## Grasping the human impact following a forest research and its recovery

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We have researched the forest environment using field surveys covering a five year span in the Woods for Field Practice Owned by Sagano High School (WFS). We discovered that pathways had become bare or were eroded. In this research study, we aimed to evaluate the change in the influences on the environment that the investigative actions have had on the WFS by our maintenance of walkways which we can make easily and use continuously during our fieldwork.

Therefore, we established three areas within the WFS and experimentally studied the gravel which is the natural groundcover material. We spread black rock that had a diameter from 3 to 4cm in the areas where the high school students usually go within the WFS. Then we waited while many researchers walked back and forth across the span where we left the rocks. After that time, we determined the proportion of gravel which remained in the areas and was not disturbed by all of the foot traffic. There were three defined zones within our area of study. The incline of area 1 is 4°, area 2 is 27°, and area 3 is 16°. As a result, we found that the proportion of gravel which remained was 93% in area 1, 43% in area 2, and 75% in area 3. After the experiment, in area 2, the gravel was buried in the ground and it has been suggested that this area should be made available as the permanent walkway. From this study in the large-incline area, we have learned that we may need to spread the gravel out more until it is buried in the ground. However, carrying the gravel is too much work to maintain it easily in the future. We think that while it would be good in practice, it is an unrealistic goal. We will examine spreading the gravel with timber. Furthermore, we will guide people by using a guide rope. This was confirmed to be an effective method from two teachers who are experienced mountain climbers.

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