

<b>ESS 110: Introduction to Geology</b> Dr. Woltemade  Marcellus Shale	<b>Name:</b> _____  <b>Section (circle):</b> <b>8:00 AM</b> <b>9:30 AM</b> <b>11:00 AM</b>
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Instructions

Use your lecture notes and linked websites to answer the following questions.

<b>1. Read the <a href="#">USGS publication</a> on Water Resources and Natural Gas Production from the Marcellus Shale.</b>	
What is the geographic extent of the Marcellus shale in Pennsylvania and surrounding states?	
In what environmental setting were the sediments deposited to form the Marcellus shale?	
What color is the shale? What natural resources are associated with that color?	
Briefly describe the process of “hydraulic fracturing” (aka “fracking”).	
How much natural gas is contained in the Marcellus shale (number of years of US gas consumption that could be supplied)?	
Name 3 key water resources concerns from fracking in the Marcellus shale.	1.  2.  3.

<b>2. Fracking and natural gas production in Pennsylvania. See the <a href="#">State Impact Pennsylvania</a> map of natural gas wells in the PA Marcellus shale.</b>	
How many natural gas wells have been drilled in the Marcellus shale in PA?	
In what parts of the state are the most wells located?	