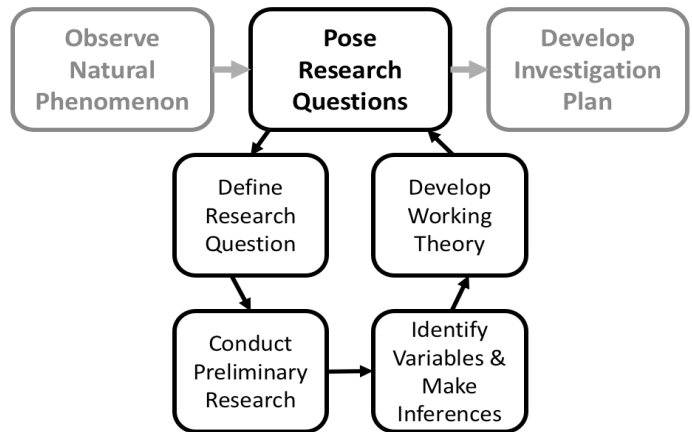


## Posing Research Questions

Once students have had the chance to observe natural phenomenon (Step 1 of the GMSSR), they will have enough prior knowledge/ experience to begin posing potential research questions. Depending on your content goals, schedule, and/or student's interests, the research question that frames your field measurements will vary. You may want to ultimately choose the research question yourself, or you may want your students to work together to choose the research question.

Either way, it is important for your students to understand this crucial part of the scientific process, as it will help them to understand the ultimate goal of their field research. The *Classroom Inquiry and Student Research* document (on the GLOBE Carbon Cycle webpage under Resources — Scientific Process) contains specific information and examples to help you guide your students through this process.



There are many possible research questions that can be investigated by measuring the biomass and carbon stored in the vegetation of a sample site field plot. Below are example research questions that have been developed by the GLOBE team.

### Example Research Questions

- How much carbon is stored in the vegetation of my sample site?
- How much carbon is stored in the vegetation of my schoolyard?
- Do different vegetation types store different amounts of carbon?
- Is there more carbon stored in the global human population or trees in New Hampshire?
- What is the pattern in which biomass and carbon storage change over time in my sample site? \*
- What is the Net Primary Productivity (NPP) of my sample site? Is it changing over time? \*
- How does the uptake of carbon by schoolyard vegetation compare to the emissions of carbon (carbon footprint) by the school? \*
- How many more trees would we need to plant to completely offset the emissions of carbon (carbon footprint) by the school? \*

*\*Multiple years of data are needed to answer these questions.*