Guidelines for monitoring of litter and waste in schools

In the registration form and in the final report, you will be asked to choose one Litter Criterion which you will be measuring during the Campaign. You will need to carry out the first monitoring of the chosen criterion when you register for the Campaign.

You have to choose one measurement criterion from the list below:

1. Amount of litter found in the school yard
2. Amount of litter and waste collected in the school
3. Amount of paper collected in the school or classrooms
4. Amount of waste recycled in the school or classrooms
5. Monitoring the amount of waste recycled at home (Only in case of COVID-19 lockdown)

Note: Data must be filled in kilograms (kg).

The selected criterion must be monitored by schools 6 times during the campaign (of which the first monitoring is at the time of registration) in order to allow us to demonstrate a change during the campaigns period. . To assist schools with this task, we have developed four frameworks (one for each criteria) which carefully explain the process and which can be used as an educational exercise for students as well.

Please use the tables 1-4 inserted below as frameworks for your monitoring activities and once the campaign is finished, please send the relevant table to your National Operator. **The 6 registered amounts (kg) must be submitted in the final report.** Schools that are on lockdown due to the COVID-19 situation can use the fifth framework that is designed to allow students to monitor specific types of waste in their home. In this case, the students can report their results to their teacher and the average change (in %) for each waste type can be reported to the NOs and uploaded on Podio.

The main aim of monitoring the flows of waste is to assess the effect of the Litter Less Campaign on student behavior in relation to littering, recycling and waste minimization as well as to serve as an educational exercise. Students should get understanding of how to measure and report waste/litter flows and reflect on any trend they see. However, educating students to minimize waste production can counter balance the amount of waste diverted to recycling, making detection of the campaigns’ effects more difficult. We would therefore appreciate the teacher’s comments on the results as well as on the educational value of the monitoring exercise.

Thank you for your participation.

**CRITERION 1 – Amount of litter found in the school yard**

|  |  |
| --- | --- |
| **Consideration** | **Description** |
| Area to be monitored | Define a fixed school yard area for the litter-pick. **Be aware: The exact same area must be monitored at all times.** Make sure that the area is representative. |
| Objects to be monitored | Please collect and monitor all types of litter in your area. |
| Period and frequency of monitoring | Make a time plan and assign students. **Be aware: You have to monitor 6 times during the campaign (**For example: During 6 consequent Tuesdays, in the morning for exactly 10 minutes) |
| Who will monitor | Choose more or less the same number of students to participate in the litter pick-up. **Be aware: students of different ages may monitor differently so be consistent.**  |
| Homogeneity | Try to make sure that the students have the same understanding of how to monitor. |
| Comparability | Can the data collected be compared? Was it collected in the same way?  |
| Avoid externalities | For example: Try to avoid monitoring on Monday mornings if the school is cleaned during weekends or on Fridays when the school is most polluted. The data has to be representative.  |
| Weighing the litter | Weigh the litter you pick and note the results in kg in the table below.  |
| Analyze the result in class. | Discuss the results of the measurements with your students. You can e.g. plot the results over time and ask the students whether they see a trend. Is the trend/change positive or negative? What could explain the results?  |

**CRITERION 1**

**School name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Number of students in school:\_\_\_\_\_\_\_ Area size:\_\_\_\_\_\_\_\_\_\_\_\_\_m2**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| i.d. | Date | Time | Duration (minutes) | Weight (kg) |
| 1 |  |  |  |  |
| 2 |  |  |  |  |
| 3 |  |  |  |  |
| 4 |  |  |  |  |
| 5 |  |  |  |  |
| 6 |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

Teacher comments about the results:

**CRITERION 2 – Amount of litter and waste collected in the school**

|  |  |
| --- | --- |
| **Consideration** | **Description** |
| Area to be monitored | Decide on an area to be monitored. E.g. specific classrooms and/or offices. **Be aware: The exact same area must be monitored at all times.**  |
| Objects to be monitored | Monitor the waste in bins used for general waste (not segregated according to types). The bins should be located in classes/areas used by students that participate in the Litter Less Campaign.  |
| Period and frequency of monitoring | Make a time plan and assign students. Make sure that no one else empties the bins during the monitoring period (You can inform the cleaner or put a note on the bins).**Be aware: You have to monitor 6 times during the campaign (**For example: During 6 consequent Tuesdays, in the morning) |
| Who will monitor? | Choose more or less the same number of students to collect and weigh the waste. |
| Homogeneity | Try to make sure that the students have the same understanding of how to monitor.  |
| Comparability | Can the data collected be compared? Was it collected in the same way? |
| Avoid externalities | Avoid monitoring during weeks where the school produces an unusual amount of litter, e.g. during festive occasions. The data has to be representative. |
| Weighing the litter | Weigh the waste you collected and note the results in kg in the table below (subtract the weight of the bin if necessary).  |
| Analyze the result in class. | Discuss the results of your measurements with your students. You can e.g. plot the results over time and ask the students whether they see a trend. Is the trend/change positive or negative? Can changes in the separation of waste or in the recycling of waste explain the results? |

**CRITERION 2**

**School name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Number of students in school:\_\_\_\_\_\_\_**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| i.d. | Date | Time(e.g. morning, afternoon) | Classroom/Offices(e.g. 1a, secretariat)  | Weight (kg) |
| 1 |  |  |  |  |
| 2 |  |  |  |  |
| 3 |  |  |  |  |
| 4 |  |  |  |  |
| 5 |  |  |  |  |
| 6 |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

Teacher comments about the results:

**CRITERION 3 – Amount of paper collected in the school or classrooms**

(Use this option if your school plan to implement initiatives to reduce paper by staff and students during the campaign)

|  |  |
| --- | --- |
| **Consideration** | **Description** |
| Area to be monitored | Monitor the paper bins in specific classes, halls and/or offices. **Be aware: The exact same bins must be monitored at all times.** Avoid sampling from the schools’ ultimate paper bin as it might not be emptied often enough during the sampling period. |
| Objects to be monitored | Monitor the paper waste in the paper bins. The bins should be located in classes/offices used by students or staff that participate in the Litter Less Campaign. |
| Period and frequency of monitoring | Make a time plan and assign students. Make sure that no one else empties the bins during the monitoring period (You can inform the cleaner or put a note on the bins).**Be aware: You have to monitor 6 times during the campaign (**For example: During 6 consequent Tuesdays, in the morning) |
| Who will monitor? | Choose more or less the same number of students to collect and weigh the waste. |
| Homogeneity | Try to make sure that the students have the same understanding of how to monitor.  |
| Comparability | Can the data collected be compared? Was it collected in the same way? |
| Avoid externalities | For example: **Avoid collecting paper during periods where classes hold unusual creative activities in which paper is used in large amounts.** The data has to be representative. |
| Weighing the litter | Weigh the waste you collect and note the results in kg in the table below (subtract the weight of the bin if necessary).  |
| Analyze the result in class. | Discuss the results of your measurements with your students. You can e.g. plot the results over time and ask the students whether they can see a trend. Is the trend/change positive? Can changes in the school activities, student use of paper resources (e.g. one-side vs. double-side) explain the results?  |

**CRITERION 3**

**School name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Number of students in school and/or in sampled classrooms:\_\_\_\_\_\_\_**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| i.d. | Date | Time | Does the sampling include offices? (Yes/No) |  weight of paper waste (kg) |
| 1 |  |  |  |  |
| 2 |  |  |  |  |
| 3 |  |  |  |  |
| 4 |  |  |  |  |
| 5 |  |  |  |  |
| 6 |  |  |  |  |

**CRITERION 4 – Amount of waste recycled in school or classrooms**

Teacher comments about the results:

(Use this option if your school just started implementing initiatives to improve waste recycling by staff and students during the campaign)

|  |  |
| --- | --- |
| **Consideration** | **Description** |
| Area to be monitored | Decide on an area/bins to be monitored. E.g. specific classrooms and/or offices. **Be aware: The exact same bins must be monitored at all times.** |
| Objects to be monitored | Choose one type of waste to monitor (e.g. bio, plastic, paper, metal). **Be aware: The same type of objects must be monitored at all times.**  |
| Period and frequency of monitoring | Make a time plan and assign students. Make sure that no one else empties the bins during the monitoring period (You can inform the cleaner or put a note on the bins).**Be aware: You have to monitor 6 times during the campaign (**For example: During 6 consequent Tuesdays, in the morning) |
| Who will monitor? | Choose more or less the same number of students to collect and weigh the waste. |
| Homogeneity | Try to make sure that the students have the same understanding of how to monitor. |
| Comparability | Can the data collected be compared? Was it collected in the same way? |
| Were externalities avoided? | For example: **Avoid collecting paper during periods where classes hold unusual creative activity in which paper is used in large amounts or during festive occasions.** The data has to be representative. |
| Weighing the litter | Weigh the waste you collect and note the results for each waste type in kg in the table below.  |
| Analyze the result in class. | Discuss the results of your measurements with your students. You can e.g. plot the results over time and ask the students whether they can see a trend. Is the trend/change positive for specific waste types? Can changes in the school activities, student use of resources (e.g. one-side vs. double-side paper use or use of plastic) explain the results?  |

**CRITERION 4**

**School name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Number of students in sampled classrooms:\_\_\_\_\_\_\_**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| i.d. | Date | Time | Waste type(only choose one type e.g. bio, plastic, paper, metal) | Weight of waste (kg) |
| 1 |  |  |  |  |
| 2 |  |  |  |
| 3 |  |  |  |
| 4 |  |  |  |
| 5 |  |  |  |
| 6 |  |  |  |

Teacher comments about the results:

**During school lockdown – Monitoring the amount of waste produced at home**

Use this table if your school is closed and your students participate in the Litter Less mainly online. The students together with their family can then monitor the amount of waste they produce at home during the campaign with the general aim of reducing it.

|  |  |
| --- | --- |
| **Consideration** | **Description** |
| Goal | To reduce the amount of waste (in general waste bin or in bins for specific type of waste like paper, glass, plastic) the household produces by becoming responsible consumers.  |
| Objects to be monitored | Decide on specific waste type to monitor. For example, plastic waste, metal, paper, cardboards. Assign a waste bin for that specific type of waste and don’t mix it with other waste types. You can also choose to reduce the amount of waste in your general waste bin. |
| Period and frequency of monitoring | Make a time plan describing the day of the week and time during the day where you will weigh the bin before discarding the waste. **Be aware: You have to monitor 6 times during the campaign (**For example: During 6 weeks - every Tuesday, in the evening)**Make sure that no one else empties the bins during the monitoring period (You can inform your family or put a note on the bin/s).** |
| Avoid excess waste production | Avoid monitoring during weeks where your household produces an unusual amount of waste, e.g. during festive occasions and family gatherings. The data has to be representative.  |
| Weighing the litter | Weigh the waste you collected and note the results in kg in the table below (subtract the weight of the bin if necessary).  |
| Analyze the result with your family | Discuss the results of your measurements with your family. You can e.g. plot the results over time and ask your family members whether they see a trend. Is the trend/change positive or negative? Alternatively, you can calculate the percentage change between measurements. What can explain the results? **Could you reduce the amount of waste your family normally produce by changing your consumption habits**? If yes, you and your family have practiced the most effective way of waste management thereby protected the environment. |
| Inform your teacher  | Inform your teacher about the results (the % change between average of first two measurements and last two measurements) and about the lessons you and your family learned from monitoring your household waste. Your teacher would then be able to calculate the average reduction for the whole class or school. |

**Monitoring the amount of waste produced at home**

**School name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Name of the student:\_\_\_\_\_\_\_**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| i.d. | Waste type (General, Plastic, metal, paper, etc.) | Date | Time(e.g. morning, afternoon) | Weight (kg)  | % change between average of first two measurements and last two measurements |
| 1 |  |  |  |  |  |
| 2 |  |  |  |  |
| 3 |  |  |  |  |
| 4 |  |  |  |  |
| 5 |  |  |  |  |
| 6 |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

Students comments about the results: