## 1. Identify in Context

In the abstract below, (1) highlight all verbs and (2) mark them as either active voice (A) or passive voice (P). Use the Comment function in your word processing program to mark the verbs.

Gross primary production and ecosystem respiration together deﬁne ecosystem metabolism and help indicate the importance of internal and external carbon sources. Spatial variability of these processes is poorly characterized in rivers. We measured metabolism in the Kansas River: (1) at 10 locations over 100s of km in tributaries within the watershed and (2) over 20 km with detailed sampling in the main stem. Whole-river metabolism at the larger scale was decoupled from light, algal growth , and nutrient limitation, and was positively related to nutrients. Smaller-scale main stem sampling revealed almost as much variance over a few kilometers as the larger scale sampling. Local processes seemed to dominate dissolved oxygen dynamics, since diurnal dissolved oxygen patterns were better correlated with absolute time than data corrected for travel times. A single-station method compared against two-station metabolism methods indicated that local hotspots of metabolism occur at scales less than 1 km and that single-station estimates average out this variance. The main stem data provide support to the idea that functional processing zones control characteristics used to estimate system metabolism, but the nutrient effect at the whole watershed level indicates that transport from upstream can also be important.

[Dodds, W.K., S.A. Higgs, M.J. Spangler, et al. 2018. Spatial heterogeneity and controls of ecosystem metabolism in a Great Plains river network. *Hydrobiologica*.]

## 2. Writing Practice:

Use the notes in the box below to write a paragraph about the scientific study of wasps. For each sentence you write, choose either an active or a passive voice verb. Consider the legitimate uses of passive voice on the Fact Sheet.



* scientific label for wasps = “vespidae”
* nearly 5,000 species of wasps
* colonies: thousands of small worker wasps, queens, and male cells
* nests of most species: mud or plant fiber
* wasp jobs in the environment: effective pollinators and notable predators of pest insect species
* diverse diet of carrion, live arthropods, fruit, honeydew, processed human food and garbage

Write your paragraph in this box.