

## TEKS-Based Activity Starter for Grade 3

# The Sum of the Parts

### Description:

In this activity, students investigate, describe, and record characteristics of simple systems.

### Time Frame:

1 lesson (45 minutes)

### Correlation to Texas Essential Knowledge and Skills:

During this activity, students will be exposed to the following Texas Essential Knowledge and Skills:

**(3.5) Science concepts.** The student knows that systems exist in the world. The student is expected to:

- (A) observe and identify simple systems such as a sprouted seed and a wooden toy car; and
- (B) observe a simple system and describe the role of various parts such as a yo-yo and string.

**Note:** The TEKS listed here are the main content TEKS for this activity; however, this activity may also cover additional content and process skills included in other TEKS.

### Materials:

Pictures of various animals and plants (several per student group)  
Simple toys such as cars, yo-yos, and whistles (several per student group)  
Flashlight (1 per class)  
Portable pencil sharpener (1 per class)  
Chart paper (2 pages per student group)  
Markers

### Background Information for the Teacher:

Systems exist everywhere, and students interact with them every day. A system is composed of parts that, together, have an organized form and function. Examples of systems are organisms, machines, school districts, ecosystems, and computer networks. Systems can be observed in and out of the classroom. The school and the community are systems composed of subsystems that interact and work together.

By studying the systems in their environment, students distinguish between the form and function of systems. This view of systems builds the foundation for student understanding of the basic laws, theories, and models that scientists use to explain the way the world works.

One common, yet important, system that students can observe is soil. Soil makes up one-fourth of the earth's surface and is itself made up of many different-sized grains of eroded rock. Depending on the combinations of sand, silt, and clay, soil can be made strong enough to build a house or weak enough to run through your fingers.

**Advance Preparation:**

1. Collect several pictures of animals and plants from magazines for each student group.
2. Collect or ask students to bring in several simple toys such as cars, yo-yos, and whistles, along with a flashlight, and portable pencil sharpeners.

**Procedures:**

1. Divide students into groups and give each group a piece of chart paper and either a picture, a toy, a flashlight, or a sharpener.
2. Have groups create a word web on their chart paper that describes their picture or object.

<b>Note:</b> Do not tell the groups that their picture or object is a system.
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3. Once each group has created a word web, write the following words on the board: "Function," "Parts," "Properties," and "Patterns."
4. Ask each group to look at their word web and see if any of these words could be used as a heading to group the words on their web.
5. Give each group another piece of chart paper and ask them to use the words on the board as headings for a second word web describing their picture or object.
6. Have groups share their information with the rest of the class and add information to their second word web during the discussion.
7. Display each chart and ask students if all of the pictures and objects could be identified with one title or heading. Tell students that the term "systems" is often used to describe these pictures and objects.