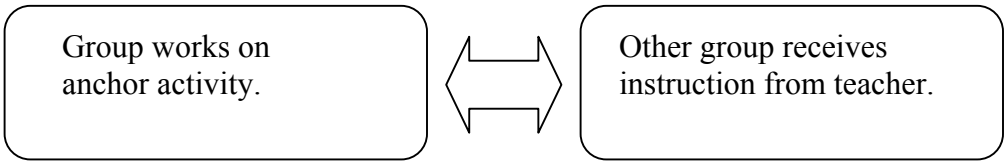
Option: Using an Anchor Activity

The purpose of an anchor activity is to reinforce, deepen, and extend students' understanding of the concepts presented in a unit. It provides meaningful tasks for students to work on while the teacher is working with another group or when the student has completed an assignment. Using anchor activities creates a productive work environment and is an efficient use of students' time. An anchor is to be completed over a period of time—anywhere from a week to a grading period. A student does the work independent of the teacher either individually or with a partner. It is important that all work in an anchor activity "count" and that students do not perceive it as busy work. The work may include:

- long-term projects
- selected games
- journal writing
- commercial kits
- learning centers/packets
- selected websites
- creating games, books, etc.
- books related to math

The following is a suggested sequence for implementing an anchor activity:

1. Introduce the anchor at the beginning of a new unit with all the resources needed readily available.
2. Teach the whole class to work independently and quietly on the anchor activity.
3. Provide time for practice of activity and procedures.
4. Begin small group instruction by alternating groups.



In summary, anchors work best when:

- expectations are clear.
- tasks are taught and practiced beforehand.
- students are held accountable for on-task behavior and completing work.

Grade 3 Unit 4 Anchor Activity

The following anchor activity presents students with tasks and games involving geometry to be done individually or with a partner throughout the unit. The anchor is tiered and suggests activities that are related to below, on, and above grade level indicators. Games may be introduced to the whole class, then placed in a math center for students to play when finished with assigned classwork.

Everyday Math
Students continue to play the games suggested in *Everyday Math*.

The Robot Game	TG p.394	2.3.4.1
Doing Triangle Calisthenics	TG p. 400	2.3.2.1
Angle Race	TG p. 426	2.3.2.2

Hot Math Topics
Some cards suggested below may be used by either group. Generally, Hot Math Topics *is sequenced from least difficult cards to most difficult cards. Direct students to respond to task cards and explain their reasoning in a math journal. Read the introduction for more suggestions on management.*

Hot Math Topics: Geometry, Spatial Sense, and Measurement, Gr. 3

Indicator	Task Cards
2.3.4.2	1, 75
2.3.3.1	3, 13, 60
2.3.1.1	5, 30, 40, 55
2.3.1.2	12, 27
2.3.3.3	12, 27, 63

Hot Math Topics: Measurement and Geometry, Gr. 4

Indicator	Task Cards
2.4.2.1	22, 30, 77
2.4.1.1	21, 27, 34, 44, 51, 55, 78, 89, 98
2.4.3.2	10. 15, 22, 30, 50, 64, 77, 85
2.4.1.2	30, 77
2.4.3.1	22
2.3.4.2	17, 65, 67, 72
2.3.5.1	83

Hot Math Topics: Spatial Sense and Measurement, Gr. 2

Indicator	Task Cards
2.2.1.1	8, 9, 10, 15, 31, 71
2.2.1.2	14, 44
2.2.4.1	34, 60, 78, 87

20 Thinking Questions, Grades 3-6
The questions from *20 Thinking Questions* are written as lessons, but may be used in centers for independent practice after students have had similar instruction using manipulatives. Teachers may choose to photocopy the question page on card stock. For follow-up, select questions from "Questions for Discussion" and "Journal Reflection" at the end of each lesson. Ask students to respond in their math journals. Students may choose one question card, since they cover a similar topic.

Indicator	*20 Thinking Questions…*	*Question*
2.3.1.2	*Rainbow Cubes*	*4: How many different shapes can you make? (2.3.1.1)* *10: How many different cubes can you build?*
2.3.2.1	*Geoboards*	*1: Can a triangle have two right angles?* *4: How many different right triangles can you make?*
2.4.2.1	*Geoboards*	*6: How many different types of triangles can you find?*
2.3.4.2	*Pattern Blocks*	*7: Can you make a design that has 1 line of symmetry?*

Navigating Through Geometry in Grades 3-5
The tasks from *Navigating Through Geometry* are written as 5E lessons. The lessons offer a variety of learning experiences, both independent and cooperative.

2.3.4.1, 2.4.4.1 "Tetrominoes Cover-Up"
Through playing a game, students will describe and represent slides, flips, and turns using square tiles.

2.4.1.1 "It's All in the Packaging"
Students will work in groups to identify and describe the attributes of solid figures by exploring and constructing three-dimensional packages.

Polygon Museum
A museum may be in the form of a class bulletin board, independent student collections, and/or a class exhibit. Museum items displayed may include models, pictures, informational texts, written descriptions, drawings, etc.

For the polygon museum, students keep a record of geometric shapes and their attributes. Shoeboxes can be used to help students organize museum items that they bring to the classroom.

Suggested literature sources for museum items:
• *The Art of Shapes for Children and Adults* by Margaret Steele and Cindy Estes (Fotofolio, 1997)
• *Shapes, Shapes, Shapes* by Tana Hoban (Greenwillow Books, 1986)
• *The Greedy Triangle* by Marilyn Burns (Scholastic, 1984)
• *Lao Lao of Dragon Mountain* by Margaret Bateson-Hill (De Agostini Children's books, 1996)

Anchor Activity: Polygon Museum Collection

due date: _____

Background

You have been selected as the curator of The Polygon Museum. As a curator, you need to select items to display in your exhibit that represent polygons and their attributes. You will keep your museum items organized in a shoebox in the classroom.

The Task

1. Select _____ examples from the world around you that contain polygons. You should have examples from newspapers/magazines, the internet, your own drawing, and written descriptions of things you've seen. Give each item a number.

2. Make a tag for each item. The tag may be written on an index card or typed and cut out. Attach the tag to the example. Be sure to have the example number on the tag.

The tag should list the type(s) of polygon(s) in your example. You should then use mathematical language to describe the polygon. Use the word bank to help you.

Word Bank

square rectangle triangle pentagon hexagon octagon
right angle greater than less than equal to
line of symmetry congruent slide flip turn

3. Advertise your Polygon Museum Collection. Make a poster, record a radio ad, or videotape a TV ad. Be prepared to show it to the class.

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square rectangle triangle pentagon hexagon octagon
right angle acute obtuse sides vertex parallel
perpendicular points lines line segment ray
line of symmetry congruent translation reflection rotation

3. Advertise your Polygon Museum Collection. Make a poster, record a radio ad, or videotape a TV ad. Be prepared to show it to the class.

Criteria for Success

- You have found ___ examples of polygons in the world around you.
- The examples come from a variety of sources.
- Each example has a number and a tag attached.
- Each tag lists the type(s) of polygon(s) in the example.
- Each tag contains a description of the polygons using correct mathematical language from the word bank.
- The advertisement is creative and includes mathematical language.
- The Polygon Museum Collection is completed on time and reflects effective effort.

Sample Tag:

Item:___**Window Drawing**_____
Number:___**3**___

Description:
This window has squares and rectangles. The squares and rectangles have 4 right angles and lines of symmetry. Two of the rectangles are congruent. If you turn one of the squares it will be on top of the other square.

Item:_____
Number:_____

Description:

Item:_____
Number:_____

Description:

Item:_____
Number:_____

Description:

Item:_____
Number:_____

Description:

Tags for Museum Items