

Algebra/Geometry Institute Summer 2008

Title: Identifying Faces, Edges, & Vertices

Faculty Name: Jalisha Cross

School: Robinsonville Elementary School

Grade Level: 4



1 Teaching objective(s)

Describe and compare three dimensional geometric shapes, figures, and models using specific vocabulary.

2 Instructional Activities

#1. The teacher will introduce the lesson by defining vertices, edges, and faces. The teacher will have the students tell how many corners are in the classroom (tell students that these are the vertices). The teacher will have the students count the walls, ceiling, and floor in the classroom (tell students that these are the faces). The teacher will have the students count the edges of the class (tell students the edges are where the faces meet). As an additional guided practice, the teacher will draw a three-dimensional shape on a transparency (using an overhead projector), and work with students on finding the number of faces, vertices, and edges. The teacher will work with students in small groups who have trouble understanding (the teacher will pull those students in a group and help them identify and find the faces, vertices, and edges of 2 3-dimensional shapes).

#2. As a practice activity, the students will work in small groups of 3-4 students. The teacher will give students 4-5 three-dimensional shapes (see attachment 1) to use in their groups. The students will identify the shapes and find how many vertices, faces, and edges each shape has. The students will write the information on an index card. The teacher will show students a sample of what information will be written on the index card (attachment 2). After the groups have been given time to find the information about their shapes, two groups will exchange shapes and the information they came up with, so that the other group can check for correctness.

3 Materials and Resources

Textbook (Houghton Mifflin, 4th Grade Math)

Classroom

Transparency (w/3 dimensional shape drawn on it)

Overhead Projector

Index cards (including sample index card)-see attachment 2

3-dimensional shapes- see attachment 1

4 Assessment

The teacher will grade the index cards completed by the students for correctness.

Attachment #1

3-Dimensional Figures

1. cube
2. rectangular prism
3. triangular prism
4. square pyramid
5. triangular pyramid
6. pentagonal prism
7. hexagonal prism
8. octagonal prism
9. decagonal prism

