

## LESSON: Reconstructing the Squares

**GRADE:** 2

### OBJECTIVES:

#### English Language Arts

#### **Speaking & Listening- Comprehension & Collaboration**

- **SL.2.1.** Participate in shared research and writing projects (e.g., read a number of books on a single topic to produce a report; record science observations).

#### Science

#### **Biological Evolution: Unity and Diversity**

- **2-LS4-1** Make observations of plants and animals to compare the diversity of life in different habitats.

### MATERIALS & RESOURCES:

- Square boxes (cardboard boxes or shoe boxes will work, two for each group)
- Sand or dirt (enough from each box)
- Representations of animals, plants and non-living objects (see Teacher Prep)
- Drawing tools

### PRESENTATION:

As a final *Square of Life* activity, students will work in their teams to review the data posted from other classes. Each team will be responsible for constructing a final presentation that will include a model or drawing of their own square and a recreation of a square from a partner school. Each group will also write a final summary/report of their project and display it with the square reconstruction. Students, teachers, parents, and community members will be invited to view the exhibit.

## **DIRECTIONS:**

### **Teacher Preparation:**

1. Each team will need to re-construct one of the squares from another school using the data that was posted online. To do this they will need a square box (it doesn't have to be a perfect square) filled with about 2 inches of dirt or sand on the bottom. You can also use clay if you can find other material.
2. Also needed are small cutouts of animals, plants and non-living objects on sticks. The students can make these by having drawing objects on 3x5 cards and then staple or glue the cards to sticks. (Popsicle sticks work the best)
3. Data from your partner schools is needed. To obtain this data go to the Project Data page located off the main project web site. From the list of schools, which have submitted data, select the schools that you want to include in this lesson. This lesson will be more effective if you schools that are in locations quite different from your own. In the last column of the table listing the schools who submitted data there is a link to more detailed observations. For each school you select click on the corresponding link in the last column. Then print out this page. It will contain the details of what was found in the school's square.

### **Activity #1: Building your model**

For this activity, do the following:

1. The goal of this activity is to create two models. One that represents the square of a partner school and one that represents the square that was studied by a particular group. These two squares will then be compared, contrasted, and placed on display. You can determine how much time to dedicate to this portion of the project depending on your student's' ability level and goals you want to set for the finished products.
2. You and your students can determine the form of the actual reconstruction and presentation. They can also determine the guidelines for the materials that will accompany the square.
3. Make scale models of the squares (50 cm x 50 cm squares) so that you can easily fit them in the classroom. If you have enough room, you can make full scale models.

4. Use the detailed observation obtained from the project database to determine what needs to go into one of the squares so that it represents what was found at the other school. You may need to read off the observations to each team and help them determine how to represent the different objects. Use the data that the group previously collected outside to create the model of their own square. When possible, find pictures of the objects if they have never seen them. The Reference Materials web site has resources that may supply you with pictures.
5. Use the bottom of the box and arrange the actual materials (rocks, sticks, sand, leaves, dirt, etc.) or as well as the representations.
6. As the group builds both of the squares have them start thinking about how they are similar and how they differ.

### **Activity #2: Presenting your findings**

For the final activity, do the following:

1. Each group should have a display board, which should include a small world map with the location of partner school pinpointed, colored, or outlined, and a written description of the project. For younger students, you may need to help them write out the descriptions or have them dictate them to you to write out
2. Each project should include the following: What did we do? Students briefly summarize the steps of the project beginning with the plotting of their own square meter. How did our square compare with the partner school's square? How were they alike? How were they different?
3. What did we learn about our partner school's environment from this project? What are some plants and animals that live in our partner school's country/state that we don't have in our location? What were the five most interesting things we learned about the country/state? Where the partner school is located?

4. Display may also include: A cut-out outline of the partner school's state or country showing the location of the specific city or town Print-outs of descriptions/messages/postings from the partner school Samples of work from the students' folders such as creative writing and art Pictures of people, scenes and objects If applicable, cards with some common words in the partner school's language or dialect Travel brochures - commercial or student designed. Student designed fact sheet about the other state or country. If you wish to have your student's work placed on display in the Student Area the project web site you can do so by submitting pictures of your models and classroom to the project leader. The project leader will then do the work of publishing these onto the project web site. If you are interested in submitting pictures please read the information in Online Help entitled "How to Publish Student Work Online."

**TIME:** **2-3 hours over a two-week period**

### **PROCESSING THROUGH THE SIX PILLARS:**

#### **WHAT?**

- Did the Class treat the presenter the way you want to be treated when it is your turn to present? Please explain why or why not.

#### **SO WHAT?**

- How do you show respect for the student making their presentation?

#### **NOW WHAT?**

- Are you more at ease in presenting in front of the Class, when you know there is agreement in the Class to show respect for presenters?

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