

Ropes - How Many Different Models?

Goal:

This lesson gives students a chance to think about many different ways of representing something.

Materials:

- Ropes, 1 per student
- Something to write with, 1 per students

Activity:

1. Each student is given a rope and tasked with demonstrating and writing down as many different ways the rope could be used to **model** something. The instructor provides a few examples (e.g. helicopter blades, a sine wave, a neck tie).
2. The instructor calls upon a few volunteers to present what they came up with.
3. Students pair up and repeat the exercise with 2 ropes.
4. The group discusses the following questions.

Questions:

1. What were some of the models you came up with?
2. In what ways is the rope limited as a model?
3. Did you notice any classes/groups/categories of things that you could model with the rope?
4. Were there any changes to your **mental model** of what a rope is useful for?
5. How were the models different when you had 2 ropes?
6. Were there any limitations introduced when you had 2 ropes to work with?
7. What did having 2 ropes allow you to do?