

A teacher's guide to *The Friendship Garden*

Integrated language arts, science, and art activities
for individual, small-group, and whole-class work
(Grades 1-3)

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BOOK 1: GREEN THUMBS-UP!

(1) Read Like a Scientist!

Kids *make predictions from evidence* as they try to guess what will happen next in the story

(II) Write Colorfully

Kids *identify and interpret figures of speech* and then make their own writing come alive with vivid images

(III) Novel Engineering

Kids *design a solution to a problem* that the characters encounter in the story

(1) Read Like a Scientist!

Overview

In this whole-class and small-group activity, learners make and defend predictions about story and character development in *The Friendship Garden: Green Thumbs-Up!* The activity begins with a teacher-led discussion about the difference between a “scientific prediction” and a “guess” and what it means to show *evidence* to support a claim. During a read-aloud, the class sets a challenge goal to see how many of its predictions are correct, then monitors its progress toward the goal.

Standards & Objectives

Learners will ask and answer questions to demonstrate understanding of a text, referring explicitly to the text as the basis for the answers. (Common Core ELA-Literacy.RL.3.1)

Learners will use evidence (e.g., measurements, observations, patterns) to construct an explanation. (Next Generation Science Standards 4 – PS3 – 1-4)

Materials

The Friendship Garden: Green Thumbs-Up! by Jenny Meyerhoff
(Aladdin, 2015)

Whiteboard, smartboard, or easel with large paper

Preparation

None: it’s best if you do not read the book beforehand, so that you are an authentic participant along with the kids in the prediction challenge.

Directions

Tell the class a real story from your life about a time when you made a *prediction* (right or wrong). For example, you might have made plans to go to a movie, and decided to arrive early because you *predicted* it would be crowded. When you got there, it actually was crowded, and you were glad you had arrived early.

Explain that people make predictions all the time. A prediction is an “*idea about what will happen.*” For this activity, a *scientific prediction* is an idea about what will happen, PLUS evidence, or “*a good reason to believe it will happen.*” If you don’t have a good reason to believe it will happen, you’re just making a *guess*. Scientific predictions are different from guesses.

Tell the class the reason for the prediction you made. For example, you had read a good review and had heard your friends saying they were going to go, so you thought a lot of people would want to go. The review and your friends’ comments gave you some *evidence*: reasons for believing it would be crowded.

Ask the class: is it possible for a scientific prediction to be wrong? How could that be, if you have a reason to make your prediction? Does this mean that scientists are sometimes wrong in their predictions? Are you a bad scientist if your predictions are wrong?

Retell the story, changing the outcome. For example, what if it had turned out that the movie theater was almost empty ... was it still a scientific prediction? Yes, because you had a reason that made sense: when movies get good reviews, they are usually crowded, and this movie got a good review, so it was likely to be crowded.

Next, retell the story, changing the evidence you used for the prediction. For example, you predicted the movie would be crowded because you had corn flakes for breakfast that morning. The last time you ate corn flakes, the movie you went to that night was sold out, so you predicted this movie would also be sold out. And it was! So, was that a scientific prediction? No, because your reason made no sense: your breakfast cereal did not have anything to do with whether the movie would be crowded.

Ask students to predict something that will happen at school today, and to provide evidence. For example, they might predict that they will have recess at 11, because every Thursday they have recess at 11, and today is Thursday. Challenge the predictions. What happens if there is a fire drill and recess is cancelled? Is it still a scientific prediction, even though it is wrong? Why?

Show the class the cover of *The Friendship Garden: Green Thumbs-Up!* by holding it up or displaying it on the smartboard. Draw or display this table and talk through the three examples, gradually drawing or revealing the cells:

Prediction <i>What do you think will happen in this story?</i>	Evidence <i>Why do you believe that will happen? Give at least one reason.</i>	Scientific prediction? <i>Does your reason make sense?</i>	Correct prediction? <i>Did this actually happen in the story?</i>
People in this book will become friends	Because it says "friendship" in the title	YES	
There will be a lot of astronauts	Sometimes books are about astronauts, and this is a book	NO	
Someone will climb a tree	There is a tree in the picture, and kids like to climb trees	YES	

Ask the class to make more predictions, just based on what they can see on the book's cover. For each prediction, ask for their evidence – a reason why they made their prediction. Write their predictions and evidence in the table. As a class, encourage discussion and debate about whether predictions are good – that is, whether their reasons make sense. Explain that this is exactly what scientists do: talk to each other about evidence. There is not always one right answer. If students can

justify each side of the argument, write MAYBE in the “Good prediction?” column; feel free to use other words like DEFINITELY or NO WAY.

Read chapter 1 with the class. At the end of the chapter, display the prediction table. Review each of the predictions: have they come true? (At this stage, the answers will either be “yes” or “don’t know yet.”)

Explain that after each chapter, the class will make another prediction, based on the evidence from what they have already read. For example, after chapter 1, the class might predict that the girls in the Outfit-Outfit will be mean to Anna. Write the prediction on the board. There are 9 chapters; encourage the class to set a goal of how many of their 9 predictions turn out to be correct. This can be done as a whole-class activity during the read-aloud, or you can organize kids into pairs or groups.

As you complete each chapter, stop and fill in more of your prediction table. Kids should (a) evaluate their previous predictions and (b) make one new prediction. Again, encourage discussion. In the first example (“people in this book will become friends”), there is some evidence of friendship during chapter 3, with stronger evidence in chapter 4. They should cite evidence in text – Anna’s thoughts, events in the story, statements by characters -- defending their belief that friendships are forming.

After the acknowledgments page, the first chapter of the next book in the *Friendship Garden* series appears (*Pumpkin Spice*). Kids can read this opening chapter, make guesses about what will happen in the story, and read the next book independently.

(11) Write colorfully

Overview

In this activity, learners read, discuss, and illustrate passages from *The Friendship Garden: Green Thumbs-Up!* in which the author uses vivid descriptions of people and events. Students begin with a teacher-led, whole-class discussion of two examples from the book. They then work individually or in small groups to illustrate other passages. Finally, kids transform their own writing from “boring” into “colorful.”

Standards & Objectives

Apply knowledge of language structure, language conventions, media techniques, figurative language, and genre to create, critique, and discuss print and nonprint texts. (NCTE / IRA 6)

Use spoken, written, and visual language to accomplish students’ own purposes (e.g., for learning, enjoyment, persuasion, and the exchange of information). (NCTE / IRA 12)

Materials

The Friendship Garden: Green Thumbs-Up! by Jenny Meyerhoff
(Aladdin, 2015)

Graphic organizers in this packet – enough copies that each student or group can choose their passage to illustrate

Whiteboard or smartboard

Pencils and markers

Preparation

Read the book with the class before starting the activity. (Alternatively, do the activity at selected chapter breaks during a read-aloud.)

Directions

As a class, re-read this passage from page 1:

Gray sky. Gray playground. Gray sidewalk. Even the squirrels were gray. All that gray made Anna’s brain bleary. Ever since she’d moved to Chicago last week, Anna *felt* gray.

Ask: was the sky actually gray? How about the sidewalk and squirrels? Introduce the word *literally*: “when the exact meaning of your words is true.” (Those statements were *literally* true: were the squirrels actually gray? Yes.)

Ask: did Anna *literally* feel gray? Did she think her skin and hair had turned gray? No. But that’s what the words say: “Anna felt gray.” Is the author lying to us?

Introduce the term *figure of speech*: “describing something in a creative way that may not be exactly true.” Anna was not *literally* turning gray ... the author used a *figure of speech*.

Ask: Why wouldn't the author just say “Anna felt sad”? It seems like it would be easier for the reader to understand if the author just explained everything literally, right? Why did she choose to say “gray” instead of “sad”?

Optionally, read a second passage, from page 56:

... the kids finished planting. When they were done, the tiny broccoli plants looked like a little green audience ready to listen to a speech.

Ask: what does an audience look like when it is getting ready to listen to a speech? Have the kids act this out, arranging themselves in an open space. Does this help them understand what the broccoli plants looked like after the kids finished planting them? Why wouldn't the author just say, “The tiny broccoli plants were lined up in rows”? Which sentence is more fun to read? Which gives the reader more information?

Explain: Using figures of speech makes your writing more “colorful.” (Point out that “colorful” is a figure of speech ... it does not mean that you're using colored markers to write your words!) You can change your words from boring to colorful by using figures of speech. One easy way to do this is to use the word “like”: you can say that something *looked like* or *felt like* something else.

Draw this table on the whiteboard with seven rows (or display page 8 of this packet on the smartboard) As a class, fill in blanks 1 through 5. In 1 and 2, kids work backward to make the sentences more boring. In 3 and 4, they write part of a colorful sentence. In 5, they write a full colorful sentence.

<u>Boring sentence</u>	<u>Colorful sentence</u>
Rachel was angry. scream.	Rachel felt like she wanted to
The train went very fast. _____ (1) _____	The train raced through like a rocket. Greg's shoulders slumped and he felt
blue. _____ (2) _____	The kitchen looked like it had been in a tornado.
The class was noisy. _____ (3) _____	The class sounded like
Julie enjoys soccer.	When Julie plays soccer, she feels like _____ (4) _____

It started to rain hard. _____(5)_____.

Have kids choose from any of the drawing handouts on pages 9 through 13. Each of these includes a figure of speech (“colorful language”) that is not literally true. Kids should draw a picture as if the words were literally true, then explain what the author meant.

Boring sentence

Rachel was angry.

The train went very fast.

(1) _____

(2) _____

The class was noisy.

Julie enjoys soccer.

It started to rain hard.

Colorful sentence

Rachel felt like she wanted to scream.

The train raced through like a rocket.

Greg's shoulders slumped and he felt blue.

The kitchen looked like it had been in a tornado.

The class sounded like

(3) _____.

When Julie plays soccer, she feels like

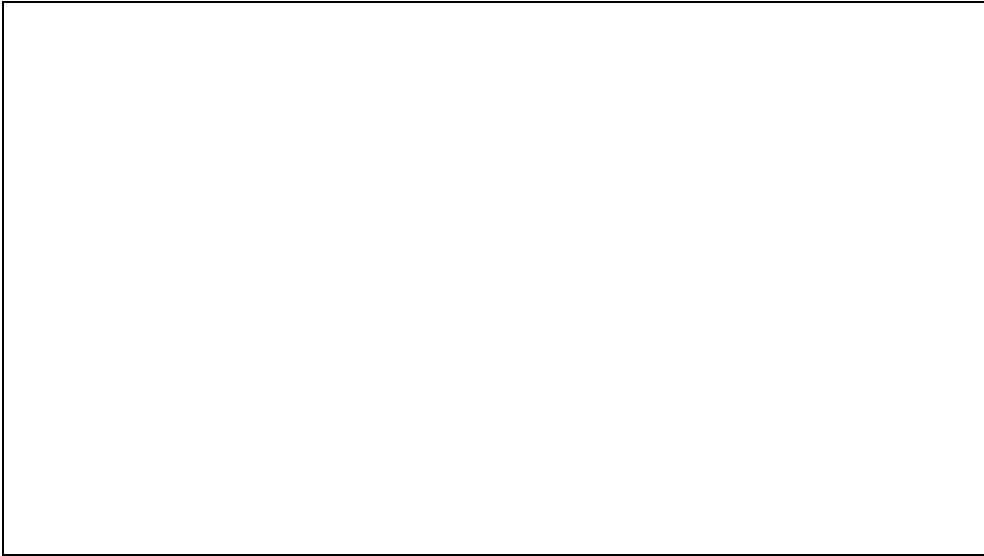
(4) _____.

(5) _____.

Write colorfully

On page 12, the author writes: *Butterflies fluttered in her stomach. Not real ones, of course, but the imaginary ones that seemed to pop up whenever Anna felt nervous. Since Anna had moved, butterflies seemed to be showing up in her stomach a lot.*

Draw a picture of what it would look like if Anna had *actual* butterflies in her stomach:



Use words to describe what the author really meant by *butterflies in her stomach*:

name:

Write colorfully

On page 49, the author writes: *Everywhere she went in her new city she saw sidewalks and buildings and even some trees, but nothing as colorful and alive as this garden. She wanted to sit still and breathe the colors in.*

Draw a picture of what it would look like if Anna actually breathed in the colors:



Use words to describe what the author really meant by *breathe the colors in*:

name:

Write colorfully

On page 59, the author writes: *Anna's heart did a little happy dance. Another day in the garden and the second day in a row of going home with a classmate. A smile spread across her face.*

Draw a picture of what it would look like if Anna's heart was actually dancing:



Use words to describe what the author really meant by *Anna's heart did a little happy dance*:

name:

Write colorfully

On page 21, the author writes: *Anna's mother used to make lasagna with the tomatoes and vegetables from the Finchers' garden in New York. Anna loved lasagna because each slice looked like a rainbow.*

Draw a picture of what it would look like if the lasagna actually looked like a rainbow:



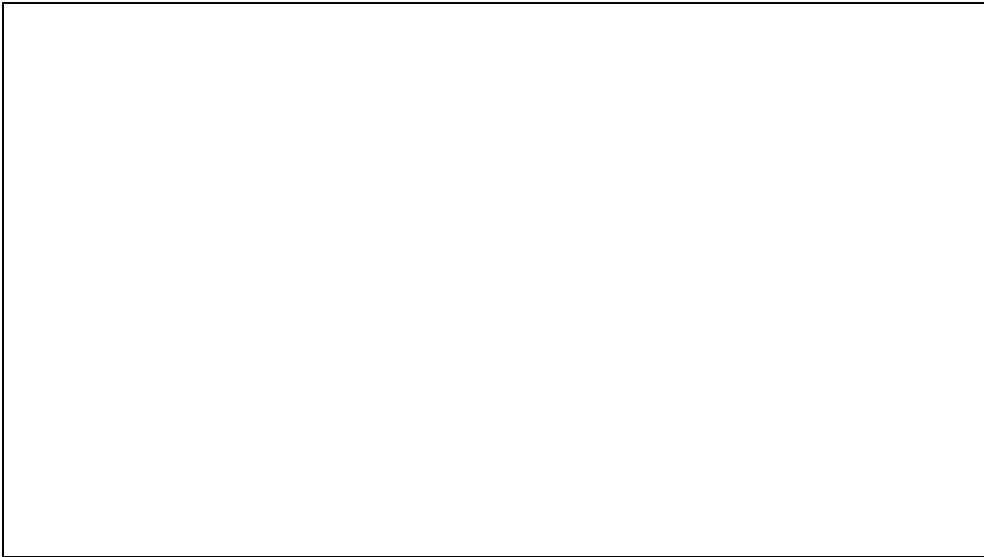
Use words to describe what the author really meant by *each slice looked like a rainbow*:

name:

Write colorfully

On page 19, the author writes: *No one in Anna's class was looking for a new friend. But maybe they could bump into friendship by accident.*

Draw a picture of what it would look like if someone bumped into friendship:



Use words to describe what the author really meant by *bump into friendship by accident*:

name:

(II1) Novel Engineering

Overview

In this activity, kids work on design challenges inspired by the book. What does the community garden look like? What's inside the shed? Raccoons are getting into the garden ... how can this problem be solved? Kids use a close reading of the text to find key details, use their imagination to fill in the missing pieces, and take on an engineering problem: designing a fence for the garden that will keep out raccoons while still letting in light and air.

Standards & Objectives

Learners will ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool. (NGSS K-2 ETS1.1)

Learners will develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem. (NGSS K-2 ETS1.2)

Materials

The Friendship Garden: Green Thumbs-Up! by Jenny Meyerhoff
(Aladdin, 2015)

"Novel Engineering" 3-page template in this packet.

Sharp pencils

Markers

Preparation

Read *The Friendship Garden* with the class.

Print out the "Novel Engineering" templates, enough for kids to work individually or in groups of 2 or 3. (Note: if possible, print at 11 x 17 to make it easier for kids to draw.)

Identify some concrete object in the classroom that solves a problem (see below).

Listening to your Imagination

Read the section in *The Friendship Garden* about walking from school to the garden. Ask the students to identify the details in the story that help

them ‘see’ the street, the buildings, and their first impressions of the garden. Hand out the first sheet of the Novel Engineering drawings. Provide colored pencils or markers, and ask the students to complete the drawing of the street and the garden, adding in the details that they see in their minds. Students may want to refer to their text while they work.

If appropriate, you can tell them this kind of drawing is an elevation drawing, used by designers, that shows us the relative sizes of elements in an environment.

Engineering Design

Direct the class’s attention to a physical object in the classroom that serves some useful purpose. A bulletin board is a good example. Explain that before there were bulletin boards, teachers and kids had a problem: they wanted to be able to put up artwork and decoration so everyone could see them. But taping artwork to the wall left marks on the wall, and using tacks made holes in the wall. How could this problem be solved? Someone *designed* a new object: a bulletin board, which could be attached to the wall and was made of a material that you could put tacks in without damaging it. Did that solve the problem? Were there other ways of solving that problem? Encourage discussion: other options might include magnet boards or hanging artwork from the ceiling. Optionally, identify other objects in the room—e.g., the intercom, the clock, a mug that holds pencils—and ask what problems they solve. Explain that “solving real-life problems by using science and math” is called *engineering*.

Do engineers start out by building things? No: they think about the problem, make *sketches*, think again, make new sketches, think again. A *sketch* is a “fast drawing that helps you think about how to solve a problem.” Engineers make many sketches while they work on problems, before they make a final drawing and then start building. Sketches don’t look perfect—engineers use them to develop their ideas. They scratch things out, erase, and write on top of their work.

Open *The Friendship Garden: Green Thumbs-Up* to chapter 9. Ask what the problem was in this chapter. Kids may remember that raccoons had gotten into the garden, and that Anna and her friends had chased them out. Point out that the raccoons will probably come back the next day. How can the community garden solve this problem? Ask kids if they would like to work on designing a new fence for the garden.

Divide kids into groups of 2 or 3 (alternatively, kids can work individually). Depending on the time available for the project, ask kids to complete all or some of the tasks. Hand out pages 2 and 3 of the Novel Engineering drawings.

For each design task, groups should brainstorm lots of solutions to the problem. No idea is too crazy, too expensive, or too futuristic. The idea of brainstorming is to get all ideas out of your mind without judging them. Choose an idea from brainstorming and make a “First Sketch” in pencil. Ask the small groups to talk about their ideas with each other informally. If ideas get co-opted by other students, remind them that they are a big team. This is how engineers work, in teams, and the more minds work

on a good idea, the better the solutions will become. Ask questions and point out complications with their ideas, and consider adding your own marks and lines to the sketch. Emphasize that the sketch is a work in progress.

Some students may not want to continue on the fence design following the brainstorming process. There are a number of design challenges on these drawing sheets. The range is meant to encourage students to see the variety of design problems in a familiar space like a community garden. Encourage students to work on the design problems that interest them.

Finally, they should work out their idea on the 3D drawing sheet with pencil and markers or colored pencil. Encourage 'annotations' (written notes, diagrams, and arrows) to explain complex features.

A gallery walk is a great way to share this visual project. Ask students to put away materials, clear desks or tables completely, and lay their drawings out neatly on their desks. Have students walk around and look at all the projects. During discussion, focus conversation on the ways in which different students' designs solved the engineering challenges.

If appropriate, draw connections to the adult job or career parallels.

Laying out the garden: Landscape Architect

Designing the Fence: Architect

Constructing the Fence: Fabricator

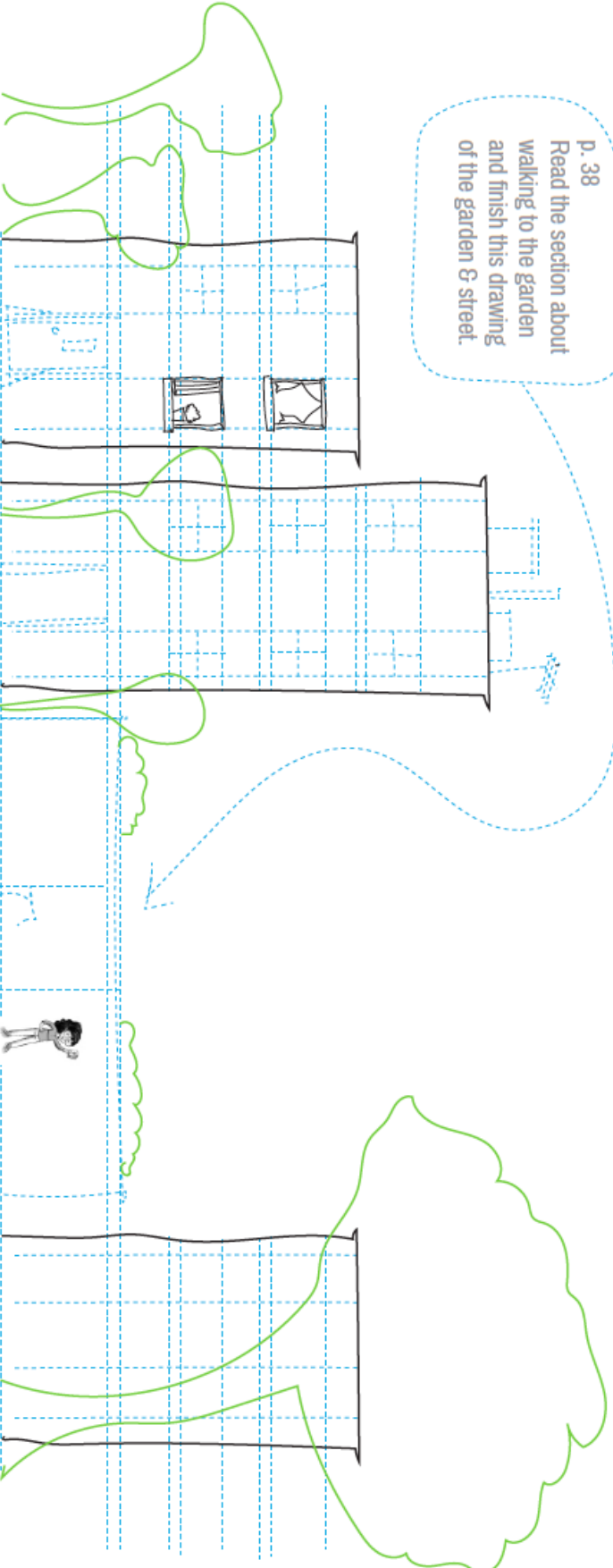
Laying out the inside of the shed: Interior Designer

Designing and Building the sign: Graphic Designer, Metalworker

Placing the garden in the empty lot: Community Organizer, Urban Planner, City Council Member

THE COMMUNITY GARDEN

p. 38
Read the section about walking to the garden and finish this drawing of the garden & street.



There are many details in the story that you fill in with your imagination. Add those details to the drawing yourself!

Will you add doors and windows to the apartment buildings?

What material is the fence on the Community Garden made of?

I am 100 cm tall. How tall do you think the garden fence is?



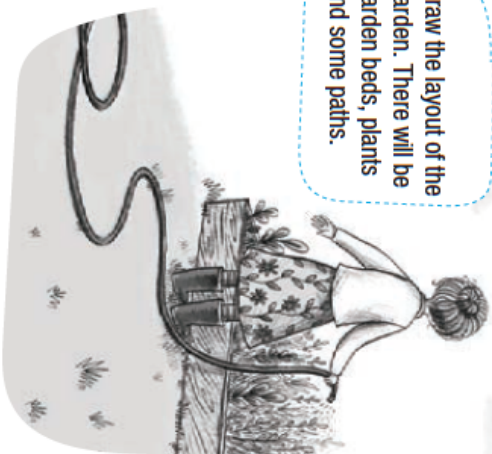
THE COMMUNITY GARDEN

p. 39

Where would the plant junkyard be in this drawing of the garden? Where is the hose? Add it.

The garden will need a gate, or maybe two. Where should the gate go?

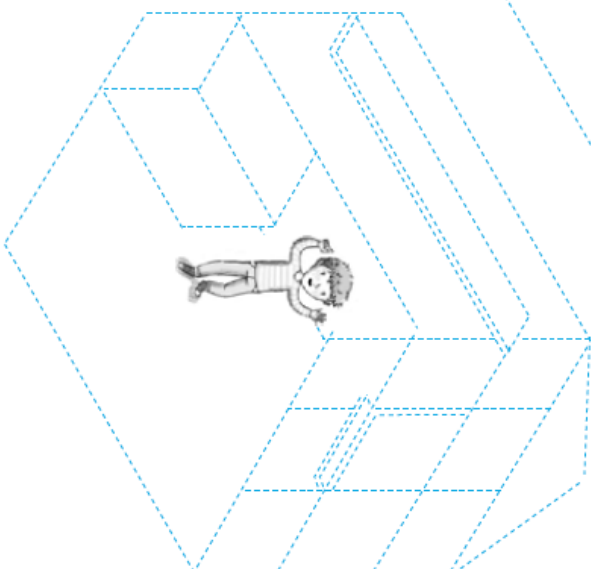
Draw the layout of the garden. There will be garden beds, plants and some paths.



p. 45
What color is the shed?
Paint it!

What would you put in your shed?

Where do the gardeners store their tools? What kind of tools might they use in the garden? Where would they keep the wheelbarrow?



THE COMMUNITY GARDEN

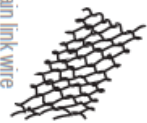
Different kind of fences: what other materials could you use?



wood



bricks



chain link wire



The garden REALLY needs a new sign. Would you make it out of wood? out of metal? How about the letters? Design your sign below. It is always good to try more than one idea!

