Landslide Model

Procedure

1. Make a Model  Work in a group. Use a milk carton that has one side and one end cut away to model a hill and a landslide. Set it up on a tray with a sheet of waxed paper on it. Add 1-cm layers of sand, pebbles, and diatomaceous earth to the bottom of the carton. Prop up the cut end of the carton with two books. Safety: Wear goggles.

2. Experiment  Slowly pour water on the material at the top of the “hill” until you cause a “landslide.”

3. When the landslide occurs, measure the volume of material that fell in the slide by pouring the material into a measuring cup. Record the amount as trial 1.

<table>
<thead>
<tr>
<th>Trial</th>
<th>Number of Books</th>
<th>Amount of Material</th>
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<tbody>
<tr>
<td>1</td>
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<td>2</td>
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4. Analyze Data  Clean out the carton and measuring cup. Repeat steps 1–3 two more times, changing the number of books to three and then four. Compare the volume of the material in the cup for each trial.

5. Collaborate  To get more data, compare results with other groups.
Conclusion

1. **Infer** What effect does the steepness of a hill have on a landslide?

2. **Analyze Data** In step 5, what might account for any differences in data?

Experiment

Make another model of a landslide. Use materials such as clay, larger rocks, and small pieces of sod. Repeat the experiment three times and average your results. **Infer** reasons for any differences.