

Lesson Plan Abstract

LESSON TITLE: *Landscape Architecture and Your Client*

LESSON TOPIC: *Design for Community, Ecology and Learning*

PURPOSE OF LESSON:

As Landscape Architects, we want to consider our clients when designing. This comprehensive and multi-class lesson plan will take students through the process of understanding and designing for multiple clients. The site will need to be analyzed, designed and programmed to meet our clients' needs. This lesson plan will take the students through six steps for designing for clients: data gathering, site analysis, conceptual design, preferred alternatives, schematic design/budgeting, and community input. The total time for this project is six to nine hours and can be broken up into four to six weekly lessons.

The site would ideally be the school yard or a nearby site that is easy to access and is accessible to the students during school.

KEYWORDS: *ecology, wildlife, community design, outdoor education*

TARGET GRADES: *4th to 7th Grade*

DURATION: *Six weekly lessons of 60 to 90 minutes*

STUDENT RATIO: *1:10 max (suggest assistant or smaller ratio for younger students)*

MATERIALS & EQUIPMENT:

- *Whiteboard markers for in-class whiteboard*
- *Digital cameras: one per group of two to five students*
- *Clipboard and/or notebook: one per group of two to five students*
- *Group presentation materials: markers, glue sticks 24x36 paper, prints of photos taken by students. Photos should be approximately 3x5. Plan on printing six to ten photos per group.*
- *Client profiles: Print brief, one-page profiles for the "clients". This should be a typical student, a teacher, a neighbor, and three small animals (butterfly, bird and reptile are good options). Have brief descriptions of each: size, habitat, desired activities (ie. reading, playing, hunting, nest-building), other needs.*
- *Art supplies: markers, glue sticks, construction paper, magazines for cutting up images, scissors, popsicle sticks, tape*
- *Sticker dots (color doesn't matter)*
- *11x17 base map: one per student*
- *Model or base map of proposed site: approximately 24x36. Show fixed elements such as buildings, sidewalks, site boundaries.*
- *Model site elements: to-scale model or printed symbolic pieces such as trees, vegetable gardens, fountains, play elements. Include elements from student designs.*
- *Budget sheet: this should be a list of elements from student designs and should match the model site elements. Provide a list of elements, a column for the cost of*

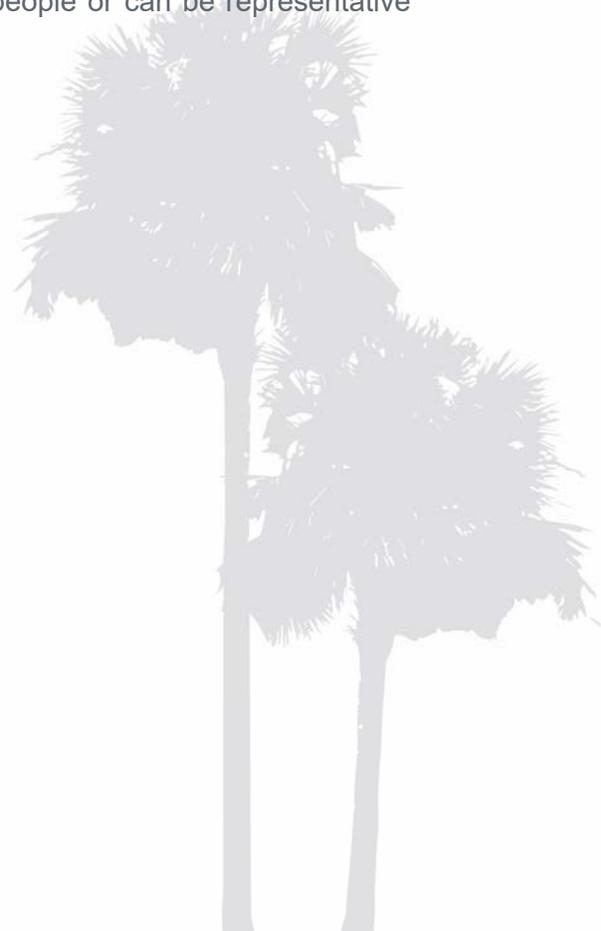
each element, a column for quantities, and a total. Costs do not have to be accurate, but should show relative value (ie. tree at \$50 and a play structure at \$10,000). Provide a total budget of somewhere between \$30,000 to \$50,000). See example.

PREPARATION:

- *Read through lesson plan.*
- *Acquire digital cameras and other materials.*
- *Choose a nearby and accessible site. Preferred site should be the school yard, if available, or an easily accessible site.*
- *Create "client" profiles. (see example)*
- *Assemble art supplies. Enough for each student to make their own concept design.*
- *Make three schematic designs based on student work.*
- *Make one model or print base map. (see examples)*
- *Prepare model site elements. Add more elements, as needed: see example*
- *Print budget sheet: one per group. (see example)*
- *Make final plan based on student work. (see example)*
- *Make certificates for final class, if desired.*

CLIENT PROFILES:

Prior to the lesson plans, create three or four client profiles. For a school yard, this can include teachers, students, neighborhood adults and children, wildlife or other possible users of the space. The clients can be specific real or imaginary people or can be representative populations. See below for sample worksheet.



Lesson Plan Outline

LESSON PLAN OUTLINE:

This lesson plan is broken into six distinct parts:

1. *Data collection: gather information about the site*
2. *Site analysis: determine pros/cons likes/dislikes of a site*
3. *Conceptual design: design for a client*
4. *Preferred alternative: feedback on preliminary design ideas*
5. *Schematic design and budgeting; refine site design*
6. *Client input: get "client" feedback*

When introducing the lesson/class series, it is important to be clear with the students that this project will likely not be built. Design is one part of the construction process and can be useful in learning how to approach future projects and potentially inspire small changes for their environment in the near future.

LESSON ONE: DATA COLLECTION

- Introduce yourself and give a brief overview (such as "I am here to help you reimagine your site for animals, students, teachers and your neighbors.")
- Give an overview of the data collection lesson: What is Landscape Architecture? Who is our client? What is data collection? Use provided PowerPoint presentation, if desired. Answer questions before site visit.
- Site visit: break students into groups and provide notebook/clipboard and digital cameras. Walk students to the site for data collection. Ask them questions as they record their observations and take photos of the site. Ask them to take photos of things they like, don't like, are important to keep or remove, things around the site that affect how it feels (i.e. busy streets). Ask them to avoid taking photos of classmates:
 - What do you like/don't like about this space?
 - Where do you like/don't like to spend your time when here and what do you do?
 - Who else do you see here?
 - What kind of animals would like to be here?
 - What make it hard for animals to be here?
 - What words would you use to describe this place?

LESSON TWO: SITE ANALYSIS

- Print photos student took during data collection prior to class. Bring in group presentation materials: 24x36 paper, glue sticks and markers.
- Give a brief overview of the site analysis lesson: Introduce students to their "clients" and let them know we will get to know them better in the next classes. Analyze photos and notes from data collection. Create posters with photos and captions. Students can organize photos into groups of positive and negative. Present findings to the group.
- As students work in groups, roam around and provide positive feedback and insights and ask questions to help them think more deeply:
 - What would your different clients think of that space or element?
 - Is that photo something positive or negative?

- How does the space differ during the day and night?
- Ask one person from each group to talk about some important findings they noticed. Write down findings on the whiteboard.
- Summarize and discuss findings, commonalities and differences.

LESSON THREE: CONCEPTUAL DESIGN

- Bring in art supplies and set up prior to class
- Print out client profiles: see "Material and Equipment" above for more information
- Give a brief overview of the conceptual design lesson: Explain what a concept design is: a concept design is an opportunity for you to design the general spaces and their relationships to one another). Designing for a specific client: student, teacher, neighbor, animal, etc.
- Ask students to individually design a space for their client using the art materials. Students can draw, make collages, make 3D models or use the materials however they want.
- As students work, roam and ask questions and provide positive feedback and insights to help them think more deeply:
 - What would your client do here?
 - How would your client feel in this space?
 - What are some of the things your client likes to do?
 - How do you balance the different needs of your clients (if doing more than one)?
- If a student is finished early, have them do an "art walk" where they can respectfully look at others' work and ask questions.
- Finish with asking students to present their work. Write down the elements, and observations that students bring up and talk about the commonalities and differences.

LESSON FOUR: PREFERRED ALTERNATIVE

- Create three design alternatives based on the designs from Conceptual Design. Use data from the most popular elements and their locations present in the student designs. Avoid adding/changing elements based on personal preferences.
- Give a brief overview of the preferred alternative lesson: present alternatives and explain sources of the elements and their locations; provide feedback on designs; introduce model or base map and moveable parts.
- Present three design alternatives.
- Ask for feedback: what do they like/don't like? What's missing? What is most important? Are we forgetting anything about our clients' needs? Write down all elements on the board, even if it's not feasible (roller coaster, 500-storey building, etc.) Ask students to vote for their favorite elements and plan using sticker dots.
- Introduce model or base map: explain plan view and show the moveable parts and what they symbolize. Explain scale. This model or map will be used in the schematic design.

LESSON FIVE: SCHEMATIC DESIGN

- Print out base map or make model prior to class. Provide to-scale moveable elements based on their previous designs.

- Give a brief overview of the schematic design lesson: budgeting for construction, placing elements.
- Pass out budget sheet and break students into groups and ask them to work on a budget for their group design. Or, they can work individually on to-scale designs with smaller base maps. This will be independent work.
- As students are working on their budgets, ask one group at a time to come to the model or large base map. Help them finish their budgets, if needed. Ask questions about whether the items purchased meet their clients' needs. (Watch the clock to ensure each group gets enough time before the lesson is over.)
- Provide the students with moveable parts and ask them to place the items on the map/model. Ask questions about the placement and relationship to one another to encourage deeper thinking.

LESSON SIX: CLIENT INPUT

- Prior to class, overlay the student maps/models to determine most popular elements and their locations. Synthesize for a final design. Avoid adding/changing based on personal preferences.
- Give a brief overview of the client input lesson: present final design; solicit student feedback based on their clients; revisit site; celebrate!
- Present final design: explain data that led to design (ie. what elements were popular)
- Pass our client profiles. Ask students to give feedback based on their clients' interests and needs. Write down feedback on whiteboard.
- Revisit site: walk the site with the final design on-hand. Ask students to imagine the site. Discuss what would work and what wouldn't:
 - Is anything too small/big?
 - Are any elements in the wrong location?
 - Do the relationships between the spaces work?
- Party: celebrate the students' hard work and participation. Ask what they enjoyed, what was hard to do, etc. Ask them to look at all outdoor spaces to imagine how they could be better, who they serve and if they're successful.



Lesson Plan

Each class below should be 60 to 90 minutes.

Brief introduction: 3 minutes

Student activity: 35 to 75 minutes, depending on class duration

Group review of activity: 10 to 15 minutes (leave more time for student presentations if there is a larger group)

Next class: 2 minutes

LESSON ONE: DATA COLLECTION

Purpose: Data collection is an opportunity to students to get an in-depth look at their site. Students can look at different elements that make a site successful or not: sun exposure, access to natural elements, places to sit, places for activities, protections, sightlines, maintenance. All of these things (and more) contribute to the good or not-so-good feelings we have that make us want to go to or get away from outdoor spaces.

Prior to class, gather notebooks or paper and clipboard, pencils, and digital cameras.

Brief introduction: Introduce yourself and give a brief overview (such as "I am here to help you reimagine your playground for animals, students and your neighbors.")

Student activity: Give an overview of the data collection lesson: what is landscape architecture, who are our clients, understanding our site.

What is landscape architecture? Ask if the students have heard of a landscape architect. Write down ideas on the class whiteboard. Provide some ideas on what a landscape architect can do: uses knowledge of the environment, math, people skills, design ideas and sociology to help communities and clients build spaces that help people and nature use, enjoy and thrive. Use provided PowerPoint presentation, if desired.

Who is our client? Ask the students who would use the site and write down all answers on whiteboard: themselves, their teachers, neighbors, animals. Introduce local wildlife using provided materials (can add local wildlife, as well). Explain the importance of considering them as clients and our responsibility toward nature.

Site visit: Explain that students will be in groups to collect data from the site that will help them understand the site. Ask what elements we are looking for and write ideas on whiteboard: natural elements, dangerous elements, unsafe/scary areas, elements that are loved or valued, signs of wildlife, areas that are too hot/cold, dark/ exposed. Break students randomly into groups of two to five. Give each group a digital camera and a notebook and/or clipboard. Ask them to make agreements on sharing the camera and note-taking. Go over camera use (suggest limit it to about 10 photos) and remind them what the photo subjects

should be (ie. probably the elements listed above and not their friends). Ask the students to use the notebook to record their observations.

Go to the site and explain the site boundaries and allow them to explore. Roam between the groups and ask them questions as they record their observations.

- What do you like/don't like about this space?
- Where do you like/don't like to spend your time when here and what do you do?
- Who else do you see here?
- What kind of animals would like to be here?
- What make it hard for animals to be here?
- What words would you use to describe this place?

Group review of activity: Regroup and return to the classroom. Ask for initial observations and write down on the whiteboard.

Next class: Let the students know that next week you will be analyzing the data they have collected.

LESSON TWO: SITE ANALYSIS

Purpose: Explain to students how it is important to understand the site we are designing so we can enhance the good and change the bad. We can be in a space many times and not notice the details of what works and doesn't. Now they have the opportunity to really think about why a space may feel scary, inviting, sparse, overwhelming, enticing or confusing.

Print photos that students took during data collection. These should be about 3x5 each. Bring in group presentation materials: 24x36 paper, glue sticks and markers.

Brief introduction: The students will go back to last week's group and use the large paper to create a board for their data.

Student activity: They can place photos into opposing categories such as like/don't like, safe/dangerous, keep/remove positive/negative. Ask them to write captions for the photos so students understand what is important about them. As they work, roam from group to group and ask questions to help them think more deeply:

- What would your different clients think of that space or element?
- Is that photo something positive or negative?
- How does the space differ during the day and night?

Review of student activity: After students have completed their boards, ask each group to talk about some important findings. Take notes on the whiteboard. After all the presentations are done, discuss findings, commonalities and differences.

Next class: Let the students know that next week you will be working on conceptual designs.

LESSON THREE: CONCEPTUAL DESIGN

Purpose: This is an opportunity to design the general spaces and their relationships to one another. Help students understand they do not have to be artists to be able to design. It's

about getting ideas on paper in any way they can best express their ideas. These ideas will help inform the next step. Students can see how spaces work together to create a whole.

Bring in the art supplies and set up prior to class. Bring in posters from last week's class. Print out client profiles.

Brief introduction: Explain what a concept design is. Explain that they do not have to be accurate or show every step, tree or play element. This is a chance to express big ideas. You can bring in examples if that would be helpful.

Student activity: Tell students that they will be designing for a specific client or more than one client (student, teacher, neighbor, animal) who will be using the space. They will not be designing for themselves so they will have to think about what others would want and it may not be the same as what they would want. Ask students to individually design a space for their client using the art materials. This does not need to be a design for the entire site. Students can draw, make collages or 3D models, or use the materials however they want (see examples below).

Pass out various "clients" to the students - offer some students more than one client. Ask them to read the information before starting. Provide reading support as needed. As students work, roam around the room and ask questions and provide positive feedback and insights that will help them think more deeply. Ask students about their clients and their needs. Ask how the envision clients using the spaces and how they would feel in the spaces. Ask the students how they balance the different needs of their clients if they are designing for more than one. Ask them to write down elements or ideas on the drawings or models. Ask to write their ideas down if they would like support.

If a student is finished early, ask them to do an "art walk" around the room. Ask them to respectfully look at other students' work and ask questions if they other students would like to discuss their work.

Review of student activity: When the work time is up, ask students to present their work. Write down the elements and observations that students bring up and talk about the commonalities and differences.

Next class: Tell students that you will synthesize the ideas and provide three alternatives for their feedback next week.

LESSON FOUR: PREFERRED ALTERNATIVE

Purpose: This is an opportunity for students to see how the elements come together and to talk about their relationships to one another. The students can see how the same elements can be given more or less space or be placed in slightly different relationships to create different outcomes. Students can see how clients' needs may conflict and discuss how to respect everyone's needs.

Prior to the lesson, create three conceptual design alternatives based on the designs the students created in the conceptual design lesson. Use data collected to determine the most

popular elements and their locations in the student designs. Avoid adding or changing elements based on personal preferences.

Prior to the lesson, create a model or base map to be introduced at the end of the lesson. Cut sticker dots into 6-dot strips for voting (see example below).

Brief introduction: Give a brief overview of the preferred alternative lesson: present alternatives and explain that their concepts are the source of the elements and their locations; provide feedback on designs; introduce model or base map and moveable parts.

Student Activity: Present the three alternatives. Talk about the common elements that showed up in their concepts. Discuss the most popular elements from their designs. Point out how the locations, sizes, shapes all help to create different spaces. Provide insight into how the relationships between the spaces differ.

Ask for feedback. What do the students like or don't like and why? What's missing? What is most important? Are we forgetting anything about the clients' needs? Write down all of the elements on the whiteboard, even if they're not feasible (ie. rollercoaster, 500-story building).

Give students up to 6 sticker dots to mark their favorite plan and elements. Allow them some time to browse the drawings and vote.

Review of student activity: Use review time for more time to introduce the next class.

Next class: Introduce model or base map for next week. Explain plan view and show moveable parts and what they symbolize. Explain scale. This model or map will be used in the schematic design.

LESSON FIVE: SCHEMATIC DESIGN:

Purpose: The students will learn how to take big ideas and develop them into a to-scale site. They will use the budget sheet to help them determine the most important elements and to learn about construction costs. This is also an opportunity for students to work in groups, compromise and make decisions efficiently.

Bring the base map or model and moveable elements that were introduced last week. Print one budget sheet per group. Bring pencils for each group. Print one 11x17 base map (see example below) per student, and markers and pencils.

Brief introduction: Give a brief overview of the schematic design lesson: budgeting for preferred elements and placing elements. Introduce the budget sheet.

Student activity: Pass out budget sheet and break students into groups. They do not have to be in the same groups as during the first two classes. Show students how to use the sheets to figure out quantities, add them up and stay under budget. Students may not go over budget. Ask students to work out disagreements respectfully and to consider all the clients for the design (students, teachers, neighbors, animals).

As students are working, invite one group at a time to the base map or model. Orient them on the map or model so they understand the site. Ask them to purchase the items first and then agree on where to place them. The first group or two will need some extra time to get their budgets finished with your support. While they are working, ask questions about the items purchased, their placement and their relationship to one another. Ask how the design meets their clients needs.

Once the students are done, they can work on individual drawings on the 11x17 base maps or further develop the group design.

Once each group is done, photo-document their designs before resetting the map or model.

Group review of activity: Ask students how the budget changed their decision-making. Was there anything that they wanted to include but couldn't?

Next class: The next class is the final one where they will review the final design that will synthesize the groups' designs.

LESSON SIX: CLIENT INPUT

Purpose: This last class will help the students reflect on their work and look at the design objectively. Ask the students to see the final design from the perspective of the clients. This will teach the students to understand others' points of view.

Prior to class, analyze the student maps and models to determine the most popular elements and their locations. Synthesize the results for a final design. This design should be 24x36 and show relatively to-scale elements with not so much detail as to distract from the site design (avoid showing detailed hardscape or plant materials and such. This can get students talking about details that are not important to the overall design).

Brief introduction: present the final design; get feedback from the students from their clients' perspectives; revisit the site; celebrate!

Student activity: Pass out client profiles. Ask students to review their clients' profiles.

Present the final design: Explain the data you gathered from the previous class. Explain the popular elements and their locations and show how the final design reflects that. Ask students to provide feedback from the perspective of their clients. Write down feedback on the whiteboard.

Revisit the site: go to the site and bring the final design for reference. Ask students to walk the site and imagine the spaces. Roam among the students and ask questions to encourage deeper thinking. Is there anything that would be too big or too small? Are any elements in the wrong location? Is there anything we didn't consider that we should have? Do the relationship between the spaces work?



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Review of student activity: Celebrate the students' hard work and participation. Ask what they enjoyed, what was hard, what was surprising. Consider making certificates for students, or providing popcorn and juice, if appropriate.

Next steps: Tell them that even if they do not become landscape architects they can look at all the outdoor spaces and imagine how they could be better. They could think about how well they serve different clients and they can advocate for change for themselves and other users.



SAMPLE CLIENT WORKSHEET:

| ITEM | UNITS | UNIT COST | TOTAL |
|------|-------|-----------|-------|
|------|-------|-----------|-------|

Client's name:

Age:

A little about my client (interests, family, home, etc.):

What my client wants to do at the site:

What my client likes about the site:

What my client dislikes about the site:

When my client visits the site they feel:

When my client visits the site they want to feel:

SAMPLE BUDGET SHEET:





| | | | |
|---------------------------------|--|-------------|--|
| bars for flips | | \$1,500.00 | |
| bathroom | | \$30,000.00 | |
| beaver dam | | \$400.00 | |
| caves | | \$1,200.00 | |
| climbing wall | | \$3,000.00 | |
| ferris wheel (4x9; hand turned) | | \$3,000.00 | |
| food stand | | \$1,000.00 | |
| go-karts and track | | \$35,000.00 | |
| monkey bars | | \$1,800.00 | |
| pillow/food fight | | \$500.00 | |
| play structure | | \$15,000.00 | |
| radio | | \$200.00 | |
| river of treats | | \$80,000.00 | |
| river with dry bed | | \$800.00 | |
| ropes course | | \$1,500.00 | |
| swings | | \$2,500.00 | |
| tire swing | | \$1,500.00 | |
| treehouse | | \$2,000.00 | |
| tunnel | | \$200.00 | |
| vegetable garden | | \$200.00 | |
| water fountain | | \$1,000.00 | |
| worm spot | | \$10.00 | |
| zipline | | \$1,200.00 | |
| trees | | \$150.00 | |
| shrubs (3x9 area) | | \$150.00 | |
| TOTAL | | | |
| BUDGET | | | |
| OVER/UNDER | | | |



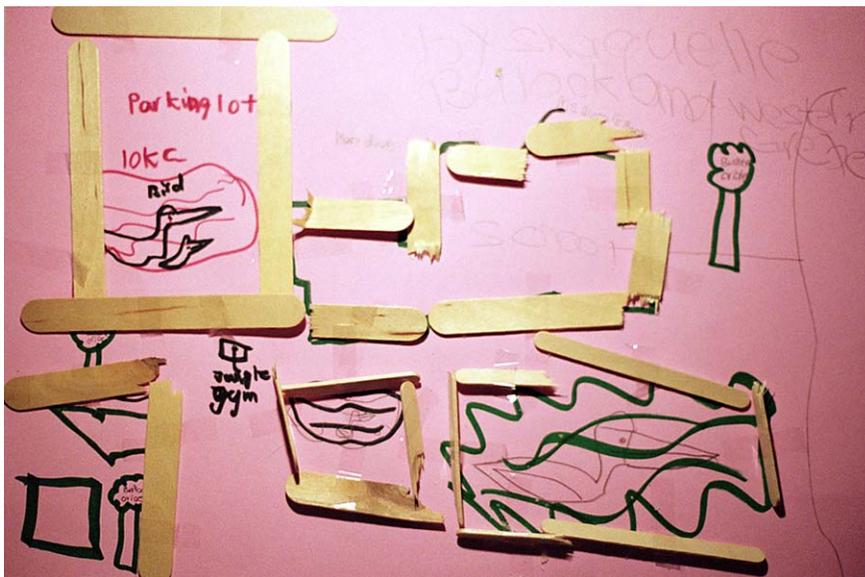
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PAST LESSONS:



Photo site analysis board.



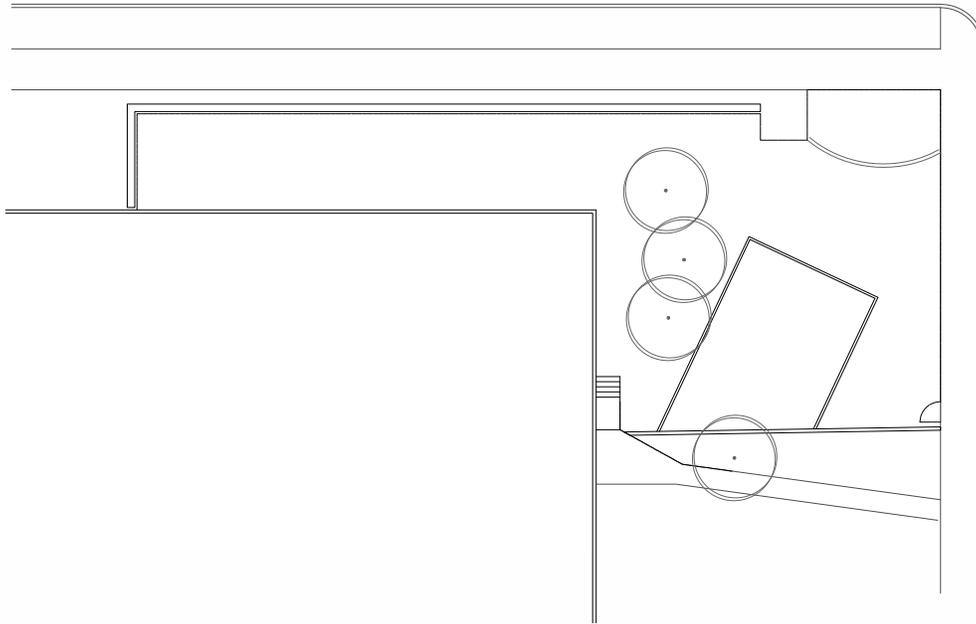
This is an example of a 2nd grade student's concept for an animal client.



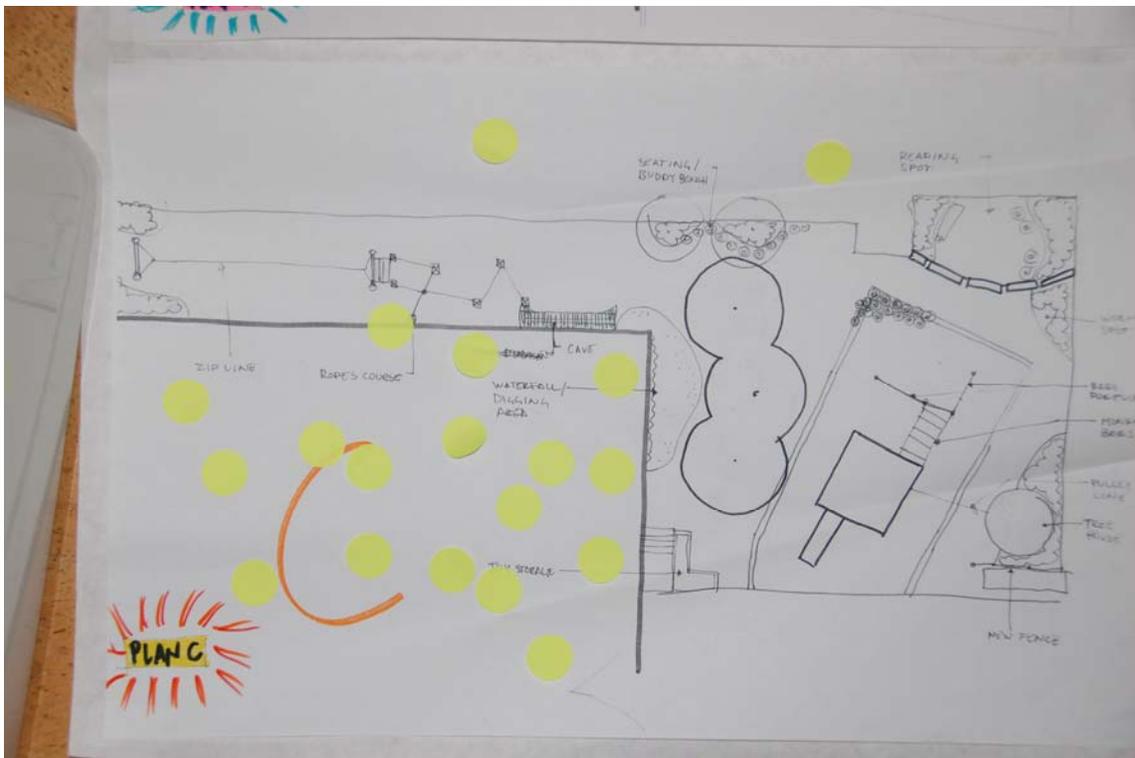


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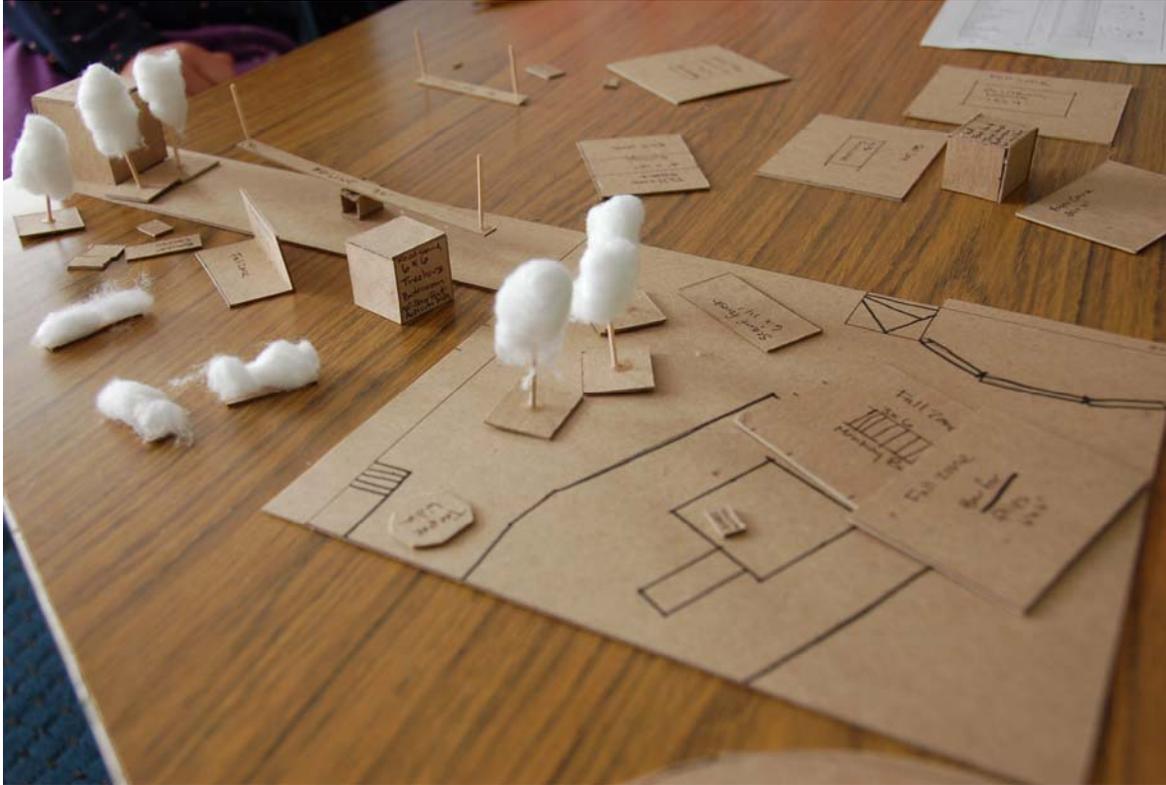
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Sample base map



Students voted on their favorite elements in one of the schematic designs using dot stickers.



This photo shows a base model of the site (school playground). There are trees (cotton balls and toothpicks, simple cardboard pieces to represent items that are on the budget sheet).

LESSON PLAN BACKGROUND:

This lesson plan has been taught previously to 2nd and 4th grade students. A modified version was taught to a group of 3rd-5th grade and a group of high school students. The second grade class needed more support and time for reading and more visual support - a smaller teacher-to-student ratio or second teacher would be helpful.

The budget sheet is a key element because it pulls students back from including unrealistic elements such as roller coasters, a Coca-Cola fountain or a slide from the roof (yes, these are real examples). I included permitting and insurance and health inspections in some of the budgets for some more risk elements, so be creative and realistic.

I did not have students to their own designs because it is really difficult for students to quickly understand and communicate in plan view and to-scale. I have found it better to get students' ideas out more completely and then synthesize them rather than get bogged down in how to draw a shrub symbol.



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