AS 3.9 Bivariate Data Checklist

Introduction

- [ ] *Description & Investigative Question "I will investigate if there is a relationship between..."
- [ ] Describe the purpose for the investigation.
- [ ] Explain the reasoning behind choice of variables.
- [ ] Links made to research (with references included)
- [ ] *Define the variables (and units) (2 explanatory & 1 response)
- [ ] Variables classified. ('associated' or 'explanatory' and 'dependent') – and why you have chosen them.
- [ ] Make a hypothesis and justify your reasoning: 'I think that... because...'.
- [ ] Discuss sample size in relation to population

Scatterplot Graph

- [ ] *A scatter plot without trend line – with title, labels and explanatory variable on 'x' axis
- [ ] *Visual description - is there is a linear looking trend or not? (in context)
- [ ] Discuss decision to continue with linear regression model (or not)

Linear Trend

- [ ] *A scatter plot with a trend line added (if appropriate)
- [ ] *Describe the Association. (Positive or Negative – in context)
- [ ] *Describe what this association means (stats the obvious)
- [ ] *Gradient statement - interpretation of trend line gradient in context

Strength & Scatter

- [ ] *Visual description of scatter about regression line discussed
- [ ] *Discuss the fit of a model throughout the range of x values.
- [ ] *Strength linked to discussion of 'r'
- [ ] Possible reason for the strength seen (in context)
- [ ] Discussion of the number of data points analysed
- [ ] Scatter - Even or changing. Was this expected?

Outliers & groups

- [ ] *Visual description of outliers and groups
- [ ] Justify the existence of any unusual value/outlier with reference to the data set and the context
- [ ] Numerical description of outliers and groups in context
- [ ] Test robustness of model or effect of unusual values.

Predications – MUST be of the response (dependent) variable

- [ ] *Make some predictions (Interpolate and/or extrapolate using your model
- [ ] *Predictions in context, units, rounded sensibly (All important)
- [ ] *The precision of the prediction discussed by reviewing the strength of the relationship and the scatter on the graph close to the relevant explanatory data value.
- [ ] Choice of values to predict explained and relevance to wider population

Other

- [ ] Different explanatory variables compared
- [ ] Investigate alternative models.
- [ ] Investigation into other groups or variable combinations
- [ ] Relating findings to research

Conclusion

- [ ] *Answer research question in context
- [ ] Summarise your findings
  Evaluate the process

Any more than 6 sides & you are waffling. Make it clear and succinct.
Bullet points are encouraged.   Context, context, context

* Are MUST HAVE items