The Vocabulary of Science

Science learning involves lots of new vocabulary words. When helping your child learn new science words, focus on words that allow you to teach more than just that one word. This can be done by considering a word’s morphemes. A morpheme is a meaningful part or unit of a word that can’t be divided into smaller parts. It isn’t important that your child know the word morpheme itself, but it is helpful for your child to learn that words may be related if they share a morpheme. There are different types of morphemes, including root words, prefixes and suffixes. Below you’ll find some science words, their morphemes, and some related words.

### Common Science Words and Morphemes

<table>
<thead>
<tr>
<th>Science word</th>
<th>Morpheme (meaning)</th>
<th>Related words</th>
</tr>
</thead>
<tbody>
<tr>
<td>Photosynthesis</td>
<td>Photo (light)</td>
<td>Photography, photograph</td>
</tr>
<tr>
<td>Thermometer</td>
<td>Therm (heat)</td>
<td>Thermos</td>
</tr>
<tr>
<td>Microscope</td>
<td>Micro (small), scope (see)</td>
<td>Microwave, stethoscope</td>
</tr>
<tr>
<td>Geology</td>
<td>Geo (earth)</td>
<td>Geode, Geometry</td>
</tr>
<tr>
<td>Graph</td>
<td>Graph (write)</td>
<td>Autograph, bar graph</td>
</tr>
</tbody>
</table>

### How do I use this information?

Using morphemes helps you teach more about word meanings and families of related words. If they learn, for example, that micro means small and scope means see, they can figure out that a microscope is an instrument scientists use that helps individuals to see small objects. Once your child recognizes the meaning of a morpheme, she can use that information to learn other new words. When you’re reading and you come across another word that shares a morpheme, you can help your child make a connection. “The boy in this story is using a periscope to see over a fence. What do you think a periscope might be? How is that related to the word microscope?”

It isn't necessary to break apart each new word into its morphemic parts. Try to focus just on the words for which you can develop a few related words. You and your child will have fun building your word families together.
Literacy in the Sciences: The Vocabulary of Science

Recommended children’s books

Clouds
By Anne Rockwell

Learn about 10 different types of clouds — cirrus, stratus, and cumulus — as well as cirrostratus, cirrocumulus, cumulonimbus, altostratus, altocumulus, nimbostratus, and stratocumulus! The author describes each type of cloud formation, explains where it is found in the sky, and tells what kind of weather is associated with it. The book ends with simple instructions for making your own cloud. (Age level: 3-6)

The Greedy Triangle
By Marilyn Burns

Learn about basic polygons and geometry in this charming story of an adventurous triangle that wants to change — into a quadrilateral (a television or book), then into a pentagon (a house) and so on. The clever text reveals unusual places to find different geometric shapes. In the end, the triangle realizes he is happiest as three-sided figure: he can hold up a roof, be a slice of a pie and, slip into place when people put their hands on their hips. (Age level: 4-8)

The Magic School Bus Inside the Earth
By Joanna Cole

Hold on for another exciting field trip with Miss Frizzle and her students — this time, it’s to the center of the earth! The class collects rock samples before the bus is tossed from the earth’s core in a volcanic eruption. (Age level: 4-9)

New Questions and Answers About Dinosaurs
By Seymour Simon

Kids and adults have long been fascinated by dinosaurs. Did you know there are about 350 different kinds of dinosaurs and that new ones are found every year? Find the answers to lots of questions you and your child might have: Were all dinosaurs giants? How are dinosaurs named? Which was the largest meat-eater? and How smart were the dinosaurs? (Age level: 3-9)