PS: K-8 Engagement Activities - Grid work

Exploration: K-8 Problem Solving - Grid work

Tools Required: None

Pre-requisites : None

This exploration explores another one of the three key activity categories in K-8 CS: grid work.

Background:

Educational literature shows that the development of spatial reasoning confers significant cross-disciplinary benefits. Use grids of multiple dimensions around your classroom, including floor grids, that students can physically move through comfortably. If your classroom doesn't permit "permanent" floor grids traced with painter's tape, consider creating shower curtain liner grids that can be easily removed. [*IndianaComputes!* is committed to the least expensive tools for the highest quality CS pedagogy, but a relatively inexpensive ($25) CS grid for the beginning grades is the CodeHopper. In the video you can watch next, you will see mention of sequential, branching and looping tiles demonstrated with the CodeHopper. These are most of the essential programming elements introduced in the first module of the upcoming programming unit.]

Code Hopper by Mindware STEM Toys Review   **(https://www.youtube.com/watch? v=oV2TJO9T898)**

▷

(https://www.youtube.com/watch?v=oV2TJO9T898)

Reflection:

Think about ways you can utilize grids in your classroom to represent location and illustrate story lines. Scale these activities by including grids of multiple dimensions (the number of cells is held constant but cell size is bigger; the total area is kept constant but the number of rows and columns grows) and placement (on the floor or hung on the wall). Observe your students (or think about past student behavior). Do you/could you see cognitive lift in spatial reasoning? What did/would that look like?