Brainstorm at least THREE factors that may affect spin duration in tops.

*A* ***factor*** *or* ***variable*** *are parts of the top that you as the scientist can change. Your goal is to brainstorm variables that you think will affect or change how long your top will spin.*

Choose ONE factor from above and write your TESTABLE QUESTION.

*A* ***testable question*** *is a question that you can answer by taking measurements and making observations.*

* *Does your question have variables you can* ***measure****?*
* *Does your question require CHANGING only ONE variable?*

Investigation notes

* *Simple drawing of the top(s) you will build*
* *Label the drawing to show the variable you will change*
* *List the materials you will need to build your tops (be specific)*
* *Predict what you think will happen. Which top will spin the longest? Why?*

Data Table

*Create a data table to help you organize and record your data. Before creating your data table, think about what you will be measuring in your investigation and how many times you think you should test your top.*

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Conclusions

* *What are your DATA?*
* *What patterns do you notice in your DATA (longer, shorter, remain the same)?*
* *Was this what you expected? Did anything surprise you?*
* *What can you conclude about the variable you changed and how it affected the spin duration of your top?*

Reflecting on the scientific process

* *Which science practices did you use?*
* *Which parts of the activity were exciting?*
* *Which parts of the activity were frustrating?*