted.

TEKS

2.0

(A) describe plan and implement a simple experiment testing one variable.

(B) formulate testable hypothesis

(C) collect information by detailed observation and accurate measuring.

9.0

(A) observe how animals interact with living and non-living parts of their habitat

(B) describe how the flow of energy from the sun is transferred through animals

(C) predict effects of change – invasive species, humans building things, etc.

10.0

(A) compare traits different animals have that help them survive.

(B) inherited and learned traits.

(C) describe the differences between complete and incomplete life cycles of insects.

INSECT LIST

TIGER SNOWTAIL

JUNE BEETLE

EUROPEAN HONEYBEE

LADYBIRD BEETLE

CICADA

BLACKWING DAMSELFLY

SOCIAL STUDIES

BIG IDEA

RIGHTS & RESPONSIBILITIES

In a democracy all citizens have rights and responsibilities. At Klyde Warren Park, each visitor must consider his or her role in making sure all guests have an enjoyable experience at this urban green space. Students will explore how individual actions can impact others in the context of public spaces like the park.

PRE-TOUR TEACHING

Lead a brief discussion about the difference between rights and responsibilities. Ask kids to think about their classroom community. With a partner, students will cut and sort the cards on page 143 into the categories of Rights vs. Responsibilities. Students should justify and defend their reasoning behind placing the cards in a specific column. Read the book, What If Everybody Did That? by Ellen Javernick. You can also view the text read on YouTube. Ask students to think about how rights and responsibilities sometimes overlap. Explain that Klyde Warren Park is a public urban green space designed to be shared by all community members. Tell them that when they visit the park, they will be observing and thinking about how the rights and responsibilities of individuals sometimes impact others in the community.

TOUR TEACHING

Explain that during a previous visit to the park you witnessed a young man attempting to fly a kite. As he ran across the field, the kite did not catch the wind, and instead of taking flight it hit a few of the visitors in the head. Ask the kids to think about how this conflict could have been prevented. Students will spend about 10 minutes walking around the park observing human behavior. As they watch the interaction of other visitors, they should think about the following questions.

- How do the choices of an individual affect the group?
- How do visitors respectfully share the park space?
- What are the shared responsibilities of all park visitors?

After making some general observations, groups of students will choose a specific location in the park and create a T-chart of rights and responsibilities for that specific area. For example, if students visit My Best Friends Park, they might include the right to bring your dog and the responsibility to clean up after you pet. The children should consider any problems that might arise in a certain area and proactively develop a set of guidelines.

POST-TEACHING

With a partner, students will write scripts for a three minute skit about rights and responsibilities. Their skits should include evidence of problem solving and decision making skills. After groups have had time to practice, the children will act out their skits, video their performance, and post their short films on a class website.

ELA COMPONENT

Students will reflect on their park experience by writing a paragraph about their observations and newly constructed understanding of rights and responsibilities. To help students transfer their learning, they will compare the areas of Klyde Warren Park to specific areas within their school environment. In their reflection, they should compare and contrast the observations witnessed in the park with common behaviors displayed in schools.

PE COMPONENT

Talk to students about sportsmanship and conflict as it relates to sports and physical activity. Ask them to brainstorm ways to solve conflicts in sports. "Rock, Paper, Scissors" and "Odds and Evens" are good examples of easy conflict resolution strategies. Discuss the role of the referee in athletic competitions and ask them to tell you why respecting the referee's call is so important. Play a classic game such as Capture The Flag or Kick The Can and tell students that you are expecting them to solve any conflicts that might arise using the strategies discussed. Play a game of soccer or field hockey and choose a referee. Tell the students that good sports always accept the call of the referee whether they agree or not.

QUICK BITE

There are already several signs posted throughout the park outlining rules and encouraging courteous behavior. Locate the procedures for the Children's Park and the park guidelines in front of the Muse Family Performance Pavilion. See if you can find civility expectations listed for the Reading Room, Family Dog Park, and the Food Truck Area.

TEKS

5.20 The student understand the fundamental rights of American citizens guaranteed in the Bill of Rights and other amendments to the U.S. Constitution.
a. describe the fundamental rights guaranteed by each amendment in the Bill of Rights

5.26 The student uses problem-solving and decision making skills, working independently and with others, in a variety of settings

Cut out each statement and glue under Right or Responsibility.
Explain why your group decided it was either a Right or Responsibility

Be treated kindly	**To ask for help**
To do my best	**To complete assignments**
To a clean and attractive classroom	**To work in a quiet classroom**
Use materials neatly and return to correct place	**To be kind**
To learn	**To tell the teacher what I am feeling**
To be on time to school	**To follow the teachers directions**
To use my time wisely	**To be listened to**
Not to bully others	**To not bully others**
To listen to others	**To complete assignments**

DISCIPLINE MAP

Although most of the lessons cover numerous portions of the park, some parts of the lessons occur in a specific area. Here is a list of some of the spaces at Klyde Warren Park that have specific portions of lessons tied to them. The lessons are written in a manner that allows you to choose the appropriate space for your students. Klyde Warren Park is an amazing learning environment – take advantage of all that it has to offer, and have fun!

DISCIPLINE MAP

Chase Promenade
- Art & Design
- Physical Education
- Math
- Science
- Social Studies

The Botanical Garden
- Art & Design
- Math
- Science
- Social Studies

Children's Park
- Art & Design
- Social Studies

Reading & Games Courtyard
- Art & Design
- Physical Education
- Social Studies

Restaurant
- Art & Design

Muse Family Performance Pavilion
- Art & Design

East Lawn
- Physical Education
- Science
- Math
- Social Studies
- Art & Design

Jane's Lane
- Math
- Social Studies
- Art & Design

The Commons
- Art & Design
- Physical Education
- Math
- Science
- Social Studies

Grand Plaza
- Math
- Social Studies
- Art & Design
- Physical Education

My Best Friend's Park
- Social Studies

Ginsburg Family Great Lawn
- Art & Design
- Physical Education
- Math
- Science
- Social Studies

1 Barbara & Steve Durham Family Playground
2 Children's Park
3 Jane's Lane
4 Ginsburg Family Great Lawn
5 The Dallas Morning News Reading and Games Room
6 Chase Promenade
7 Hart Boulevard
8 Nancy Collins Fisher Pavilion
9 Muse Family Performance Pavilion
10 Southwest Porch
11 Moody Plaza
12 East Lawn
13 The Commons presented by Cigna
14 My Best Friend's Park

Savor, full service restaurant
Relish, walk-up kiosk
Food Trucks
Restrooms
Family Restrooms
Game tables
Game carts
Butterfly Garden

Pedestrian Entry
Handicapped Entry
Drinking Fountains
Bike Rack
M-Line Trolley
D-Link
Information kiosk
Emergency phone

CAREER CONNECTIONS

Below are possible careers associated with Klyde Warren Park which are connected to the disciplines within this guide. These career connections include the array of expertise needed at Klyde Warren Park from its creation to keeping it maintained and successful. Although these are divided by discipline, talk with the students about how most of these careers require knowledge and understanding of multiple subject areas. These are just a few ideas – see if your students can come up with even more!

Art & Design
- Landscape architect
- Architect
- Painter
- Sculptor
- Graphic Designer
- Photographer
- Floral Designer
- Community Arts Worker
- Furniture Design
- Interior and Spatial Designer
- Web Designer

Math
- Teacher
- Engineer
- Statistician
- Land Surveyor
- Environmental Mathematician
- Accountant

Social Studies
- Sociologist
- Anthropologist
- Lawyer
- Entrepreneur
- Administrator
- Security Guard
- Public Relations

Physical Education
- Exercise Physiologist
- Nutritionist
- Dietician
- Health Educator
- Public Health Administrator
- Personal Trainer
- Fitness Instructor
- Sport Journalist
- Physical Education Teacher

Science
- Biologist
- Botanist
- Entomologist
- Ornithologist
- Microbiologist
- Mycologist
- Dendrologist
- Ecologist
- Landscape Scientist
- Environmental Scientist
- Chef
- Florist
- Gardener

TEKS INDEX

TEKS INDEX

3rd Grade

Art & Design, Page 14

2 Creative expression/performance.
(B) Design original artworks.

3 Historical/cultural heritage.
(A) Identify simple main ideas expressed in art.

4 Response/evaluation.
(A) Describe intent and form conclusions about personal artworks.

ELA Component:

20 Writing/Expository and Procedural Texts. Students write expository and procedural or work-related texts to communicate ideas and information to specific audiences for specific purposes. Students are expected to:

(A) create brief compositions that:
(i) establish a central idea in a topic sentence;
(ii) include supporting sentences with simple facts, details, and explanations; and
(iii) contain a concluding statement;

Math, Page 20

3.4(A) Solve with fluency one-step and two-step problems involving addition and subtraction within 1,000 using strategies based on place value, properties of operations, and the relationship between addition and subtraction.

3.4(E) Represent multiplication facts by using a variety of approaches such as repeated addition, equal-sized groups, arrays, area models, equal jumps on a number line, and skip counting.

3.5(A) Represent one-and two-step problems involving addition and subtraction of whole numbers to 1,000 using pictorial models, number lines, and equations.

3.6(A) Classify and sort two-and three dimensional figures, including cones, cylinders, spheres, triangular and rectangular prisms, and cubes, based on attributes using formal geometric language.

3.6(C) Determine the area of rectangles with whole number side lengths in problems using multiplication related to the number of rows times the number of unit squares in each row.

3.7(B) Determine the perimeter of a polygon or a missing length when given perimeter and remaining side lengths in problems.

3.8(A) Summarize a data set with multiple categories using a frequency table, dot plot, pictograph, or bar graph with scaled intervals.

ELA Component:

17 Writing/Writing Process. Students use elements of the writing process (planning, drafting, revising, editing, and publishing) to compose text. Students are expected to:

(A) Plan a first draft by selecting a genre appropriate for conveying the intended meaning to an audience and generating ideas through a range of strategies (e.g., brainstorming, graphic organizers, logs, journals);

(B) Develop drafts by categorizing ideas and organizing them into paragraphs;

Physical Education, Page 30

3.1 Movement
(B) Demonstrate proper form and smooth transitions during combinations of fundamental locomotor and body control skills such as running and jumping safely in dynamic situations.

(J) Demonstrate key elements in manipulative skills such as underhand throw, overhand throw, catch and kick such as position your side to the target.

3.3 Physical activity and health
(C) Participate in appropriate exercises for developing flexibility.

3.4 Physical activity and health
(B) Distinguish between aerobic and anaerobic activities.
(D) Identify principles of good posture and its impact on physical activity.

3.5 Physical Activity and Health
(A) Use equipment safely and properly.

3.7 Social Development
(B) Persevere when not successful on the first try in learning movement skills.

ELA Component:

4(D) Identify and apply playful uses of language (e.g., tongue twisters, palindromes, riddles);

6 Reading/Comprehension of Literary Text/Poetry. Students understand, make inferences and draw conclusions about the structure and elements of poetry and provide evidence from text to support their understanding. Students are expected to describe the characteristics of various forms of poetry and how they create imagery (e.g., narrative poetry, lyrical poetry, humorous poetry, free verse).

22(A) Use and understand the function of the following parts of speech in the context of reading, writing, and speaking: verbs (past, present, and future)

25(A) Generate research topics from personal interests or by brainstorming with others, narrow to one topic, and formulate open-ended questions about the major research topic

26(C) Take simple notes and sort evidence into provided categories or an

28 Research/Organizing and Presenting Ideas. Students organize and present their ideas and information according to the purpose of the research and their audience. Students are expected to draw conclusions through a brief written explanation and create a works-cited page from notes, including the author, title, publisher, and publication year for each source used.

Science, Page 42

2 Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and outdoor investigations.
(A) Plan and implement descriptive investigations, including asking and answering questions, making inferences, and selecting and using equipment or technology needed, to solve a specific problem in the natural world.
(C) construct maps, graphic organizers, simple tables, charts, and bar graphs using tools and current technology to organize, examine, and evaluate measured data.
(D) analyze and interpret patterns in data to construct reasonable explanations based on evidence from investigations.
(F) communicate valid conclusions supported by data in writing, by drawing pictures, and through verbal discussion.

9 Organisms and environments. The student knows that organisms have characteristics that help them survive and can describe patterns, cycles, systems, and relationships within the environments.
(A) observe and describe the physical characteristics of environments and how they support populations and communities within an ecosystem.

10 Organisms and environments. The student knows that organisms undergo similar life processes and have structures that help them survive within their environments.
(A) Explore how structures and functions of plants and animals allow them to survive in a particular environment.

ELA Component:

27 Research/Synthesizing Information. Students clarify research questions and evaluate and synthesize collected information. Students are expected to improve the focus of research as a result of consulting expert sources (e.g., reference librarians and local experts on the topic).

Social Studies, Page 56

3.12 Citizenship: The student understands the impact of individual and group decisions on communities in a constitutional republic.

(A) Give examples of community changes that result from individual or group decisions.

(B) Identify examples of actions individuals or groups can take to improve the community.

(C) Identify examples of nonprofit/or civic organization and explain how they serve the common good.

ELA Component:

2(C) Establish purpose for reading selected texts and monitor comprehension, making corrections and adjustments when that understanding breaks down (e.g., identifying clues, using background knowledge, generating questions, re-reading a portion aloud).

5(A) Paraphrase the themes and supporting details of fables, legends, myths, or stories;

8(B) Describe the interaction of characters including their relationships and the changes they undergo;

4th Grade

Art & Design, Page 62

2 Creative expression/performance.
(B) design original artworks.

3 Historical/cultural heritage.
(A) identify simple main ideas expressed in art.

4 Response/evaluation.
(A) Describe intent and form conclusions about personal artworks.

ELA Component:

18 Writing/Expository and Procedural Texts. Students write expository and procedural or work-related texts to communicate ideas and information to specific audiences for specific purposes. Students are expected to:

(A) create brief compositions that
(i) establish a central idea in a topic sentence;
(ii) include supporting sentences with simple facts, details, and explanations; and
(iii) contain a concluding statement;

Math, Page 67

4.1(A) Apply mathematics to problems arising in everyday life, society, and the workplace

4.1(B) Use a problem-solving model that incorporates analyzing given information, formulating a plan or strategy, determining a solution, justifying the solution, and evaluating the problem-solving process and the reasonableness of the solution;

4.1(E) – create and use representations to organize, record, and communicate mathematical ideas;

4.2(E) Represent decimals, including tenths and hundredths, using concrete and visual models and money

4.4(A) Add and subtract whole numbers and decimals to the hundredths place using the standard algorithm

4.6(A) Identify points, lines, line segments, rays, angles, and perpendicular and parallel lines

4.6(C) Apply knowledge of right angles to identify acute, right, and obtuse triangles

4.6(D) Classify two-dimensional figures based on the presence or absence of parallel or perpendicular lines or the presence or absence of angles of a specified size.

4.10(B) Calculate profit in a given situation

4.10(C) Compare the advantages and disadvantages of various savings options

4.10(D) Describe how to allocate a weekly allowance among spending; saving, including for college; and sharing

ELA Component:

29 Listening and Speaking/Teamwork. Students work productively with others in teams. Students continue to apply earlier standards with greater complexity. Students are expected to participate in teacher- and student-led discussions by posing and answering questions with appropriate detail and by providing suggestions that build upon the ideas of others.

Physical Education, Page 76

4.1 Movement
(A) Demonstrate changes in speed during straight, curved, and zig zag pathways in dynamic situations.
(C) Combines shapes, levels, pathways, and locomotor patterns smoothly into repeatable sequences.

4.2 Movement
(B) Identify ways movement concepts such as time, space, effort, and relationships can be used to refine movement skills.
(C) Make appropriate changes in performance based on feedback.

4.3 Physical activity and health
(B) Name the components of health-related fitness such as strength, endurance, and flexibility.

4.4 Physical activity and health
(B) Participate in moderate to vigorous physical activities on a daily basis.
(C) Identify methods for measuring cardiovascular endurance, muscular strength and endurance and flexibility.

4.7 Social Development
(D) Demonstrate effective communication, consideration and respect for the feelings of others during physical activities such as encourage others, allow others equal turns, and invite others to participate.

ELA Component:

15(A) Plan a first draft by selecting a genre appropriate for conveying the intended meaning to an audience and generating ideas through a range of strategies (e.g., brainstorming, graphic organizers, logs, journals).

17 Writing. Students write about their own experiences. Students are expected to write about important personal experiences.

20(A) Use and understand the function of the parts of speech in the context of reading, writing, and speaking.

24 Research/Gathering Sources. Students determine, locate, and explore the full range of relevant sources addressing a research question and systematically record the information they gather. Students are expected to
(A) Follow the research plan to collect information from multiple sources of information both oral and written, including (iii) visual sources of information (e.g., maps, timelines, graphs) where appropriate.
(C) Take simple notes and sort evidence into provided categories or an organizer.

Science, Page 88

2 Scientific investigation and reasoning. The student uses scientific inquiry methods during laboratory and outdoor investigations.
(B) collect and record data by observing and measuring, using the metric system, and using descriptive words and numerals such as labeled drawings, writing, and concept maps.
(C) construct simple tables, charts, bar graphs, and maps using tools and current technology to organize, examine, and evaluate data.
(D) analyze data and interpret patterns to construct reasonable explanations from data that can be observed and measured.
(F) communicate valid, oral, and written results supported by data.

4 Scientific investigation and reasoning. The student knows how to use a variety of tools, materials, equipment, and models to conduct science inquiry.
(A) collect, record, and analyze information using tools, including calculators, microscopes, cameras, computers, hand lenses, metric rulers, Celsius thermometers, mirrors, spring scales, pan balances, triple beam balances, graduated cylinders, beakers, hot plates, meter sticks, compasses, magnets, collecting nets, and notebooks; timing devices, including clocks and stopwatches; and materials to support observation of habitats of organisms such as terrariums and aquariums.

9 Organisms and environments. The student knows and understands that living organisms within an ecosystem interact with one another and with their environment.
(A) investigate that most producers need sunlight, water, and carbon dioxide to make their own food, while consumers are dependent on other organisms for food.
(B) describe the flow of energy through food webs, beginning with the Sun, and predict how changes in the ecosystem affect the food web such as a fire in a forest.

10 Organisms and environments. The student knows that organisms undergo similar life processes and have structures that help them survive within their environment.
(A) explore how adaptations enable organisms to survive in their environment such as comparing birds' beaks and leaves on plants.
(C) explore, illustrate, and compare life cycles in living organisms such as butterflies, beetles, radishes, or lima beans.

ELA Component:

25 Research/Synthesizing Information. Students clarify research questions and evaluate and synthesize collected information. Students are expected to improve the focus of research as a result of consulting expert sources (e.g., reference librarians and local experts on the topic).

Social Studies, Page 97

4.19 The student understands the contributions of people of various racial, ethnic, and religious groups to Texas.

4.22 The student communicates in written, oral, and visual forms.
(C) Express ideas orally based on research and experiences.

ELA Component:

1(A) Read aloud gradelevel stories with fluency (rate, accuracy, expression, appropriate phrasing) and comprehension.

6(C) Identify whether the narrator or speaker of a story is first or third person.

16(B) Write poems that convey sensory details using the conventions of poetry (e.g., rhyme, meter, patterns of verse)

5th Grade

Art & Design, Page 103

1 Perception.
(B) Identify in artworks that color, texture, form, line, space, and value are basic art elements and that the principles such as emphasis, pattern, rhythm, balance, proportion, and unity serve as organizers.

2 Creative expression/performance.
(A) Combine information from direct observation, experience, and imagination to express ideas about self, family, and community.
(B) Compare relationships between design and everyday life.

4 Response/evaluation.
(A) Analyze personal artworks to interpret meaning.

ELA Component:

17 Writing. Students write about their own experiences. Students are expected to write a personal narrative that conveys thoughts and feelings about an experience.

Math, Page 109

5.1(A) Apply mathematics to problems arising in everyday life, society, and the workplace

5.1(C) Select tools, including real objects, manipulatives, paper and pencil, and technology as appropriate, and techniques, including mental math, estimation, and number sense as appropriate, to solve problems

5.1(D) Communicate mathematical ideas, reasoning, and their implications using multiple representations, including symbols, diagrams, graphs, and language as appropriate

5.1 (E) Create and use representations to organize, record, and communicate mathematical ideas

5.3(I) Represent and solve multiplication of a whole number and a fraction that refers to the same whole using objects and pictorial models, including area models

5.3(L) Divide whole numbers by unit fractions and unit fractions by whole numbers

5.9(A) Represent categorical data with bar graphs or frequency tables and numerical data, including data sets of measurements in fractions or decimals, with dot plots or stem-and-leaf plots

5.9(C) Solve one-and two-step problems using data from a frequency table, dot plot, bar graph, stem-and-leaf plot, or scatterplot
ELA Component:

29 Listening and Speaking/Teamwork. Students work productively with others in teams. Students continue to apply earlier standards with greater complexity. Students are expected to participate in student-led discussions by eliciting and considering suggestions from other group members and by identifying points of agreement and disagreement.

Physical Education, Page 119

5.1 Movement
(J) Jump a rope using various rhythms and foot patterns repeatedly.
(L) Demonstrate combinations of locomotor and manipulative skills in complex and/or game-like situations such as pivoting and throwing, twisting and striking, and running and catching.

5.3(B) Identify appropriate personal fitness goals in each of the components of health-related fitness.

5.4 Physical Activity and health
(A) Relate ways that aerobic exercise strengthens and improves the efficiency of the heart and lungs.
(F) Identify the relationship between optimal body function and a healthy eating plan such as eating a variety of foods in moderation according to U. S. dietary guidelines.

5.5 Physical Activity and Health
(C) Describe the importance of taking personal responsibility for reducing hazards, avoiding accidents, and preventing injuries during physical activity.

5.7 (A) Follow rules, procedures, and etiquette.

ELA Component:

17 Writing. Students write about their own experiences. Students are expected to write a personal narrative that conveys thoughts and feelings about an experience.

23(B) Generate a research plan for gathering relevant information about the major research question.

26(C) Presents the findings in a consistent format

Science, Page 130

2 Scientific investigation and reasoning. The student uses scientific methods during laboratory and outdoor investigations.
(A) Describe, plan, and implement simple experimental investigations testing one variable.
(B) Formulate testable hypothesis.
(C) Collect information by detailed observation and accurate measuring.

9 Organisms and environments.
(A) Observe how animals interact with living and non-living parts of their habitat
(B) Describe how the flow of energy from the sun is transferred through animals
(C) Predict effects of change – invasive species, humans building things, etc.

10 Organisms and environments. The student knows that organisms undergo similar life processes and have structures that help them survive within their environments.
(A) Compare traits different animals have that help them survive.
(B) Inherited and learned traits.
(C) Describe the differences between complete and incomplete life cycles of insects.

ELA Component:

25 Research/Synthesizing Information. Students clarify research questions and evaluate and synthesize collected information. Students are expected to improve the focus of research as a result of consulting expert sources (e.g., reference librarians and local experts on the topic).

Social Studies, Page 139

5.20 The student understand the fundamental rights of American citizens guaranteed in the Bill of Rights and other amendments to the U.S. Constitution.
(A) describe the fundamental rights guaranteed by each amendment in the Bill of Rights.

5.26 The student uses problem-solving and decision making skills, working independently and with others, in a variety of settings.

ELA Component:

1(A) Read aloud grade level stories with fluency (rate, accuracy, expression, appropriate phrasing) and comprehension.

19(A) Write persuasive essays/scripts for appropriate audiences that establish a position and include sound reasoning, detailed and relevant evidence, and consideration of alternatives.

KLYDE WARREN
PARK