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Analyze the Demands of the Task

There is lots of logical thinking needed to work out this problem. Students have to think algebraically as they mess around with multiple constraints to figure out two unknowns.

As far as language goes, there are everyday words to understand, like *vehicles, bicycles, go-carts, seats, wheels*. Stuff like that. They also have to understand *each* and *only*-as in each bicycle has only one seat and each go-kart has only one seat.

There are spatial ordering demands. So if students decide to draw any pictures as they work on this problem, they'll have to organize them somehow. So that's a spatial ordering demand.

Students' short term and active working memory will be in demand since they have to remember to meet two constraints rather than one, which is what they are more used to doing.

They will have to stay focused and self-monitor as they check their work; so attentional demands.

They will be talking with each other and collaborating as they compare their thinking and explain their solutions to partners.

There's a lot in play!