



# How Emerging Contaminants Impact the Environment

Suggested Grade Level 6

<b>Objective</b>	The students will create a local city or neighborhood plan to control the impact of emerging contaminants with information from the United States Geological Survey (USGS) Web site. They will relate emerging contaminants to potential changes in local ecosystem sustainability.
<b>Materials</b>	<ul style="list-style-type: none"> <li>• AVMA poster</li> <li>• Internet access</li> </ul>

<p><b>Procedure</b></p> <p><b>National Standards:</b></p> <p><b>Language Arts</b></p> <ul style="list-style-type: none"> <li>• Research issues</li> <li>• Problem/solution</li> </ul> <p><b>Science</b></p> <ul style="list-style-type: none"> <li>• Science and technology</li> <li>• Personal health</li> </ul>	<ul style="list-style-type: none"> <li>• The teacher begins by asking student volunteers to define the words “contaminant” and “ecosystem.” Then, the teacher asks students to think about how a contaminant might effect an ecosystem.</li> <li>• The United States Geological Survey (USGS) is tracking emerging contaminants. Tell students to go to <a href="http://toxics.usgs.gov/regional/emc/">http://toxics.usgs.gov/regional/emc/</a> and explore the site to learn about emerging contaminants and answer these questions: <i>What is an emerging contaminant? What impact do emerging contaminants have on the environment? Where do they track them? How might a veterinarian help in tracking?</i></li> <li>• Tell students to go to <a href="http://toxics.usgs.gov/photo_gallery/emercont.html">http://toxics.usgs.gov/photo_gallery/emercont.html</a> and note the photos shown here. Have the students explore each link on the photos and write down what they learn there, along with what they learned in the previous link.</li> <li>• As a class, discuss why emerging contaminants have become such a problem in the past few years. Have students think about what we can do to reduce their impact.</li> <li>• Next ask each student to identify specific emerging contaminants present in their local city or neighborhood. In groups of four, have students create a city or neighborhood plan to reduce the impact of emerging contaminants as if they were able to write laws and enforce those laws.</li> <li>• Have students or student groups compare their proposed city plans and discuss what they have written that is similar and what is different.</li> <li>• As a class, create a single city plan that incorporates the best ideas of each of the students or student groups.</li> </ul>
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<b>Ideas to extend this lesson</b>	Have students locate the names of their elected state legislators and send their proposed city plan to those individuals. Alternatively, send the plan to their state representatives in Congress. Call the USGS at 1-888-ASK-USGS or visit their Web site <a href="http://www.usgs.gov">www.usgs.gov</a> to see if <i>Source Characterization Studies</i> are being conducted locally. If so, see if the veterinarian or other scientist collecting the data could come to your class to describe what is being done.
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