Shapes and Space Lesson

(Template Revised from http://differentiationcentral.com/teachertools.html)

Curriculum Area: Math

Grade Level: 1

GLO/SLO

General Outcome

Sort, classify and build real-world objects. Explore and classify 3-D objects and 2-D shapes, according to their properties.

Specific Outcomes Specific Outcomes

9. Identify, sort and classify 3-D objects in the environment. [CN, R]
10. Describe, and discuss orally, objects, using such words as big, little, round, like a box, like a can. [C]
11. Build 3-D objects. [PS, V]

Student Groupings	**Materials**
-Large group, small group, pairs, individual	-Math manipulatives (3-d shapes), bags, pencils, paper

How will you differentiate? Content Process Product

Content will be differentiated by giving students more or less complex tasks or questions based on their level of mastery. For students who struggle with concepts taught in previous lessons, more scaffolding, prompting, and leading questions can be used during group discussions. Students at higher levels can be given tasks in evaluation and analysis rather than recall of information.

Process can be differentiated by dividing students into "ability groups" during the smaller group activity. This allows students who are ahead to be challenged by peers, and students who need more support to have the attention they need.

The product of this lesson is a RAFT assignment that asks students to take on the role of a shape. Students may decide the shape they wish to write about based on individual understanding and interest level. As well, if students are not able to communicate their learning through words, they may orally discuss the shape they have chosen, or draw a diagram.

How will you differentiate? Readiness Interest Learning Style

Readiness will be differentiated by giving students the opportunity to spend more or less time with peers in a group setting. Throughout the lesson, students will gradually move from a highly supported large-group environment to a smaller group, to individual work, and finally a partner activity. This will give students the opportunity to learn from peers, as well as be challenged as individuals.

The RAFT portion of this lesson gives students choice with deciding which shape (or ROLE) they would like to focus on. Students are then encouraged to expand their initial interests by collaborating with a partner.

This lesson emphasizes auditory, visual, and kinesthetic learning styles working together. If a particular student shows great improvement by focusing on one learning style, this lesson can accommodate these needs. For instance, if a student learns best through visual examples, they can chose to fulfill the RAFT portion of the assignment by drawing pictures to show their learning.

As a result of this lesson, students will :

Know: How to describe and discuss 3-D objects using terms such as "edges", "points", and "faces".

Understand: The difference between 2-D shapes and 3-D objects.

Do (skills): Determine a shape or object from a given description, and orally describe a shape or object. Write a short paragraph about a shape.

Steps in the lesson: (whole group activities and use of targeted differentiation strategy)

Introduction: At their desks, review shapes with students by playing "I spy" with different shapes in the room, i.e. "I spy with my little eye, something that is a rectangular prism…"

Body: Divide students into groups of 4-5 and have them play with the "feely bag" (a bag filled with various 3-d shapes- students take turns putting their hand in and describing a shape without taking it out of the bag. The other students try to guess the shape).
Have students individually write a short paragraph utilizing RAFT, where students take on the role of a particular shape. For example, Role- Sphere, Audience- Partner, Format- Clue, Topic- 3-D objects. In partners, have students read out their RAFTs and have the partner guess the shape.

Closure: Ask students to come back to desks. Have a few students read their RAFTs to the whole group, and as a group discuss which shapes were more difficult to guess and why. Answer questions, review, and inform students about next lesson.

Assessment: Have students had in their RAFT paragraphs. Use a rubric to determine whether students understand the basic properties of their chosen shape- can it be rolled or stacked, does the shape have any points or edges, how many faces? Etc. Use an observation checklist to determine if students are orally discussing shapes during the feely bag activity.

Rationale for use of differentiation strategy: While RAFTs are generally used for creative writing exercises, they may also be modified to fit other curriculums. In this instance, students take on the role of shape, rather than a character. Students learn about various properties of shapes by describing the characteristics of specific 3-D shapes. Student learning is enhanced by working individually, in small groups, and in a large group. Students also work visually, orally, and kinesthetically to reinforce understanding.