IB ESS IA PLANNING SHEET

Research question
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Environmental issue
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Method outline
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Justify your sampling strategy
(why have you chosen to collect the data in the way you described in the method?)
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Hypothesis
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Hazards
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Results (assuming your hypothesis is correct):

Processed data
(predict what your processed data will look like)

Conclusion
(Answer your research question in one sentence)
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Applications
(In what way is your conclusion useful to society/the scientific community/...)
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Evaluation

Strengths
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Weaknesses
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Limitations
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Improvements
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IB ESS IA PLANNING SHEET

Research question
How does air pollution correlate with distance from the road.

Environmental issue
Air pollution emitted from cars. This may affect people or ecosystems close to the road.

Method outline
- Record particulate matter levels using digit metre.
- Record levels every 20m from the road up to 500m
- Measure over three transects, each 50m apart.

Justify your sampling strategy
(why have you chosen to collect the data in the way you described in the method?)
- Three repeats for reliability
- Every 10m provides high resolution while being time efficient
- Recording up to 500m is far enough to show patterns

Hypothesis
- Particulate matter level will decrease as distance from road increases.

Hazards
- Traffic
- Cuts/scratches as sample area is forest

Results (assuming your hypothesis is correct):

Processed data
(predict what your processed data will look like)

Conclusion
(Answer your research question in one sentence)
As distance from the road increases, air pollution level decreases

Applications
(In what way is your conclusion useful to society/the scientific community/...)
Homes should not be built within 500m of busy roads.

Evaluation

Strengths
- Repeats - reliable
- Large distance (500m)
- Precise equipment used.

Weaknesses
- Short stretch of road
- Traffic level not considered
- Time of day not considered.

Limitations
- May not be true for all roads/locations
- Results may vary at other times of day.

Improvements
- Record throughout day/week
- Sample multiple roads