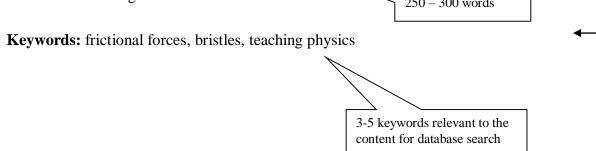


## **Abstract**

We present simple apparatus designed to help Thai high school students visualize the directions of frictional forces. Bristles of toothbrushes, paintbrushes and scrubbing brushes are used to demonstrate the frictional forces acting in a variety of situations. These demonstrations, when followed by discussion of free-body diagrams, were found to be effective in teaching frictional force directions. 250-300 words



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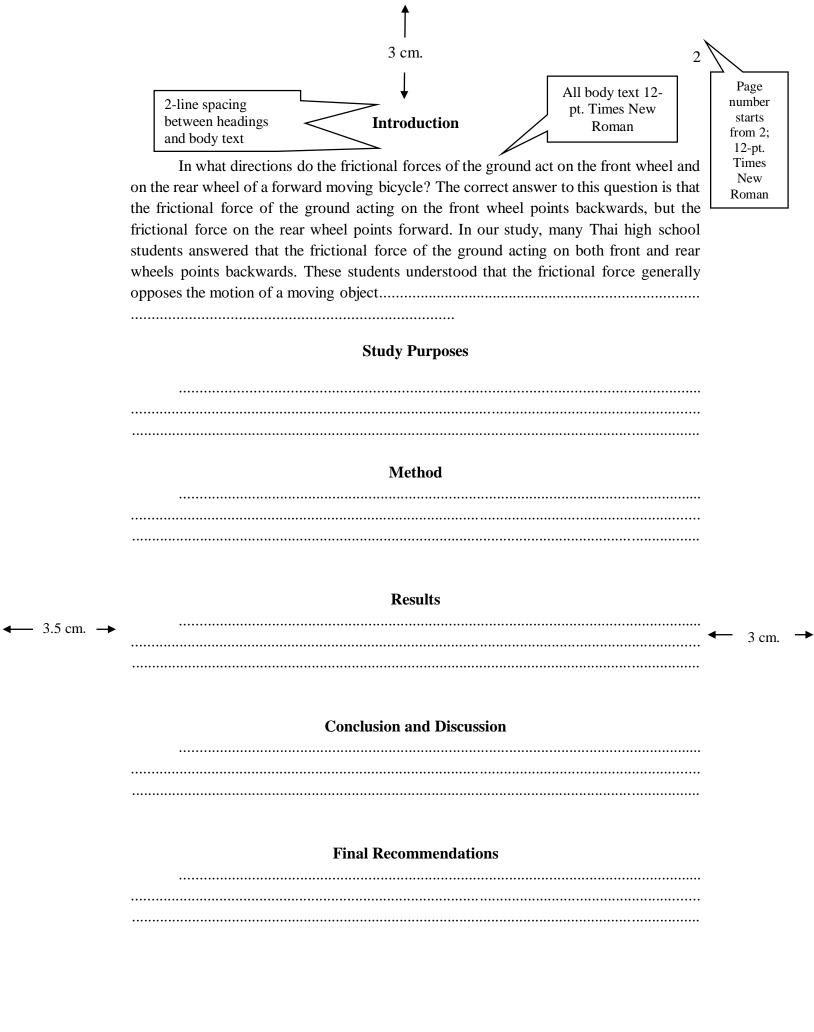
Authors' affiliations

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## In-text citation and references

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http://www.jba.tbs.tu.ac.th/files/APA\_Style.pdf