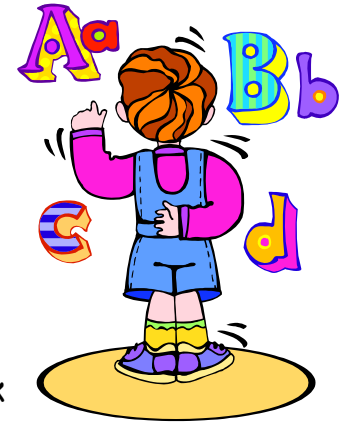


# Building a Letter

Based on the book  
Albert's Alphabet by Leslie Tryon



**Background:** In the book Albert's Alphabet, Albert designs and builds all the letters of the alphabet, using tools and scraps. A playground and path are then lined with the letters.

**Design Challenge:** Build a letter of the alphabet that will stand by itself. Be ready to present your work to the class.

## Criteria:

- The letter must be freestanding.
- It must be made from materials found in the classroom.

**Materials:** You may select from the items below.

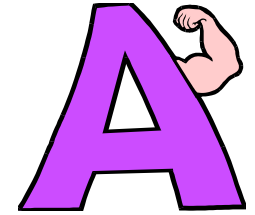
- cardboard
- straight edge
- scrap paper/cloth
- tape
- brads
- hole punch
- boxes
- stapler
- scissors/cutting tools
- wood and wooden dowels
- string
- writing and drawing tools
- glue

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Targeted Standard of Learning: English K.7a  
Supporting Standards of Learning: English K.1, K.2, K.3, K.5, K.6, K.7, K.8, K.10  
Science K.1, K.4, K.10  
Mathematics K.10

Targeted Standard for Technological Literacy: 8  
Supporting Standards for Technological Literacy: 5, 9, 10, 11, 12

# Building a Letter



**Targeted Standard of Learning:** English K.7a

- The student will identify and name both uppercase and lowercase letters of the alphabet.

**Targeted Standard for Technological Literacy:** Standard 8

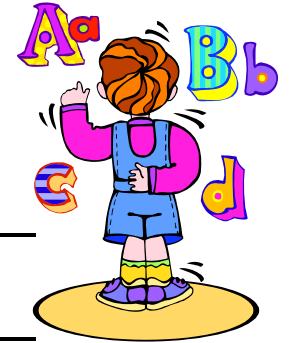
- Students will develop an understanding of the attributes of design.

Prior Knowledge & Skill	Materials & Preparation	Safety Issues	Class Management	Materials Provided	Time Management
<ul style="list-style-type: none"> <li>• Shapes of letters</li> <li>• Uppercase and lowercase letters</li> </ul>	<ul style="list-style-type: none"> <li>• <u>Albert's Alphabet</u> by Leslie Tryon</li> <li>• Check Design Brief for suggested materials.</li> <li>• Teacher may substitute materials.</li> </ul>	<ul style="list-style-type: none"> <li>• Correct use of cutting tools</li> </ul>	<ul style="list-style-type: none"> <li>• Small groups or individual</li> </ul>	<ul style="list-style-type: none"> <li>• Design Brief</li> <li>• Guided Portfolio (Optional)</li> <li>• Rubric Assessment</li> </ul>	<ul style="list-style-type: none"> <li>• Session 1 Introducing Design Brief and Portfolio (30 min.)</li> <li>• Sessions 2 and 3: Building (30 min.)</li> <li>• Session 4: Sharing and evaluating</li> </ul>

Guided Portfolio—1

Name \_\_\_\_\_

# Building a Letter



Group Members: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

1. **What is the problem?** State the problem in *your own words*.

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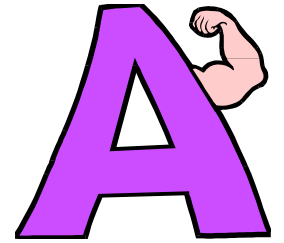
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Targeted Standard of Learning: English K.7a  
Supporting Standards of Learning: English K.1, K.2, K.3, K.5, K.6, K.7, K.8, K.9, K.10  
Science K.1, K.4, K.10  
Mathematics K.10

Targeted Standard for Technological Literacy: 8  
Supporting Standards for Technological Literacy: 5, 9, 10, 11, 12

Name \_\_\_\_\_

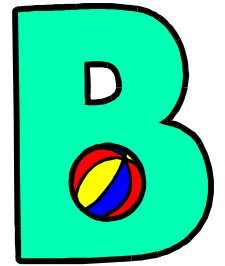


## 2. Brainstorm solutions.

Draw or describe some possible solutions.

The page features a brainstorming template consisting of four large, rounded rectangular boxes arranged in a 2x2 grid. The boxes are empty, intended for drawing or describing solutions. In the center of the grid, where the four boxes meet, is a black and white illustration of a lit lightbulb with radiating lines, symbolizing an idea or solution.

Name \_\_\_\_\_



**3. Create the solution you think is best.**

Keep notes below about the problems you have and how you solve them.

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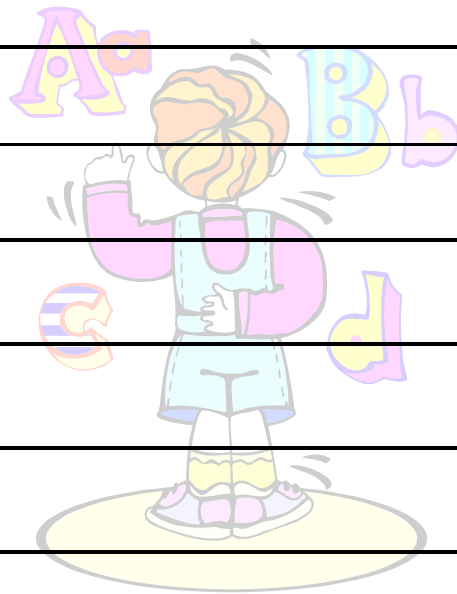
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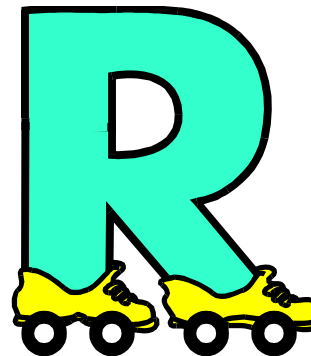
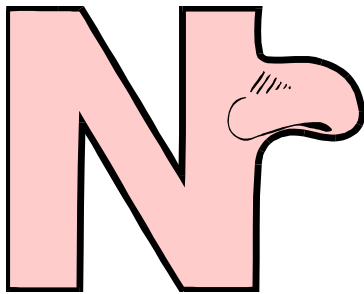
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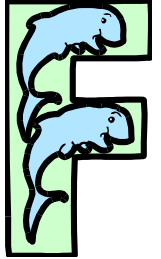
Name \_\_\_\_\_

#### 4. Test your solution.

- Is your design based on an alphabet letter?      YES      NO
- Does your letter stand up by itself?      YES      NO
- What letter is your design based on?      \_\_\_\_\_



Name \_\_\_\_\_



### 5. Evaluate your solution.

Was it the best solution? Would one of your other ideas have been better? Why or why not?

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What would you have done differently?

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Could you add to it to make it better? What would you add to it?

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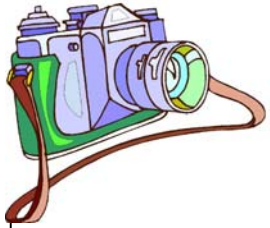
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Guided Portfolio—6

Name \_\_\_\_\_

Attach a photograph of your final project here. If you do not have a photograph, draw a picture of your final project.



A large, empty rounded rectangular box for drawing or pasting a photograph.

How would you make your project better? Draw a picture showing how it would look after you have made changes to it.



A large, empty rounded rectangular box for drawing a picture showing improvements to the project.



# Rubric for *Building a Letter*

Name \_\_\_\_\_

Date \_\_\_\_\_

<b>Student Evaluation</b>	no evidence 0	limited understanding 1	some understanding with room for improvement 2	good understanding with room for improvement 3	substantial understanding 4
<b>Oral Presentation: The student</b> <input type="checkbox"/> used complete sentences <input type="checkbox"/> used descriptive words.					
<b>Guided Portfolio: The student</b> <input type="checkbox"/> restated the problem <input type="checkbox"/> brainstormed solutions <input type="checkbox"/> created a solution <input type="checkbox"/> tested the solution <input type="checkbox"/> evaluated the solution.					
<b>Team Skills: The student</b> <input type="checkbox"/> used appropriate voice <input type="checkbox"/> encouraged team members <input type="checkbox"/> listened to team members <input type="checkbox"/> was involved in all aspects of the project <input type="checkbox"/> respected team members.					

<b>Tested Criteria</b>		
The design represented a letter of the alphabet.	Yes	No
The letter was freestanding.	Yes	No
The student used materials from the classroom.	Yes	No



# Standards of Learning

## English (2002)

### *Oral Language*

- K.1 The student will demonstrate growth in the use of oral language.
- a) Listen to a variety of literary forms, including stories and poems.
  - b) Participate in choral speaking and recite short poems, rhymes, songs, and stories with repeated patterns.
  - c) Participate in creative dramatics.
  - d) Begin to discriminate between spoken sentences, words, and syllables.
  - e) Recognize rhyming words.
  - f) Generate rhyming words in a rhyming pattern.
- K.2 The student will use listening and speaking vocabularies.
- a) Use number words.
  - b) Use words to describe/name people, places, and things.
  - c) Use words to describe location, size, color, and shape.
  - d) Use words to describe actions.
  - e) Ask about words not understood.
  - f) Follow one-step and two-step directions.
  - g) Begin to ask how and why questions.
- K.3 The student will build oral communication skills.
- a) Begin to follow implicit rules for conversation, including taking turns and staying on topic.
  - b) Express ideas and needs in complete sentences.
  - c) Begin to use voice level, phrasing, and intonation appropriate for language situation.
  - d) Listen and speak in informal conversations with peers and adults.
  - e) Begin to initiate conversations.
  - f) Participate in discussions about books and specific topics.

### *Reading*

- K.5 The student will understand how print is organized and read.
- a) Hold print materials in the correct position.
  - b) Identify the front cover, back cover, and title page of a book.
  - c) Follow words from left to right and top to bottom on a printed page.
  - d) Match voice with print: syllables, words, and phrases.
- K.6 The student will demonstrate an understanding that print makes sense.
- a) Explain that printed materials provide information.
  - b) Identify common signs and logos.
  - c) Read ten high-frequency words.
  - d) Read and explain own writing and drawings.

## English (2002), continued

- K.7 The student will develop an understanding of basic phonetic principles.
- Identify and name both uppercase and lowercase letters of the alphabet.
  - Match consonant and short vowel sounds to appropriate letters.
  - Identify beginning consonant sounds in single-syllable words.
- K.8 The student will demonstrate comprehension of fiction and nonfiction.
- Use pictures to make predictions about content.
  - Retell familiar stories using beginning, middle, and end.
  - Discuss characters, setting, and events.
  - Use story language in discussions and retellings.
  - Identify what an author does and what an illustrator does.
  - Identify the topics of nonfiction selections.

### *Writing*

- K.9 The student will print the uppercase and lowercase letters of the alphabet independently.
- K.10 The student will print his/her first and last names.

## Science (2003)

### *Scientific Investigation, Reasoning, and Logic*

- K.1 The student will conduct investigations in which
- basic properties of objects are identified by direct observation;
  - observations are made from multiple positions to achieve different perspectives;
  - objects are described both pictorially and verbally;
  - a set of objects is sequenced according to size;
  - a set of objects is separated into two groups based on a single physical attribute;
  - nonstandard units are used to measure common objects;
  - a question is developed from one or more observations;
  - picture graphs are constructed using 10 or fewer units;
  - an unseen member in a sequence of objects is predicted; and
  - unusual or unexpected results in an activity are recognized.

### *Matter*

- K.4 The student will investigate and understand that the position, motion, and physical properties of an object can be described. Key concepts include
- colors (red, orange, yellow, green, blue, purple), white, and black;
  - shapes (circle, triangle, square, and rectangle) and forms (flexible/stiff, straight/curved);
  - textures (rough/smooth) and feel (hard/soft);
  - relative size and weight (big/little, large/small, heavy/light, wide/thin, long/short); and
  - position (over/under, in/out, above/below, left/right) and speed (fast/slow).

## **Science (2003) continued**

### ***Resources***

- K.10 The student will investigate and understand that materials can be reused, recycled, and conserved. Key concepts include
- a) materials and objects that can be used over and over again;
  - b) everyday materials can be recycled; and
  - c) water and energy conservation at home and in school helps preserve resources for future use.

## **Mathematics (2001)**

### ***Measurement***

- K.10 The student will compare two objects or events, using direct comparisons or nonstandard units of measure, according to one or more of the following attributes: length (shorter, longer), height (taller, shorter), weight (heavier, lighter), temperature (hotter, colder). Examples of nonstandard units include foot length, hand span, new pencil, paper clip, block.

## **Standards for Technological Literacy**

- Standard 5: Students will develop an understanding of the effects of technology on the environment.
- Standard 8: Students will develop an understanding of the attributes of design.
- Standard 9: Students will develop an understanding of engineering design.
- Standard 10: Students will develop an understanding of the role of troubleshooting, research and development, invention and innovation, and experimentation in problem solving.
- Standard 11: Students will develop the abilities to apply the design process.
- Standard 12: Students will develop the abilities to use and maintain technological products and systems.