

The Wind Blows: Essential Elements of Life

Instructions

To play The Wind Blows, which is similar to musical chairs, there must be one less seat than participants in the circle (in our class, we ask that each student sit on one gardening cushion).

In this Essential Elements of Life version of the game, each student should also be given a sign to hold up throughout the game that indicates which key player (bacteria or one of the six essential elements) they are.

The person standing reads the first Wind Blows card and all players for whom the sentence applies must stand up and find a new seat, moving at least 3 spaces away from their original seat. The standing person also finds a seat, so whoever is left without a seat replaces the standing person next to the pile of cards. First, the standing person from the first round reads aloud the back of their Wind Blows card from their new seat, and then the new standing person reads the next Wind Blows card. The game continues until time or cards have run out.

Cards

Make a card with the wind blows prompt on the front and the associated information (written in italics below) on the back. Cards can be used in any order.

FRONT OF CARD: The wind blows for any element found in water.

BACK OF CARD: *Each molecule of water is made up of two atoms of hydrogen bonded to one atom of oxygen.*

1. The wind blows for any element found in water.
Each molecule of water is made up of two atoms of hydrogen bonded to one atom of oxygen.
2. The wind blows for the element that comes to the compost through manure.
Sulfur is found in the manure layer of the compost pile. Bacteria convert it into a form that is absorbable by plants.
3. The wind blows for the element in the “browns” layer of the compost.
Carbon is added to the compost through straw, twigs and the other brown ingredients.
4. The wind blows for the element that becomes available when rocks break down.
Phosphorous comes from the erosion of rocks. Ants and earthworms help to make it more available by breaking up soil particles and moving minerals around.

5. The wind blows for the element that is converted in the nodules of legume cover crops.
Bacteria living in the nodules of legume plants convert nitrogen into a form that the plant can use.
6. The wind blows for the organisms that convert elements into usable compounds that plants can absorb.
Bacteria excrete carbon, nitrogen, phosphorous and sulfur through their bodies.
7. The wind blows for the element that humans directly absorb by taking in a breath.
Oxygen comprises 65% of the human body.
8. The wind blows for the elements that make up carbon dioxide.
Carbon dioxide, or CO₂, is made up of Carbon and Oxygen. Humans exhale CO₂ into the atmosphere. Trees and plants absorb it from the atmosphere.
9. The wind blows for the elements that are necessary to sustain life on earth.
Carbon, Hydrogen, Nitrogen, Oxygen, Phosphorous and Sulfur are the six elements essential for life.