**“Food quickly picked up from the floor is safe to eat**…”

Scientists have put the commonly-cited **five-second rule** to the test.

Use the statistical enquiry cycle to conduct your investigation and write a report describing the investigation.

1. Familiarise yourself with the data set provided. This will include doing research to help you understand the variables and develop a purpose for the investigation.
2. Identify the variables you wish to investigate, and establish a related investigative comparison question.
3. Conduct your investigation and write a report containing:

* your comparison investigative question
* appropriate displays and summary statistics
* a discussion of the sample distributions
* an appropriate formal statistical inference
* a conclusion communicating your findings, which may include discussing sampling variability, including the variability of estimates and reflecting on the process that has been used to make the formal inference.

As you write your report, take care to link your discussion to the context and to support your statements by referring to statistical evidence.

*“I wonder if food that comes into contact with a tile or carpeted floor, picks up large amounts of bacteria – And -*

*I wonder which type of floor, tile or carpeted, transfers the most bacteria.”*

The dataset provided will allow one ‘kind’ of comparison (Tile vs Carpet); it can also be manipulated to enable you to compare each of the different ‘foods’.

(Refer to Sigma textbook page 179, for a basic idea of how you can modify a dataset to allow a comparison consistent with your pose.)

* I wonder if a ham slice picks up more bacteria from the floor than a cheese slice.
* I wonder if a Cookie picks up more bacteria from the floor than a Potato chip.
* I wonder if a \_\_\_\_\_\_\_\_ picks up more bacteria from the floor than a \_\_\_\_\_\_\_\_\_.
* Other?