

Project Plan: What a load of rubbish!



Litter and other rubbish is a widespread problem in the countryside today. In this Project Plan, we outline a “completely rubbish” practical task that can be carried out over 30-60 minutes, preceded by a short initial discussion of the task (10-15 minutes), and followed by a discussion of the results (20-30 minutes). A follow-up activity is also outlined, which could be set as homework or used in subsequent lessons.

This project is designed for Key Stage 2, but individual parts of the exercise (e.g. questions for discussion) can readily be adapted to younger or older learners.

Background:

Many parts of the countryside (including woodland nature reserves) contain large amounts of litter and other waste materials. Litter is unpleasant to look at for humans, and can be harmful to pets and wildlife. In this mini-project, we investigate why people leave rubbish in the countryside, what the effects of litter are, and how the problem can be reduced.

Learning Outcomes:

- Awareness of the problem of litter in the countryside
- Experience of “hands-on” action to improve an area for people and wildlife
- Understanding of human behavior leading to littering
- Appreciation of individual responsibility in society
- Planning and creation of a publicity campaign to reduce littering

Equipment needed

- Rubber gloves, and/or long-handled “litter-grabber”
- Anti-septic hand wipes or gel
- Old supermarket carrier bags (3-4 per pupil)
- Black bin-bags (1 per pupil)
- Digital camera (used by teachers)
- Step-on bathroom scales, preferably weighing in units of Kg
- Data collection sheet
- Clip-board
- Pencil

Method

- Select an area of countryside that is regularly used by people (e.g. an area of woodland, parkland or school grounds).
- Discuss the problem of litter for:
 - people
 - pets
 - wild animals
- Discuss the problem of hygiene when handling litter, and demonstrate the use of rubber gloves, litter-grabbers and antiseptic hand wipes / gel.
- Split the class into small groups of 3-4 pupils, and ask each group to choose a name for their group.
- Award a prize for the best group name!
- Give each group 3-4 carrier bags.
- Walk around your chosen area, with each group competing to collect as much litter as possible, into their carrier bags.
- During the walk, teachers are encouraged to take photographs of the area before and after removal of litter (for later discussion).
- At the end of the walk, count the number of full bags collected by each group. Put the bags from each group together into a single black bin-bag, and measure the total weight of rubbish. A good way to do this is to subtract the weight of a pupil holding the black bag, from the weight of the same pupil without the black bag.
- Enter the weight onto the class data sheet (a blank data sheet is on the following page).
- Take some photographs of the pile of rubbish collected by the class. Don't forget to include a picture with the pupils posing as superheroes!
- Leave the rubbish bags in an accessible place, and call the local council to come and take the bags to the local tip. In Bridgend, the number to call for waste collection is: (01656) 643468.

Data collection sheet

Group number	Name of group	Number of pupils	No. of full carrier bags	Total weight of rubbish	Weight collected per pupil
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					

Total =

Total weight of rubbish collected by the whole class = _____ Kg

Email your results table to Alex Pollard at Eco-explore (alex@eco-explore.co.uk) and we will help to publicise your activities!

Results

1. How did we do?

First of all, make some calculations to highlight the effectiveness of the litter clearance exercise:

- Calculate the total weight of litter collected by each group
- Calculate the total weight of litter collected by the whole class
- Calculate the weight of litter collected per person, for each group

2. How much rubbish is out there?

Use the data collected during the class project, to make estimations about the total amount of litter in the environment at much larger scales. Note that these estimations are only “best-guesses”, but they make two important points; that...

- (i) it is possible to make such estimates
- (ii) there is a lot of litter out there still to collect!

Calculations to make:

- Estimate the area covered by the class during the walk
- Estimate the area of the whole woodland/park/beach
- Estimate the total amount of litter in the whole woodland/park/beach
- Estimate the total amount of litter in Wales

Points for discussion

- Why do people drop litter? Here are some possibilities for discussion:
 - Are people just lazy?
 - Are people just evil?
 - Are people just not aware of the problem?
 - Is there a cost of disposing of litter properly?
- What kinds of rubbish are there?
 - Packaging
 - Cans and bottles
 - Building waste
 - Vehicle parts
 - Dog waste / poop-scoop bags (this in itself leads to a very interesting discussion about human behavior!)
- What will happen to the litter that we have collected?
 - Leave it here in bags?
 - Landfill?
 - Incineration?
- How much litter is still out there? (see calculations above)
 - Can the problem of litter ever be solved?
- Solutions: How can litter be reduced?
 - Laws and regulations
 - Local council facilities
 - Personal responsibility (including today's activity of personally clearing up other peoples' litter)
 - Awareness and campaigning
 - The importance of young peoples' voices

Follow-up activity: Designing and implementing an anti-litter campaign

You could include the following ideas...

- Create A4 posters to highlight the problem of litter.
- Laminate the posters and pin them up in the area that you have cleared of rubbish.
- Contact the local newspaper to publicise your litter clearance campaign.
- Write a short article about the problem of litter and your role in clearing it up.
- You could include photos of the area before and after, and a photo of the pile of rubbish collected by your class.
- Choose the best article(s) to send to the local newspaper.

External links for additional ideas and inspiration:

Keep Wales Tidy <http://www.keepwalestidy.org/home>

Waste Awareness Wales <http://www.wasteawarenesswales.org.uk>