MYTH
After falling off the edge of the kitchen bench, toast always lands buttered side down.

OBJECTIVE
To observe any changes in the aerodynamics of toast caused by falling from various heights.

BACKGROUND INFORMATION
The legend that toast will land buttered-side down is based on a scenario where the toast is on the table and when someone leans across the table for something else, the toast is pushed or dragged off the table to land on the floor. In this scenario, the way in which the toast leaves the table is important to how it will rotate in the air. The toast will either slide horizontally off the table (buttered side up), or it will flip 180 degrees due to the way it was pushed or dragged off the table.

Karl Kruszelnicki (1999) proposed that the toast may rotate only 180 degrees when it slides off a table, but when dropped from a greater height, such as the refrigerator, it would have time to flip over again. However, our experimentation found that once the toast is falling clear of the table (or refrigerator), the toast acts as a dead weight and will not continue to rotate.

WHAT YOU NEED
- Toaster
- Loaf of bread
- Butter
- Knife
- Boxes
- Ladder or height double that of bench
- Measuring tape

WHAT TO DO
Trial 1: Height of bench top butter side up
1. Toast the bread and butter it
2. Measure height of bench for trial one
3. Place on edge of bench
4. Push over side
5. Repeat 6-10 times and note results

Trial 2: Twice height of bench top
6. Use a height twice that of bench top, create by using ladder or boxes
7. Place a fresh piece of toast on edge
8. Push over the side
9. Repeat 6-10 times and note results

QUESTIONS
1. In what parts of the method are errors likely to occur? Discuss how these might affect your results. The consistency of the force when pushing the bread.
2. What other variables might you test to further investigate this myth? Trial other materials; a cracker will have a different period of rotation, whether different spreads will affect the weight of the toast and hence rotation, different angles the toast leaves from the starting position, the surface area from which the toast leaves. Start with the butter side down.
RESOURCES USED TO DEVELOP THIS ACTIVITY

   http://www.abc.net.au/science/k2/moments/gmis9908.htm