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## Research





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#### **Subject Areas:**

subject 1, subject 2, subject 3

#### Keywords:

one, two, optional, optional, optional

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# Template for preparing your research report submission to Royal Society Open Science using RMarkdown

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The abstract text goes here. The abstract text goes here.

## 1. Insert A head here

This demo file is intended to serve as a "starter file"" for articles submitted to the Royal Society Open Science journal using RMarkdown.

Place \EndFirstPage at the point where the plain text on the first page stops. Warning: excess text will be hidden behind the copyright box. The example below contains line 1 to 19 in the code. Lines 14 to 17 are hidden behind the copyright box.

#### (a) Insert B head here

Subsection text here.

#### (i) Insert C head here

Subsubsection text here.

Line 1

Line 2

Line 3

Line 4

Line 5

Line 6

Line 7

Line 8

Line 9

Line 10

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Line 12

Line 13

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Line 18

Line 19

THE ROYAL SOCIETY

### 2. Lists

- one
- two
- three
- fruits
  - apples
    - \* macintosh
    - \* red delicious
  - pears
  - peaches
- vegetables
  - broccoli
  - chard

#### (a) Citations

Blabla [1] blabla. Blabla [2] blabla. Blabla [1,3] blabla. Blabla [2,4-6] blabla.

(i) Headling level 3

Subsubsection text here.

#### 3. R code

R code can be added as usual. Fig. 1 is a an example.

```
summary(lm(mpg ~ disp, data = mtcars))
##
## Call:
## lm(formula = mpg ~ disp, data = mtcars)
## Residuals:
##
     Min
               1Q Median
                               3Q
## -4.8922 -2.2022 -0.9631 1.6272 7.2305
##
## Coefficients:
##
               Estimate Std. Error t value Pr(>|t|)
                          1.229720 24.070 < 2e-16 ***
## (Intercept) 29.599855
## disp
              -0.041215
                          0.004712 -8.747 9.38e-10 ***
## ---
## Signif. codes: 0 '***' 0.001 '**' 0.05 '.' 0.1 ' ' 1
## Residual standard error: 3.251 on 30 degrees of freedom
## Multiple R-squared: 0.7183, Adjusted R-squared: 0.709
## F-statistic: 76.51 on 1 and 30 DF, p-value: 9.38e-10
##
                                        disp
        mpg
                        cyl
                                                        hp
                                                        : 52.0
##
   Min. :10.40
                  Min. :4.000
                                  Min. : 71.1
                                                  Min.
   1st Qu.:15.43
                  1st Qu.:4.000
                                   1st Qu.:120.8
                                                  1st Qu.: 96.5
## Median :19.20
                 Median :6.000
                                  Median :196.3
                                                  Median :123.0
```

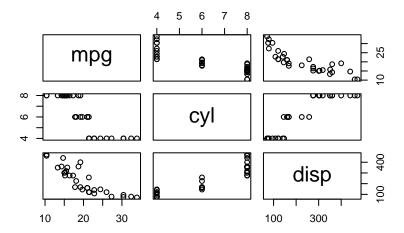


Figure 1. The caption

```
##
    Mean
            :20.09
                     Mean
                             :6.188
                                       Mean
                                               :230.7
                                                        Mean
                                                                 :146.7
##
    3rd Ou.:22.80
                     3rd Ou.:8.000
                                       3rd Ou.:326.0
                                                         3rd Qu.:180.0
                             :8.000
##
   Max.
           :33.90
                                               :472.0
                                                                :335.0
                     Max.
                                       Max.
                                                        Max.
##
         drat
                            wt
                                            qsec
                                                               VS
##
            :2.760
                     Min.
                             :1.513
                                       Min.
                                               :14.50
                                                        Min.
                                                                :0.0000
##
    1st Qu.:3.080
                     1st Qu.:2.581
                                       1st Qu.:16.89
                                                        1st Qu.:0.0000
##
    Median :3.695
                     Median :3.325
                                       Median :17.71
                                                        Median :0.0000
##
            :3.597
                             :3.217
                                               :17.85
                                                                 :0.4375
    Mean
                     Mean
                                       Mean
                                                        Mean
##
    3rd Qu.:3.920
                     3rd Qu.:3.610
                                       3rd Qu.:18.90
                                                         3rd Qu.:1.0000
##
           :4.930
                             :5.424
                                               :22.90
                                                        Max.
                                                                :1.0000
    Max.
                     Max.
                                       Max.
##
                            gear
                                             carb
          am
##
    Min.
           :0.0000
                      Min.
                              :3.000
                                        Min.
                                                :1.000
##
    1st Qu.:0.0000
                      1st Qu.:3.000
                                        1st Qu.:2.000
##
    Median :0.0000
                      Median :4.000
                                        Median :2.000
##
                              :3.688
            :0.4062
                                                :2.812
    Mean
                      Mean
                                        Mean
##
    3rd Qu.:1.0000
                      3rd Qu.:4.000
                                        3rd Qu.:4.000
            :1.0000
                              :5.000
                                                :8.000
    Max.
                      Max.
                                        Max.
```

Ethics. Please provide details on the ethics.

Data Accessibility. Please provide details on the data availability.

Authors' Contributions. Please provide details of author contributions here.

Competing Interests. Please declare any conflict of interest here.

Funding. Please provide details on funding

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Acknowledgements. Please include your acknowledgments here, set in a single paragraph. Please do not include any acknowledgments in the Supporting Information, or anywhere else in the manuscript.

## References

- 1. Lannes D. 2013 *The Water Waves Problem: Mathematical Analysis and Asymptotics*. Mathematical Surveys and Monographs. Providence, RI: American Mathematical Society.
- 2. Hur VM, Johnson MA. 2015 Modulational instability in the Whitham equation for water waves. *Stud. Appl. Math.* **134**, 120–143.
- 3. Benjamin TB, Feir JE. 1967 The disintegration of wave trains on deep water. Part 1. Theory. *J. Fluid Mech.* **27**, 417–437.
- 4. Benjamin TB, Hasselmann K. 1967 Instability of Periodic Wavetrains in Nonlinear Dispersive Systems [and Discussion]. *Proc. R. Soc. Lond. Ser. A Math. Phys. Eng. Sci.* **299**, 59–76.
- 5. Hur VM, Johnson MA. 2015 Modulational instability in the Whitham equation with surface tension and vorticity. *Nonlinear Anal.* **129**, 104–118.
- 6. Hur VM, Pandey AK. 2016 Modulational instability in a shallow water model. *Preprint* p. 1608.04685.