# Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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## Grades 4 Mathematics Extension Menu

**Concept and/or Topic: Area & Perimeter**



**Directions: Choose** a learning activity from one square to complete. If you choose the square, “Write your idea here,” please see the teacher with your idea first. **Circle**the number of the learning activity you choose.

**Turn in**this paper with your work.

|  |  |  |
| --- | --- | --- |
| 1. **Use** manipulatives or **draw** pictures to exploretheperimeter of a rectangle formed by any number of one-inch squares in a row, either vertically or horizontally. **Create** a function table showing the number of squares in a row and the perimeter of each rectangle you created. Your function table must include at least 4 different rectangles. **Explain** the pattern using words and/or symbols. | 2. **Create** a learning center with an activity that would help other students learn about the concepts of area and/or perimeter. **Include** vocabulary, illustrations, and explanations. **Create** an answer key for the learning activity. | 3. **Plan** a lesson to teach next year’s fourth grade class the concepts of area and/or perimeter. **Include** curriculum objectives, vocabulary, student activities, illustrations/models/  manipulatives and assessment/ evaluation item(s). **Provide** at least one activity for students that would reinforce the concept of area and/or perimeter. |
| 4. **Interview** or **read** about people who use area and/or perimeter in their professions. **List** or **illustrate** ways they use area and/or perimeter.  **Create** an authentic problem that a professional might solve using area and/or perimeter. | 5. **Create** a Power Point Presentation or web page to teach about area and/or perimeter. **Include** one or more of the following to illustrate your presentation: photographs scanned pictures, or internet-provided images. | 6. **Write** an extension of the story Spaghetti and Meatballs For All: A Mathematical Story or write your own mathematical story using the concepts of area and/or perimeter. **Include** vocabulary and illustrations. **Check** for correct spelling and punctuation. |
| 7. **Create** one or more of the following: a cartoon, skit, poem (Acrostic, Cinquain, Haiku), song or rap to teach area and/or perimeter. **Include** vocabulary and explanations. **Prepare** to share or perform your final product. | 8. **Write** your idea here.  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 9. **Create** a game using the concepts of area and/or perimeter. **Write** directions and rules. **Use** materials approved by your teacher to construct your game. |

Teacher Resource Page

Grades 4 Mathematics Extension Menu

**Concept and/or Topic: Area and Perimeter**

**Intended Purpose: Extension/Enrichment Activity**

**Standard(s) and Indicators Addressed:**

Box 1: MA.400.30.26b Explore, invent and apply the formula for area of a rectangle using models

MA.400.30.25 Estimate and determine perimeter of polygons by calculating up to 100 units

Box 2: MA.400.30.26b Explore, invent and apply the formula for area of a rectangle using models

MA.400.30.25 Estimate and determine perimeter of polygons by calculating up to 100 units

Box 3: MA.400.30.26b Explore, invent and apply the formula for area of a rectangle using models

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Box 7: MA.400.30.26b Explore, invent and apply the formula for area of a rectangle using models

MA.400.30.25 Estimate and determine perimeter of polygons by calculating up to 100 units

Box 9: MA.400.30.26b Explore, invent and apply the formula for area of a rectangle using models

MA.400.30.25 Estimate and determine perimeter of polygons by calculating up to 100 units

**Organizational Tips:**

Box 1: Provide *Color Tiles* or *Pattern Blocks* 1-inch squares, paper, and pencils.

Box 2: Provide paper, books, pencils, crayons, colored pencils or markers.

Box 3: Provide curriculum objectives.

Box 4: Provide access to resource materials about people or occupations that use area and perimeter.

Box 5: Provide access to a computer and scanner (if available).

Box 6: Provide paper , pencils, and a copy of Spaghetti and Meatballs For All: A Mathematical Story,

by Marilyn Burns and Debbie Tilley, Brainy Day Books.

Box 7: Provide paper and pencils.

Box 9: Provide paper, pencils, crayons, and markers.

Provide access to the following resources for student use:

* Math Central-4th Grade, Houghton Mifflin, pp. 188-189, 342-343, 516-526.
* Just for Pattern Blocks-Intermediate by Carolyn O’Donnell, Creative Publications, 1996
* Math at Hand by Great Source Education Group, Inc., 1999
* Math on Call by Great Source Education Group, Inc., 1998
* Encyclopedias
* SIRS

Websites for Teacher Background/Usage:

<http://www.bgfl.org/bgfl/custom/resources_ftp/client_ftp/ks2/maths/perimeter_and_area/>

<http://www.mathplayground.com/geometryMovie.html>

<http://www.mathplayground.com/SolveIt_main.html>

<http://www.funbrain.com/poly/>

<http://its.guilford.k12.nc.us/webquests/areaperim/areaperim.htm>