

# The Apple-Wrapping Experiment

Food waste costs money and is a humanitarian issue because we need to ensure there is enough food to go round. We need to eat all the food we buy, so we need to know how to keep it fresh.

## Hypothesis

WE HYPOTHESISED THAT WRAPPING PIECES OF APPLE BEFORE STORING THEM IN THE FRIDGE WOULD KEEP THEM FRESH FOR LONGER. WE EXPECTED THAT PLASTIC WRAPPINGS WOULD KEEP THEM FRESHEST BY KEEPING OUT AIR AND SEALING IN MOISTURE.

## Results

AFTER RATING THE 3 PIECES FROM EACH WRAPPING, WE AVERAGED THEIR SCORES ON EACH DECAY CATEGORY TO GET ONE SCORE PER WRAPPING PER CATEGORY. WE THEN ADDED THE CATEGORY SCORES TO GET AN OVERALL SCORE FOR EACH WRAPPING. THE PLASTIC BAG WAS THE MOST EFFECTIVE WRAPPING. THE PAPER WRAPPING WAS THE LEAST EFFECTIVE.

## Discussion

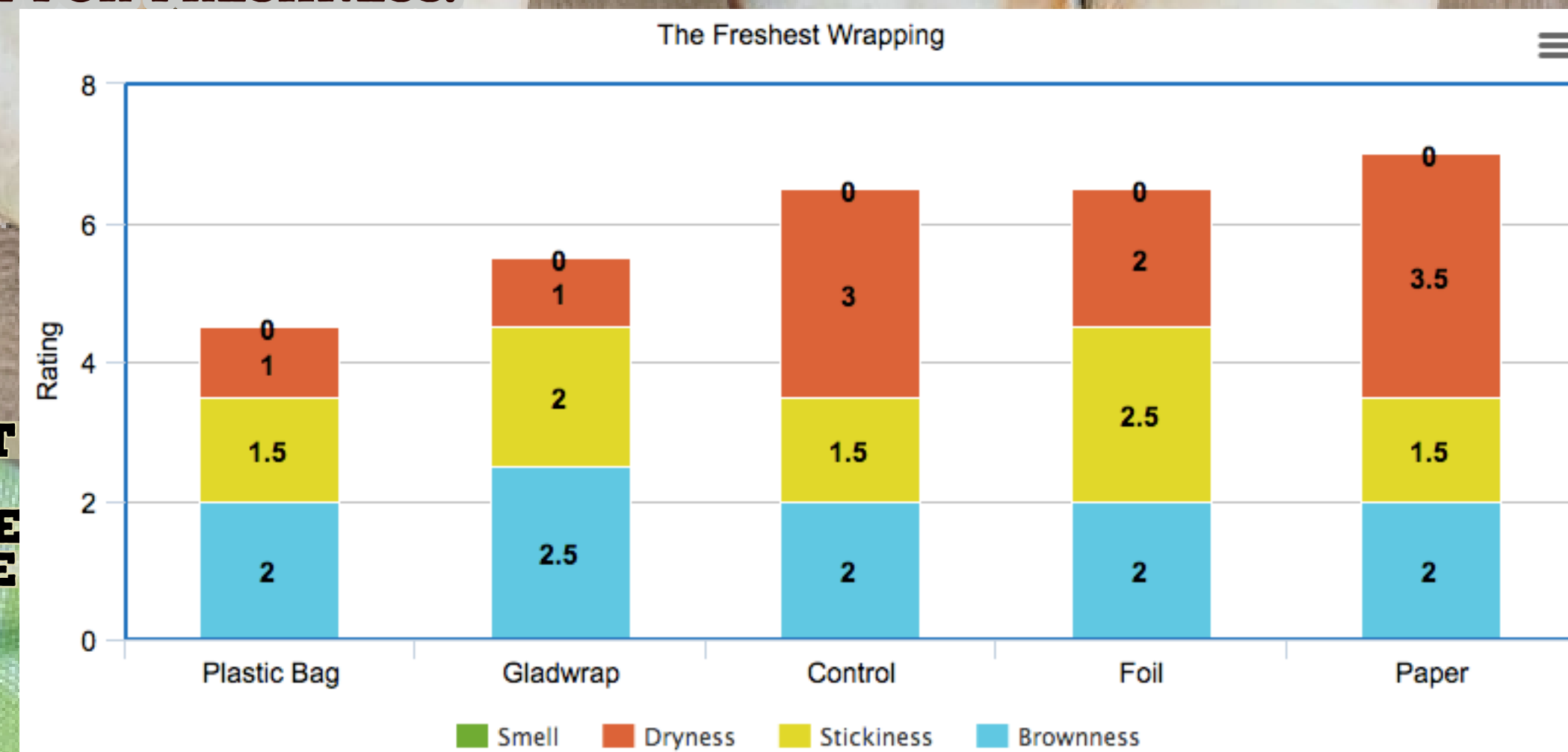
NOTABLE RESULTS WERE THAT THE PLASTIC BAG KEPT THE APPLE FRESHEST, AS WE HYPOTHESISED. THE GLAD WRAP MADE THE APPLE STICKY, PROBABLY BECAUSE IT STUCK TO THE SURFACE. THE PAPER, CURIOUSLY, LET THE APPLE DRY OUT MORE THAN THE UNWRAPPED CONTROL. FOIL DID NOT INCREASE FRESHNESS. NO APPLE PIECES HAD AN OFFENSIVE SMELL. FRESHNESS DID NOT MEAN THE SAME THING FOR ALL WRAPPINGS, BECAUSE EACH OVERALL RESULT WAS MADE UP OF A MIXTURE OF HIGHER AND LOWER SCORES FROM THE DIFFERENT CATEGORIES.

## Method

1. CUT 15 APPLE PIECES AND COVER 3 PIECES WITH EACH OF A. GLADWRAP B. FOIL C. PAPER D. A PLASTIC BAG. LEAVE 3 UNCOVERED.
2. STORE IN FRIDGE.
3. REMOVE AFTER 1 WEEK AND RATE FOR FRESHNESS.

## Definition

WE DEFINED "FRESHNESS" AS OFFENSIVE SMELL, STICKINESS, BROWNING OR DRYNESS (DESICCATION). EACH PIECE OF APPLE WAS RATED FOR EACH CATEGORY FROM 1 TO 5, WITH 1 THE MOST FRESH AND 5 THE LEAST FRESH.



WE COULD HAVE HAD MORE CONTROLS. WE CUT 3 BUT 2 OF THEM WERE EATEN BY PARTICIPANTS. WE COULD HAVE COMPARED RAW AND COOKED FOOD, OR FOOD STORED IN AND OUT OF THE FRIDGE. OUR JUDGEMENT OF FRESHNESS WAS SUBJECTIVE AND WE DIDN'T ALL AGREE ON THE RATINGS. AN OBJECTIVE MEASUREMENT, SUCH AS WEIGHT LOSS, OR A MICROSCOPE TO SEE BACTERIA, WOULD GIVE MORE ACCURATE RESULTS.