

Silent Squares



Overview:

Students are introduced to the activity as simply a fun game, a game that they can learn from. Silent Squares builds students' cooperative learning/working skills while facilitating students' discovery and development of a variety of systems principles with universal applications. Systems principles and understanding of interdependence emerges from students' reflection on their experience in the game.

Key Concepts:

- Process and function aspects of elements in one system can correspond to or be the same as the process and function aspects of different elements within an entirely different system.
- One universal element of successful systems shows that things that appear different on the outside, actually have much in common. *i.e. different cultures, races, religions share a common humanity, love of family and physical needs.*
- Pay attention to other's need first, and your needs will be met. *i.e. your self-interest will be served by serving others' self interest.*

Contexts for Use:

- As a prelude for any lesson or activity where students work in cooperative groups.
- To establish systems principles for lessons that build on those ideas.

Grade levels: K-12 with adaptations

Objectives:

- Perform a game with follow-up reflection to establish systems principles.
- Create foundational understanding of systems for application to all study.
- Definition of a system, and principles for sustainable system functioning
- Development of cooperative group skills

Preparation:

- Use the answer key to create puzzle pieces on card stock and cut out puzzle pieces. Put pieces in correctly numbered envelopes to make a set of 5 envelopes. Label each envelope with the same number as the numbered puzzle pieces inside.

Playing the Game

1. Introduce the game to students:

A) "Today we are going to play a game. The purpose of this game is to have fun of course, but we are going to get more than fun from the game. The game has some very interesting and important ideas to teach is about how the world works."

Optional Information:

Our game is what we call a "simulation" of something in the real world. Do you know what a simulation is? <<discuss>>

A simulation is like a model. What is a model? <<discuss>>

B) We will learn about something called "systems thinking," but you don't have to worry about that right now. We will use some of the terms, but they are just part of the game. We will learn what the words mean after we play when we think about how we played the game and what happened. Right now, don't worry about any of that, just pay attention to what happens and have fun!"

2. Instructions:

- A) When asked to begin, students will open their envelopes and take out all of the pieces and put them on the table.
- B) Their goal is to create 5 separate systems. Each will be the same size and shape. The letters on the shapes have nothing to do with how to create the system. None of the pieces from any one envelope can complete a system.
- C) The game proceeds with students (elements) passing pieces to each other until success is achieved while following these restrictions:
 1. **Silence, no talking**
 2. **No pointing or other hand signals (no footsies, no blinking codes, etc.)**
 3. **No taking, only giving, one piece at a time**

Goal for system success: Each element of the system must have their own perfect square created from the pieces.

Students are not competing with other groups (systems). The only advice you should give is the guideline:

NO ONE IS DONE UNTIL EVERYONE IS DONE

Teach Speak: Resist giving any advice beyond this guideline initially!! It is extremely important not to do their learning for them. Let them struggle. They will eventually discover what they need to do to reach success, and these actions and strategies will be the focus of the debriefing and reflection. Depending on the ability or grade level you are working with you can make modifications.

Modifications for K-3:

1. Use squares with only two pieces.
2. Provide more support and advice during the process
3. Modify debrief questions—make them very simple and related to the experience

1 Set of Silent Squares

