Outline of Kinesthetic Kinematics

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Abstract

I. INTRODUCTION

Physics concepts are particularly suited to be explored via kinesthetic activities. Indeed, concepts in physics, such as kinematics and dynamics are central to our kinesthetic experience of the world. A number of authors have begun incorporating kinesthetic activities

A. Active learning

Cite Holmes & Weiman 2018

B. Active learning activities in literature

C. Kinesthetic Activities

1. Difficulties implementing kinesthetic activities

D. The Technology

II. THE ACTIVITY

A. 1-D

1. Constant velocity

Comparing x(t) slopes with measured velocity

Out and Back - same area under v(t) graph

Out and Back - different areas under v(t) graph

2. Constant acceleration

Examining x(t) graphs with constant a

3. Rotational Motion

B. 3-D

Constant velocity in one direction, step-wise changing velocity in other

Determining x-y position plots from x(t) and y(t) plots

1. Rotational Motion

C. Novel approaches to

III. CONCLUSION

Encourage students to think of their own ways to do the activities.

Teacher rolling ball - mention Murdock workshop

Inquiry based approach to activities

IV. ENDNOTES AND REFERENCES

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