

Introduction to Modeling Pedagogy

A 2-hour presentation to the McREL Math-Science Team
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- 1) Powerpoint presentation¹
 - a) What is a model?
 - i) Slides 13, 14, and 15

- 1) Vicarious lab experience²– Unit III – acceleration lab

- 1) Post video discussion – Unit III – acceleration lab
 - a) Question/answers about the lab activity
 - b) Eliciting the model from the lab experience
 - i) Developing the mathematical models
 - ii) How to draw a motion map

- 1) Deployment activity
 - a) Participant were assigned a problem from Unit III worksheet 1 to whiteboard
 - b) Participants presented whiteboard
 - i) Participants engage in modeling deployment activity
 - ii) Leader models classroom instructors role
 - iii) Question/answer about deployment activity

- 1) Powerpoint presentation cont.
 - a) How does modeling foster student understanding?
 - i) Slides 17 and 18
 - b) Student justification of the model
 - i) Slide 19
 - c) How does modeling change the work of the instructor?
 - i) Slide 20
 - d) Effectiveness of modeling
 - i) Slide 22
 - e) Modeling is science as inquiry
 - i) Slide 16

- 6) Conclusion and discussion

¹The numbers refer to the slide frames that were used from the “Colleague” ppt downloaded from the Modeling web page.

² Participants viewed the 5.5 minute video prepared by Jim Rynearson of Lincoln, NE to see how a Modeling lab experience is structured.