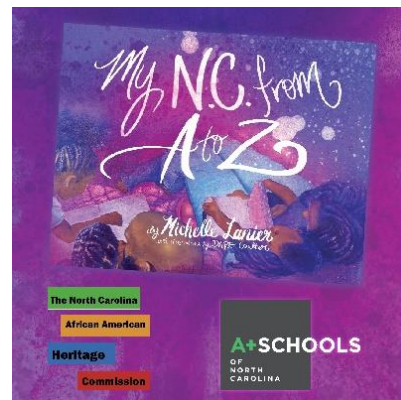


## **“My NC from A to Z”: Lessons to Accompany the Book**

Lesson plans developed by A+ Schools of NC  
<https://www.ncarts.org/aplus-schools>



**Lesson Title:** Lil' Bear Needs a Chair ToDAY

**Author/Collaborators:** September Krueger and Kristen Terry,  
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**Grade Level(s):** K-5<sup>th</sup> grade

**Time Required:** Three to five 45-minute lessons (depending on ability and grade level)

**Subjects/Content being integrated:** Math and Visual Art

State Standards in both arts and non-arts content that are being addressed:

### Math (K-2<sup>nd</sup>) – MD.1 & 2

- NC.K.MD.1 Describe measurable attributes of objects; and describe several different measurable attributes of a single object.
- NC.1.MD.2 Measure lengths with non-standard units.
- NC.2.MD.1 Measure the length of an object in standard units by selecting and using appropriate tools such as rulers, yardsticks, meter sticks, and measuring tapes.

### Math (3<sup>rd</sup>-5<sup>th</sup>) – MD 1 & 2

- NC.3.MD.2 Solve problems involving customary measurement.
- NC.4.MD.1 Know relative sizes of measurement units. Solve problems involving metric measurement.
- NC.5.MD.1 Given a conversion chart, use multiplicative reasoning to solve one-step conversion problems within a given measurement system.

### Visual Arts

- K.V.3.2 Use a variety of media to create art.
- 1.CX.1.5 Understand that art is a reflection of the artist's ideas, environment and/or resources.
- 3.CX.1.1 Exemplify how visual arts are used by various groups for artistic expression within the local community.
- 4.CX.2.1 Exemplify visual arts industries in North Carolina.
- 5.CX.1.5 Analyze the effect of the geographic location and physical environment on the media and subject matter of North American art and artists.

## **LESSON PLAN DETAILS**

### Purpose/Objective

*(What do you want students to know and be able to do?)*

Students will solve a problem by creating a chair according to specific measurable attributes with at least three to five elements that are similar to the designs of Thomas Day.

### Student Assessments

*(How and when will you know if students have mastered the content?)*

Pre-assessment: Four Corners activity (see description within plan)

During the lesson: Questions, observations, and comparisons

Post-assessment: [Editable Rubric](#)

## Focus Question

How can my team create a replacement chair for the Honey Bears that is freestanding and sturdy (support will be determined by teacher) with similar artistic styles of Thomas Day?

## Multiple Intelligences

(Which MIs will be supported and how?)

- Logical-Mathematical: construction of chair, measurement
- Interpersonal: teamwork to complete a task
- Intrapersonal: independent thinking and brainstorming
- Visual-Spatial: design element choices, sketching of prototypes

## 21<sup>st</sup> Century Skills

(Which 21<sup>st</sup> century skills will be supported and how?)

- **Use a wide range of idea-creation techniques (such as brainstorming):** Students will work (individually or in small teams) to solve a new chair design.
- **Identify and ask significant questions that clarify various points of view and lead to better solutions:** Older students should have a clearly defined function for their new chair design and incorporate end use into their design ideas.
- **Articulate thoughts and ideas effectively using oral, written and nonverbal communication skills in a variety of forms and contexts:** Students will present their final designs to the class.

## Vocabulary

(This list can be expanded or reduced to more specific vocabulary based on learner ability and need.)

### **Non-arts vocabulary:**

Kindergarten: describe

1<sup>st</sup> grade: non-standard measurement

2<sup>nd</sup> grade: ruler, yardstick, meter sticks, measuring tapes

3<sup>rd</sup> grade: estimate, inches, feet, yards, customary

4<sup>th</sup> grade: relative size, metric units

5<sup>th</sup> grade: conversion

**Arts vocabulary:** line, shape, balance, 3-D, vertical, horizontal, symmetry

**Shared vocabulary:** length, width, height, structural, design, elements, compare, contrast, measure, attribute

## Materials Needed

(supplies, handouts, resources, etc.)

- [Editable Rubric](#) (Please make a copy of the rubric and save to your own computer before editing.)
- Four Corners Activity materials (at end of lesson), requires advance set-up:
  - print out one set of the chair pictures, cut them apart and glue each chair picture to a separate piece of construction paper.
  - post one prepared chair picture in each corner of your classroom.
  - print out one set of the activity questions per group (or project questions for group discussions)
- Pre-assessment activity (at end of lesson), requires advance set-up: each group needs the chair image and a baggie with vocabulary words cut apart. Each student needs a copy of the “Chair ID” handout.
- Book: “Leola and the Honey Bears” by Melodye Benson Rosales or video of [read aloud](#) of the book
- [Thomas Day Biography](#) teacher slide deck

- Paper, pencils and drawing utensils for each group
- Book: “My NC from A to Z” by Michelle Lanier, Illustrated by Dare Coulter

**Materials Needed for Chair Creation**

Materials to consider:

Craft sticks, straws, cardboard tubes (wide or narrow), craft foam, masking tape, string, flat pieces of cardboard food boxes, stickers or paint to decorate, construction paper, rubber bands, chenille stems/pipe cleaners, cotton swabs, aluminum foil

Set Bag Option (Great for K-2)	Teacher determines specific items as well as how many items go into each bag.
Grab Bag Option (Great for 3-5)	Teacher creates several different bags with predetermined items. Teams submit a request for a specific bag after they have created at least two plans. Teacher can choose to allow teams to “trade” items with other teams.
Materials Store (Great for 3-5)	Teacher lays out all materials available and determines a set price for the items. Teams are provided a certain dollar amount they can spend on items. Teams may send their “shopper” to the store to purchase items (or teacher may simply decide to lay out a selection of materials).

**Teacher Background Information**

*(What might a teacher need to know prior to teaching this lesson? What might students already need to know prior to participating in this lesson?)*

- Teacher should review the slides in [Thomas Day Biography](#) and may also want to read this NCPedia article on the artist: [Thomas Day](#).
- Edit the rubric to make it applicable to the appropriate grade level’s standards. (See supply list for link, and please make a copy of the rubric and save to your own computer before editing.) You may choose to have students help with rubric development. Make sure that you include expectations for the appropriate math standards related to measurement in your edited version.
- Complete advance preparation for the Four Corners activity and the vocabulary pre-assessment activity.
- Collect materials for chair creation and determine which materials option would work best for the class. Teacher may or may not connect “pricing and purchasing” supplies as a part of the lesson as desired.
- Note: for upper grades, you may decide that the inclusion of “Leola and Honey Bears” is too young for your students. This lesson will work without the inclusion of the book. Simply focus the lesson on Thomas Day and your math standards. Just skip the first two bullets in session one and begin with the introduction to Thomas Day.

**THE LEARNERS’ EXPERIENCE**

**Anticipatory Set/Engagement Before Instruction**

*(What happens to get the students engaged/hooked?)*

- Facilitate the Four Corners: Chair Analysis activity (images and discussion questions are at the end of this lesson).
- Images of the four very different chairs will be placed in four corners of the room (one image per corner).

- Divide students into four groups. Assign each group one corner as a starting point.
- Students will have one to two minutes to look at each chair. Pose the first two of these “thinking” questions and ask students to silently consider their response to the questions. Note: you may decide to have student discuss their responses in pairs if desired.
  - Have you seen this chair before?
  - How might you sit in this chair?
  - Where might you use this chair?
  - How comfortable do you think this chair might be to sit in?
  - Who could use this chair? Why?
  - Who might not be able to use this chair? Why?
  - Do you think this chair is strong? Why or why not?
  - What might you change about this chair?
- Then rotate the groups to the next chair and repeat the process with the next two questions. Do this until groups have observed at all four stations and all eight questions have been asked.
- After students have rotated to all four stations, have each group discuss the “group” questions (at end of this lesson), sharing their responses with each other.
- Then popcorn out some responses to each question as a whole group.

### Student Engagement Activities/Learning Experiences

*(What are the detailed instructions for carrying out the lesson?)*

#### Session One

- Gather students in a common space to share with them the story of “Leola and the Honey Bears.” Either read the book or share the video of the [read aloud](#). Note: you may read the entire story or choose to focus only on the beginning of the story when the chair is broken by Leola.
- Ask students these guiding questions about the problem that was created by Leola.
  - What were the problems that Leola created? (*eaten food, broken chair*)
  - Were these problems solved? (*no*)
  - Do you have a favorite piece of furniture in your home? (*various answers*)
  - Can you imagine if it were destroyed or damaged? (*various answers*)
- Now introduce students to Thomas Day through the slide presentation. Share the [NCPedia Thomas Day](#) page, if desired.
  - What kind of person do you think Mr. Day was? (*creative, imaginative, problem solver*)
  - Design elements are the way a craftsperson adds special details. What do you notice about Mr. Day’s design choices? (*face, curves, spirals - images on slides 5-8*)
  - What makes Mr. Day’s chair freestanding? (*legs - front and rear*)
  - What makes Mr. Day’s chair sturdy? (*seat*)
  - What is the purpose of this part? (*point to other parts of chair without naming them - comfort, support*)
- Share “My NC from A to Z,” focusing on the T is for Thomas Day page.
- Share the following focus question with the learners: Imagine you and your classmates were asked to create a new chair for the Honey Bears! How could your team create a replacement chair for the Honey Bears that is **freestanding** and **sturdy** that can **support** the weight of \_\_\_\_\_ (support weight/items will be determined by teacher) with similar design styles and structural elements of Thomas Day?

(Pre-assessment)

- Distribute to each group the prepared materials of the image of a chair made by Day and a small bag with the vocabulary (see additional considerations below for help in creating groups) and ask students with their group to try to label the following words: top rail, cross rail, back post, apron, rear leg, front leg, seat, curves, cutouts.
- As learners are working, circulate asking questions:
  - How did you decide where this design element should go?
  - Does this structural element make you think of anything else?
- Students can check answers as the teacher reveals them on the final slide of the slide deck. As the labels are added, other vocabulary can be shared (line, shape, balance, 3-D, vertical, horizontal, symmetry).
- Now provide each student with a copy of the two-page handout “Chair ID Activity” (at end of lesson plan), and have them use the handout to sketch and compare their own chair with the Thomas Day chair.
- Allow students to share their responses to the prompts on the handout.
- Closing for this session: Tell students that over the next few days they will be creating their own chair in the style of Thomas Day to help the Honey Bears.

### Session Two

Begin today’s lesson by reviewing the vocabulary students were exposed to in session one through a warm-up, either a song (K-3) or charades (3-5).

#### Warm-Up: Song (Tune of [Johnny Works with One Hammer](#))

- Students will repeat the words to the song with the teacher. As each line of the song is shared, the teacher will elicit ideas from the students to incorporate body movements to go with the song.

“Thomas builds a chair with one hammer, one hammer, one hammer.  
Thomas builds a chair with one hammer all day long.”

- Ask students: What should we build first? Why? (front legs and rear legs)

“Thomas builds the chair’s front legs, rear legs, front legs.  
Thomas builds the chair’s rear legs all day long.”

- Ask students: What should he build next? Continue song with seat and apron, back post, cross rail and top rail.

#### Warm-Up: Charades

- Divide students into seven teams (see end of lesson for help with dividing students).
- Using the word cards from session one, distribute one word to each group.
- Each group comes up with a movement sequence without talking. The other teams may guess which chair part/vocabulary word they are.
- Game continues until all teams have had a chance to perform.

#### After the Warm-up:

- Share the edited rubric that you (and/or the students) created and review the goal: Imagine you and your classmates were asked to create a new chair for the Honey Bears! How could your team create a replacement chair for the Honey Bears that is **freestanding** and **sturdy** that can **support** the weight of \_\_\_\_\_ (support weight/items will be determined by teacher) with similar design and structural styles of Thomas Day?
- Review furniture styles and draw attention to slide 5 in the slide deck.
- Divide students into working groups (see additional considerations for help in creating groups).

- Have student groups work together to draw and label (with learned vocabulary words) a plan for their chair.
- Encourage groups to create more than one sample plan.
- When plans are complete and labeled, groups may begin selecting their materials (or a materials bag could be given to them).
- Once groups have received materials, but before building begins, ask groups to decide on the plan they will build. Encourage them to adjust their plan based on the materials they have.

### Session Three

- Check in with groups to see where they are in their work. Groups should be in one of three places:
  - still sketching a plan
  - reviewing materials and adjusting their plan
  - already building
- Groups should continue building.
- Provide them with a time frame for completion of their chair.
- Assist groups that are stuck or need help.
- Once time is up, have groups use the rubric to self-assess their design.
- Give groups an additional 10 minutes to revise or enhance their designs based on the rubric.

### Closing

*(How will the lesson wrap up and bring closure for the students?)*

- Gather students in a common place to share their chair.
- Have each group place the chosen item/weight in their chair to see if the chair can support it.
- Have each group share why they chose their design.
- After each group shares, ask the class how that group's chair design is similar to Thomas Day's designs.
- As a class, ask students if they think the Honey Bear family would be pleased with the various chair designs.

## **ADDITIONAL CONSIDERATIONS**

### Classroom/Behavior Management Tips and Tools

*(What techniques might be useful in managing this lesson?)*

Tips for creating groups

- Keep groups small, depending on ability to collaborate. Groups of three to four are recommended
- Instead of counting off, consider naming the groups with a corresponding hand motion (top rail – hands on head, cross rail – cross arms, back rail – thumb up with elbows bent to indicate a going back motion, etc.) .

Job assignments would work great for this project. Some job titles could be:

- Material/Shopping Manager (gathers materials)
- Time Manager (keeps team on time)
- Design Manager (draws the design with ideas of the team)
- Testing Manager (places the item to be supported on the chair)
- Money Manager (checks the team's math and gives money to the shopper)
- Spokesperson (answers questions that have been answered by the team)

Vocabulary: Encourage the use of the vocabulary appropriately. Be confident that your youngest students will be able to articulate the “design elements” as well as any other lesson vocabulary.

### Distance Learning Adaptations or Suggestions

*(How can this lesson be taught virtually - synchronously or asynchronously?)*

- Students could participate in a [Padlet](#) designed to supplement the Four Corners activity
- Students could participate in a Google Doc where they tally and sort the types of chairs in their homes, using details such as material, size, color and curves.
- Students read (or listen to a reading of) a summary on the life of Thomas Day. Students respond to question prompts to summarize/compare big ideas about Thomas Day via FlipGrid or SeeSaw or Chatter Pix.  
[ChatterPix Sample: Thomas Day](#)
- For the building component, students could be asked to collect five or six materials from the kitchen, bathroom or around the house, as building materials. The teacher could then approve the materials, and the student could [catalog the items](#) before building. Students could also recycle the materials from lunch delivery for one week (providing milk cartons, sandwich wraps, plastic utensils, etc.) for building.

### Extensions, Follow-up or Additional Resources

Additional visual arts resources:

- [https://nmaahc.si.edu/object/nmaahc\\_2017.108.2](https://nmaahc.si.edu/object/nmaahc_2017.108.2) Side chair example in the National Museum of African American History and Culture. Shows multiple views of the chair. Excellent zoom feature for looking closely at the carving details and materials.
- <http://www.breathingroomradio.com/lounge.htm> This site offers a brief description of the Day Lounge, a piece of furniture that was unique to Thomas Day’s workshop.

Contextualizing a free black man owning slaves:

- NC Museum of History video: <https://www.youtube.com/watch?v=95em5dvn0IY>
- This article discusses Thomas Day’s trip to Philadelphia for the Fifth Annual Convention for the Improvement of the Free People of Color in the United States (excerpt paragraphs 1-4). It allows for conversation regarding a free man of color owning slaves, and discusses the risks involved in abolitionist activities.  
<http://www.chipstone.org/article.php/648/American-Furniture-2013/The-Missing-Chapter-in-the-Life-of-Thomas-Day>

The [My NC from A to Z Resource Guide](#) overs several activity sheets as well as the link to an audio recording of the author, Michelle Lanier, reading the book.

Folding chair



Stool



Dining chair



Bean bag





## Thomas Day: Four Corners Activity

### Questions for Group Discussion

- What do the four chairs have in common?
- Which of the four chairs is the most different? How is it different?
- Which of the four chairs do you think is the most comfortable? Why?
- Is there a chair that no one in your group had seen before?
- Is there a chair that might not be usable for someone? Which one and who wouldn't be able to use it?
- Which chair do you think is the strongest?
- Which chair do you think is made of the strongest material? Is this the same chair that you think is the strongest?
- Which chair do you think is the strongest, most functional for the largest number of users? Rank them from 1 to 4, with 1 being the strongest and most functional for the most users and 4 being the group's last choice.



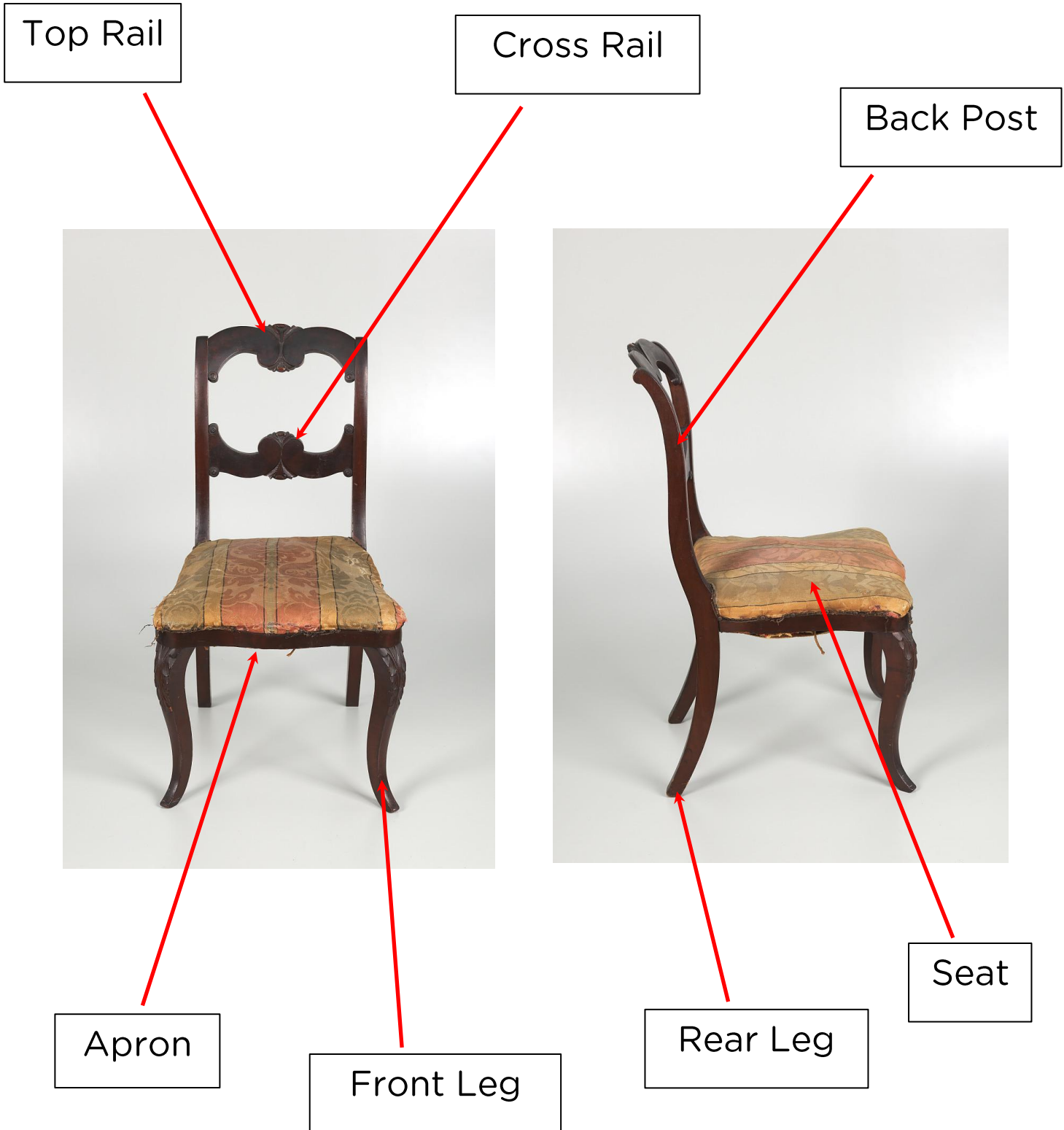
top rail	back post	cross rail
apron	rear leg	front leg
seat	curves	cutouts

Vocabulary Pre-Assessment, one page

# Parts of a Thomas Day Chair

Thomas Day side chair, ca. 1850

[https://nmaahc.si.edu/object/nmaahc\\_2017.108.2](https://nmaahc.si.edu/object/nmaahc_2017.108.2)



What does your classroom chair have in common with a Thomas Day chair?

Please sketch your chair below.

Can you use Thomas Day's chair to describe any part of your chair?  
Is your chair made from the same material?

