

Lesson Plan Template

Demographics:

Name: Natalie Doering		Date: April 6, 2011	Age/Grade Level: 2nd
# of Students: 24	# of Students with IEP's: 2	# of Students with GSSP: 1	# of Students with LEP: 3
Subject: Mathematics		Major Content: Geometry Symmetry	Lesson Length: 30 mins
Unit Title (if part of unit): Geometry in Space	Lesson # (if in a sequence) and Title: Lesson 1 of 4	Created by: (If not completely your original work, cite source -- web or print.) http://mathforum.org/varnelle/kgeo5.html http://www.geom.uiuc.edu/~demo5337/s97a/reflect.html Mr. Gierhart – line & rotational symmetry KDE – curriculum resources; livetext lesson plan format to get DOD's	

Context:

- Describe the students' prior knowledge or the focus of the previous lesson.

This is a brand new content area in mathematics, geometry specifically. Students will learn symmetry first then non symmetry both in the classroom and in a gymnasium setting. Prior knowledge of basic shapes and lines needed. This lesson is the physical activity part of the lesson only.

- Explain how this lesson relates to the unit of study and your goals for teaching about the topic.

This is the first lesson in a 5 day unit of study in geometry. Students will learn line symmetry and symmetrical shapes first. Next, they will apply symmetry to two dimensional shapes, then three dimensional objects. Then they will learn asymmetry applied to lines, two dimensional shapes and three dimensional objects. Lastly, they will learn to move two-dimensional figures in a plane explore congruent and similar figures.

- Explain what is needed from this lesson for the next lesson.

AOTEOTFL: the student will need to be able to clearly recognize symmetry on paper and in the human body (self and others).

- Describe any critical student characteristics that will affect student learning (include details about modifications needed for students with an IEP, or GSSP, or LEP, 504 Plan, Title I, ethnic, cultural, or racial diversity, or achievement gaps). All students will be included and peer assistance will be provided when there are reading issues. I have one student with a physical impairment, but he will be able to participate in the physical aspect of this lesson with simple modifications i.e. travelling with wheel chair versus locomotor skills.

Objectives (Learning Outcomes):

State what students will demonstrate as a result of this lesson. Objectives must be student centered and observable and measurable. **No more than 3 objectives - 1 is best**

1. Students will **identify symmetrical lines (letters, numbers, shapes, objects)**. **DOK 1**
2. Students will **create** symmetrical shapes with their bodies. **DOK 2**
3. Students will **design a sequence** with beginning and ending symmetrical shapes (Letters & Shapes). **DOK 3**

Connections

Students explore and find basic geometric elements and terms, two-dimensional shapes and three-dimensional objects. They find and use symmetry.

MA-04-3.2.1

MA Mathematics (domain)

EP – end of primary

3 Geometry (subdomain)

2 Transformations of Shapes (organizer)

1 (first standard)

MA-EP-3.2.1

Students will **describe and provide examples** of line symmetry in real-world and mathematical problems or will apply one line of symmetry to construct a simple geometric design. **DOK 2**

Assessment Plan

Objective Number	Describe Assessment Type (Summative or Formative)	Description of Assessment (1) (Describe the assessment and what scoring instrument you will use to score for mastery of the objective.)	Depth of Knowledge Level (2)	Adaptations and/or Accommodations (3) (so that all students will master the objective.)
1	Summative	Paper & Pencil: Circle the pictures of symmetrical letters and shapes	DOK 1	Will read test to students needing help and let them respond orally.
2	Formative	Teacher observation – performance check – teacher will record responses on a checklist	DOK 2	Teacher & Peer assistance as required
3	Summative	Teacher observation	DOK 3	Group students low, medium & high with each other

Resources, Media and Technology

- Poly spots, cones (1 each), handouts, paper and pencil test, pencils, clip board with letters, shapes, my lesson materials.
- Sited in demographics table.

Procedures

Opening

Boys and girls, today we will learned a big fancy dollar word called symmetrical. Raise your hand if you have ever seen a butterfly. Notice a butterfly looks the same on both sides. If you pretend divide it down the middle the wings look the same on both sides – they mirror each other. We call that symmetrical – a good way to remember the word is to call it the same – in math we call it line symmetry. When we draw a pretend line down the middle it looks the same. Later that will help us with geometry and even fractions.

Middle

- I. Show letters: the letter A – does it look the same on both sides if you divide it down the middle. How about the letter T?
- II. Show the various shapes. a. See or Know in real-life b. Share - I will call on someone to name the object. c. Now you draw a symmetrical shape. Next we will do some physical activity to practice symmetry with our body.
- III. Activity:
 - a. Body Shapes (letters – A, T, I, O)
 - b. Body Shapes (create & show me) low level, medium level, high level
 - c. Body Shapes with a partner checking – give high five if your partner creates symmetrical shape facing you
 - d. Sequence – 8 counts Beginning 2 counts, travel 4 end 2 counts – partner checks

Closing

- Boys and girls today we learned – what was that large one dollar word we learned today? Please say it together. Hot dog! You got it. Now with just your arms, show me a symmetrical shape – good now one more but it has to be a different one. Good. I can see that all of you can make symmetrical shapes with your body and now I want you to circle the symmetrical shapes and objects on your paper to show me one more time that you know what symmetrical is. Next class we will learn asymmetrical shapes then apply both symmetry and asymmetry into three dimensional objects in space. It will be a blast! Get it? Blast into space!

After you teach do the lesson analysis from the lesson and data you collected!

Lesson Analysis

(Analysis of Student Achievement from this lesson)

1. How many students (percent or number) **met** performance criteria for the objective(s)?
2. How many students (percent or number) **did not** meet the performance criteria for the objective(s)?
3. How did you determine whether students met or did not meet the objective(s)?

Lesson Reflection

(How will you change the lesson to improve student achievement?)

1. What did your analysis of the lesson tell you about the success of the strategies you used?
2. How useful were the assessments in terms of student learning?
3. How will you differentiate instruction the next time you teach the lesson so that all students learn?
4. How will you differentiate instruction for students who easily achieved the performance criteria and need to move forward?
5. Describe how you have communicated learning results to students and/or parents.

Glossary

Differentiation - The practice of giving students multiple options for learning information, making sense of ideas, and expressing what they learn. It provides different avenues to acquire content, to process ideas, to develop products.

Formative Assessment - Provides evidence that students are making (or not making) progress in learning outcomes. Teachers use the information to make appropriate changes to instruction.

Summative Assessment - Comprehensive in nature, addresses accountability and is used to determine the level of learning at the end of a course of study.

GSSP - Gifted Student Services Plan

IEP - Individual Education Profile

LEP - Limited English Proficiency