**The not so kind, Farmer Joe…**

After a week of rainy weather in late May, followed by a gorgeous few weeks of sunshine in June, the bay a few miles from the Farmer Joe’s house became covered with a greenish film. A local news reporter, Saidy Rivers, looked into the matter and found that it was an algae bloom. Knowing that the only local farm around was Farmer Joe’s he decided to have a talk with him, and arranged a meeting. But before he went to meet Farmer Joe, he did his research and prepared a hypothetical situation in order to explain, just how “unkind” Farmer Joe was being.

1. Explain what an algae bloom is?
2. What element can cause the algae to increase in number? How did this element make its way from the fertilizer used by Farmer Joe to the river?
3. Saidy Rivers prepared a hypothetical situation below. Using the food web she found, help her to:
4. Explain any and all changes to the food chain after being polluted.
5. What is the danger in having a “blanket” like film on the surface of the water?
6. Suppose the phytoplankton produced a toxin, like the toxin produced by the algae that are known for Red Tide. Which organism has the greatest concentration of the toxin produced? Which has the least?

Food Web:

Large Fish

Small Fish Clams (fliter feeders)

Zooplankton

Phytoplankton