Abstract. This study aims to determine the environmental care attitude of the XI grade students of Surakarta city high school conducted in July 2019 with quantitative descriptive approach. The population is all public high school students in Surakarta. Samples were taken from 4 public high schools using the simple random sampling method. Data collection using a questionnaire. The results of the study indicate that: indicators (1) Working hard in protecting nature is included in a good level; indicator (2) Thinking far ahead includes a good level; indicator (3) Appreciating hygiene health including good levels; indicator (4) Environmental responsibility is included in the good level. Thus the overall level of environmental awareness of high school students in Surakarta is included in the good level.

1. Introduction
Environmental problems are conditions in the biophysical environment that prevent the fulfilment of human needs for health and happiness [1]. Another problem caused is the accumulation of hazardous waste that threatens humans and the environment. Environmental pollution from a wide range of sources is concentrated in urban areas [2]. Household objects containing MHz and GHz waves can interfere with the brain's working system [3]. This orientation has made humans become greedy, exploitative and irresponsible in preserving their natural resources and environment [4]. As a result, there are natural disasters and environmental damage caused by humans. There are various cases of environmental damage that occur, both in the global and national environment, mostly caused by humans [5]. Explains that the relationship between humans and nature is important. in order to keep it good, it will certainly have a positive impact on the sustainability of humans and nature [6]. The biophilia hypothesis suggests that humans and nature are biologically connected and that our well-being can be affected by that connection [7]. However, the current phenomenon is precisely the many elements of exploitation, such as pollution, forest destruction, and massive utilization of natural resources.
From these data it can be seen that the largest percentage is changes in forest land that are shifting functions and energy. Forest changes are exacerbated by the use of energy that causes pollution which will have an impact on human life, for example the problem of global warming caused by reduced forests and the increasing amount of pollution due to industry, motor vehicles, waste, etc.

An important need for restructuring the education system by making provisions for learning opportunities with environmental education models that use innovation and collaborative methods [9]. Lack of knowledge about the environment often results in the exploitation and destruction of natural resources resulting in loss of biodiversity [10]. Many people believe that environmental education is one of the most important factors for preventing problems [11]. Knowledge of the environment is very important in addressing the phenomena that occur. This needs to be taught as early as possible to the community, especially school students. So as to be able to form an environmentally caring attitude. This kind of behavior should be carried out because of the amount of pollution that occurs, especially in urban areas. Therefore, high school students in Surakarta are chosen because they are in one of the advanced urban environments in Indonesia. The results obtained will be a reference from the teacher and related parties.

2. Methods
This research is quantitative using a descriptive approach carried out in July 2019. The population used was all 9th senior high school students in Surakarta by taking 4 samples using a simple random sampling method, namely Senior Highschool 2 of Surakarta, Senior Highschool 3 of Surakarta, Senior Highschool 5 of Surakarta, and Senior Highschool 6 of Surakarta. Each school is taken one class randomly in class 9, then do research. Sampling was randomly selected to obtain data that was truly valid for later analysis by researchers. The data collection technique of caring attitude of the students uses questionnaires with 4 indicators according to Sedyawati which are quoted from the books of [12], namely:
1. Work hard in protecting nature,
2. Think far ahead,
3. Appreciate hygiene health
4. Environmental responsibility.
Some of these indicators were applied to 24 items in the questionnaire then calculated using the formula cited from [13] as follows:

$$NP = \frac{R}{SM} \times 100$$

Keterangan:

- **NP**: The percent value sought
- **R**: Raw score obtained
- **SM**: Ideal maximum score
- **100**: fixed number (constant)

The percentage obtained is then categorized using a reference cited from [14] as follows:

| Average score | Description       |
|---------------|-------------------|
| 81-100%       | Very good         |
| 61-80%        | Well              |
| 41-60%        | Sufficient        |
| 21-40%        | Insufficient      |
| <21%          | Very Insufficient |

Table 1. Criteria for student response to learning media

Source: Arikunto (2008)

3. **Results and Discussion**

From the environmental care questionnaire analysis that was distributed in 4 high schools in Surakarta City the following results were obtained:

3.1 **Environmental Care Attitudes in Senior Highschool 2 of Surakarta Students**

Senior Highschool 2 of Surakarta is located on Jl. Monginsidi No.40, Gilingan, Banjarsari District, Surakarta City, Central Java. The environment around the school is on a busy lane of vehicles, but there are trees that are quite lush and there are railroad tracks not far from this school. Senior Highschool 2 of Surakarta is an environment-based school in Surakarta City. The results of the questionnaire analysis regarding the care of the school environment can be seen in table 2.
From the table it is known that the indicator of working hard in protecting nature shows 76.13%. This means that it is classified as "good". The second indicator, which is thinking far ahead, shows 55.33%. This means that it is classified as "sufficient". The third indicator, which respects hygiene health, shows a figure of 60.46% which means that it is classified as "sufficient". The fourth indicator, namely environmental responsibility shows 66.13%, which means that it is classified as "good". Thus the average results of all indicators show 64.50%. It means that the environmentally caring attitude of Senior Highscool 2 of Surakarta students is classified as good and needs to be improved. These results are clarified in the graph shown in figure 2.

3.2 Environmental Care Attitudes in Senior Highscool 3 of Surakarta Students

Senior Highscool 3 of Surakarta is located on Jl. Prof. Yohanes No.58, Purwodiningratan, Jebres District, Surakarta City, Central Java. The environment around the school is in an area prone to congestion, so the air quality is not so good. The settlements around the school are quite dense so the number of green plants is relatively small. The results of the questionnaire analysis regarding the care of the school environment can be seen in table 3.

Table 2. Percentage of Analysis Results

| No. | Indicator                           | Score  | Criteria |
|-----|-------------------------------------|--------|----------|
| 1.  | Work hard in protecting nature      | 76.13% | Good     |
| 2.  | Think far ahead                     | 55.33% | Sufficient |
| 3.  | Appreciate hygiene health           | 60.46% | Sufficient |
| 4.  | Environmental responsibility         | 66.13% | Good     |
|     | Average                             | 64.50% | Good     |

Figure 2. Analysis result
Figure 3
Analysis result

From the table it is known that the indicator of working hard in protecting nature shows 72.60%. This means that it is classified as "good". The second indicator, which is thinking far ahead, shows the number 49.93%. This is classified as "sufficient" criteria. This result must be considered because it has a percentage rate of <50%. The third indicator, which appreciate hygiene health, shows a figure of 59.73% which means that it is classified as "sufficient". The fourth indicator, namely environmental responsibility, shows a number of 64.40%, which means that it is classified as "good". Thus the average results of all indicators show 61.66%. This means that the environmental care attitude of Senior Highscool 3 of Surakarta students is classified as "good" and needs improvement in several aspects. These results are clarified in the graph shown in figure 3.

3.3 Environmental Care Attitudes in Senior Highscool 5 of Surakarta Students

Senior Highscool 5 of Surakarta located on Jl. Letjen. Sutoyo No.18, Nusukan, Banjarsari District, Surakarta City, Central Java. The surrounding environment of Senior Highscool 5 of Surakarta is close to the river, universities, and alternative routes that connect Karangayar Regency with Surakarta City. Thus, the environment of this school has high mobility so that there is potentially a lot of air pollution. The results of the questionnaire analysis regarding the care of the school environment can be seen in table 4.
Table 4. Percentage of Analysis Results

| No. | Indicator                              | Score   | Criteria   |
|-----|----------------------------------------|---------|------------|
| 1.  | Work hard in protecting nature         | 72.00%  | Good       |
| 2.  | Think far ahead                        | 56.86%  | Sufficient |
| 3.  | Appreciate hygiene health              | 64.06%  | Good       |
| 4.  | Environmental responsibility           | 66.20%  | Good       |
|     | Average                                | 64.78%  | Good       |

From the table it is known that the indicator of working hard in protecting nature shows a figure of 72.00%. This means that it is classified as "good". The second indicator, which is thinking far ahead, shows 56.86%. This means that it is classified as "sufficient", so it needs to be improved. The third indicator, which appreciate hygiene health, shows a figure of 64.06%, which means it is classified as a "good" criteria. The fourth indicator, namely environmental responsibility shows a value of 64.20%, which means that it is classified as "good". Thus the average results of all indicators show 64.78%. This means that the environmental care attitude of Senior Highscool 5 of Surakarta students is classified as "good" and needs to be improved. These results are clarified in the graph shown in figure 4.

3.4 Environmental Care Attitudes in Senior Highscool 6 of Surakarta Students

Senior Highscool 6 of Surakarta is located at Jl. Mr. Sartono No.30, Nusukan, Banjarsari District, Surakarta City, Central Java. The location of this school is adjacent to Senior Highscool 6 of Surakarta. Therefore, the environment and surrounding conditions of Senior Highscool 6 of Surakarta have similarities with Senior Highscool 5 of Surakarta. This school is one of the environment-based schools in Surakarta City. The results of the questionnaire analysis regarding the care of the school environment can be seen in table 5.
Figure 5

From the table it is known that the indicator of working hard in protecting nature shows a figure of 74.20%. This means that it is classified as "good". The second indicator, which is thinking far ahead, shows a figure of 60.86%. This means entering into "Sufficient" criteria. The third indicator, which is to appreciate hygiene health, shows a number of 67.60% which means it is classified as a "good" criterion. The fourth indicator, namely environmental responsibility shows 68.53%, which means it is classified as a "good" criterion. Thus the average yield of all indicators shows 67.80%. This means that the environmental care attitude of Senior Highscool 6 of Surakarta students is classified as "good" and needs to be improved. These results are clarified in the graph shown in figure 5.

3.5 Environmental Care Attitude of Surakarta City High School Students

From the results of the average questionnaire on the attitude of caring for students in 4 schools, all of them are classified as "good" with a percentage of > 61%. However, this number needs to be increased because this is the minimum value of the "good" criterion. While the average number of each indicator shows some differences that can be seen in table 6.

Table 5. Percentage of Analysis Results

| No. | Indicator                                    | Score  | Criteria |
|-----|---------------------------------------------|--------|----------|
| 1.  | Work hard in protecting nature              | 74.20% | Good     |
| 2.  | Think far ahead                             | 60.86% | Sufficient |
| 3.  | Appreciate hygiene health                   | 67.60% | Good     |
| 4.  | Environmental responsibility                | 68.53% | Good     |
|     | Average                                     | 67.80% | Good     |

Table 6. Percentage of Student's Environmental Care Attitude

| No. | Indicator                                    | Senior Highscool 2 | Senior Highscool 3 | Senior Highscool 5 | Senior Highscool 6 | Average | Criteria |
|-----|---------------------------------------------|-------------------|-------------------|-------------------|-------------------|---------|----------|
| 1.  | Work hard in protecting nature              | 76.13%            | 72.60%            | 72.00%            | 74.20%            | 73.73%  | Good     |
| 2.  | Think far ahead                             | 55.33%            | 49.93%            | 56.86%            | 60.86%            | 55.74%  | Sufficient |
| 3.  | Appreciate hygiene health                   | 60.46%            | 59.73%            | 64.06%            | 67.60%            | 62.96%  | Good     |
| 4.  | Environmental responsibility                | 66.13%            | 64.40%            | 66.20%            | 68.53%            | 66.31%  | Good     |
|     | Average                                     | 64.50%            | 61.66%            | 64.78%            | 67.80%            | 64.68%  | Good     |
From the table shows the average of each indicator of environmental care from all high schools. Indicator (1) Working hard in protecting nature, shows an average value of 73.73% which means it falls into the "good" category. Indicator (2) Thinking far ahead, shows an average value of 55.74% which means entering into the criteria of "sufficient". This value is the lowest value of all the average of each indicator, which means it needs to be improved. Indicator (3) Appreciating hygiene health, shows an average value of 62.96% which means it falls into the "good" category. Indicator (4) Responsibility to the environment, shows an average value of 66.31% which means it falls into the category of "good". This result can be clarified in figure 6.

![Figure 6](image1.png)

**Figure 6**  
Average Indicator Graph

![Figure 7](image2.png)

**Figure 7**  
Results Graph of Environmental Care Attitudes

Figure 6 contains a graph and the average value of each indicator of environmental care, which shows the indicator (1) has the highest average value of 73.73%. Then followed by indicators (4) as the second rank, indicator (3) as the third rank, and indicator (2) as the last rank. Of the four indicators obtained an average value of 64.68%. So, the attitude of caring for high school students in Surakarta City is categorized as "good".

Figure 7 contains a graph and the average value of each high school in the city of Surakarta, which shows Senior Highschool 6 of Surakarta is ranked first. Then followed by Senior Highschool 5 of Surakarta as the second place, Senior Highschool 2 of Surakarta as the third place, and Senior Highschool 3 of Surakarta as the fourth place.

4. **Conclusion**

From some of the findings described above there are differences in the results of each school. This is caused by differences in school and home environment conditions and student knowledge about the environment. Differences are shown in several indicators that have varied results. From all the percentage results, each indicator is then averaged to find out the environmental care attitude of high school students in Surakarta City. The results of the average environmental care questionnaire from each school have almost the same percentage value, namely> 61% and <70%. From these results it can be concluded that
the caring attitude of high school students in Surakarta is included in the criteria of "good" with a percentage value of 64.68%. These results can be used as a reference for teachers and related parties to improve environmental awareness as an effort to educate so that students can care about their environment.

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