S05.03.07 Handout

Understand water resistance and friction

You are going to investigate which surface provide the best grip.

Method

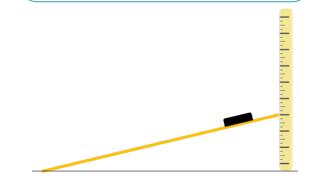
- 1. Cover a ramp in a material and place a weight at the top of the ramp.
- 2. Raise the top of the ramp gently while watching the weight .
- 3. As soon as the weight begins to slip, stop raising the ramp and record the height of the ramp.
- 4. Repeat this process changing the material on the ramp.

Height or ramp

Which material provided the largest frictional force? Suggest why this material has the largest frictional force.

Equipment

- Metre stick
- A short ramp
- Different materials; foil, felt, film, sandpaper, bubble wrap.
- Weight



Stretch Give an example of where friction is useful and an issue.

Challenge

Why do driver change their driving behaviour during different weathers.

Which material provided the largest frictional force? Suggest why this material has the largest frictional force.