

# Zome System

*Builds Genius!*

## ***Descriptive Writing***

### Language Arts / Mathematics Intermediate Concept

#### **Lesson Objective:**

Students will use geometric models to practice technical writing.

#### **Prerequisite Skills:**

Students need to have played with Zome System before.

#### **Time Needed:**

One class period of 45 to 60 minutes.

#### **Materials Needed:**

- One or two Zome System Creator Kits for class of 25-30 students

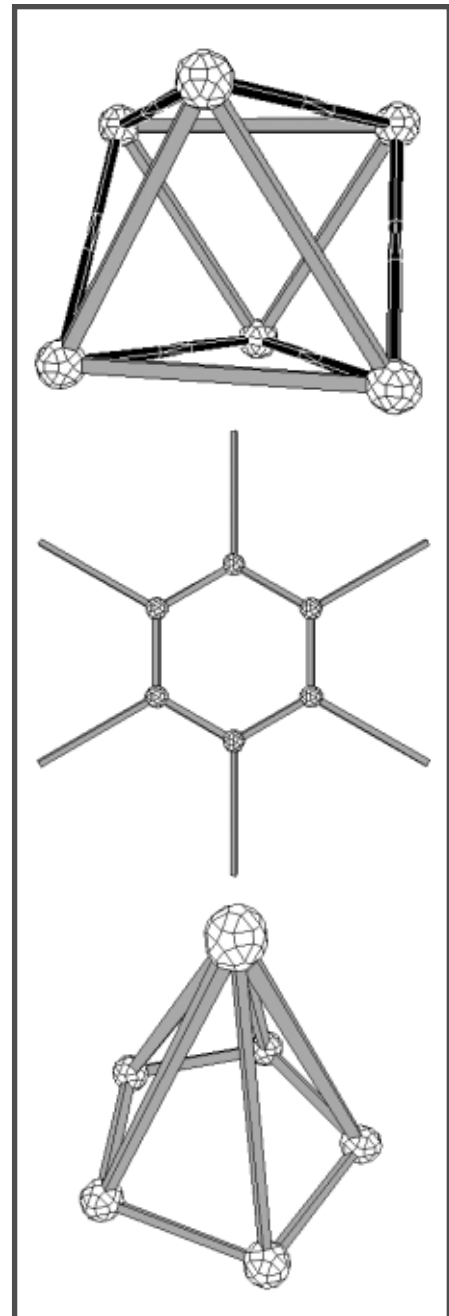
#### **Procedure:**

Introduce the lesson to the class as a practice session in constructing models from written descriptions.

Divide the class into pairs, and distribute the Zome System pieces. The pairs should re-arrange their seats so they are sitting back to back. Their task is to build small models based on descriptions written by their partner. Each student should first spend 10 minutes building a simple Zome System model, and writing a detailed description of it. The partners then exchange descriptions, taking care that they do not show the models. They then spend 5 minutes trying to re-create their partner's model. When the time is up, the pairs should compare the original models to those built using the descriptions. *Are the models identical? If not, why? Are the models built according to the descriptions? What was missing in the description to make a perfect copy?*

Following their discussion the student pairs should repeat the entire process and see if their discussion helped them write better descriptions

Bring the entire class together to share their experiences,



and discuss implications of the exercise. *Was this a difficult exercise? Why or why not? Were some types of models easier to describe than others? Which element needed to be present in the descriptions? Was it necessary to know any specific geometry vocabulary to write a good description? Would drawings have helped? What are practical applications of this type of writing skills? Which professions are required to be good at descriptive writing?*

The final task for the student pairs is to write a short manual of how model descriptions should be organized.

### Assessment:

Take notes while the students build and write their descriptions. Review their “description manuals”. To meet the standard, students must write a description clear and concise enough to allow their partner to build a copy of the Zome System model. To exceed the standard, they must produce a “manual” with a standardized method of writing model descriptions. They must also draw connections to real-life applications of descriptive writing skills of this type.

### Standards Addressed:

- \* Language Arts standards requiring students to write and speak for a variety of purposes
- \* Mathematics standards addressing the study of the geometry of one, two, and three dimensions in a variety of situations (NCTM Standard 12).

### Transfer Possibilities:

Working on geometric vocabulary (“Naming 2-D and 3-D Shapes”). Technical writing in connection with construction projects (“Bridge Building Unit”).

