**Soil and Society Issues Homework**

The purpose of this homework is to start researching locally and broadly important issues in the context of soils that may be used for your Soils, Systems, and Society Kit. The follow-up questions will help you start to think about these issues in the context of Earth and interdisciplinary systems, data, and how these issues can be incorporated into grade appropriate standards-aligned K–8 lessons.

1. Complete the table below for your chosen focal issue(s). Before going on, read over your suggested questions to make sure they are testable. Remember that you should be able to identify your manipulated (or different groups observed) and responding variables in the question for it to be testable.

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| **Local Importance** | **Broad Importance (Grand Challenge)** | **Testable Questions (At least two; one should be about soils.)** |
| Local forests are being clear-cut to allow planting of Douglas fir | Sustainable forest practices | Do buffer zones around creeks improve water quality and impede soil runoff?  How will a monoculture of Douglas fir affect associated species in the ecosystem? |
| With climate change, less water will be available for agricultural use in our state | Water as a resource | How does crop choice affect water usage?  How does soil composition affect water retention? |
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1. How might your issue(s) interact with economic, social, and political systems?
2. Choose one of the testable questions you listed for one of the focal issues you researched. For this question, describe at least two *different* kinds of data (e.g., quantitative field, maps, images, quantitative lab) you could collect or obtain to address this question.
   1. What question did you pick?
   2. Describe the data you are collecting.
   3. Why are you collecting these data?
   4. Describe one method that you might use to collect or obtain each type of data.
3. Briefly describe at least two activities you might do with a K–8 student to teach about your issue. Include references for these activities if necessary.