

Examples of Productive Work Pedagogy in school curriculum on the theme of Waste

List of Activities designed for schools: related to waste

Do

1. A) Segregate Dry/ Wet/ and reject Household waste every day . Learn to do fractions/ percentages on this measurement. (per day waste or per month waste per category of waste(paper/ plastic) Encourage illustrations.
B) Create a pie/ bar graph of above data .
2. A) Measure Dry Waste generated at Household level per day and keep a weekly/ monthly chart
B) measure and rank according to price;
C) Measure and rank according to sustainability (how much can be recycled/ upcycled/reused)
3. Measure dry waste generated at School level and aggregate for one month : compare different schools on the basis of dry waste generated? (might need help with external agency like SWMRT).
4. Observe and measure quantity of dry waste packaging per product given by online retailers names on who are the big polluters (unilever/ ITC/ flipkart/ amazon (online retailers!))
5. Write letters /postcards for reducing packaging to online retailers. Letters to local MLAs on informing waste (advocacy based on numerical skills and investigation)
6. Find out using internet and interviews some good CSR /EPR activities related to waste management (including production)
7. Create some good slogans on managing waste/ choose a relevant mascot for waste advocacy and give reasons why(say an urban crow)
8. Find out your family's waste foot print. (uses Maths and calculations based on information available on the website or derive your own formula)
9. Do a water and soil test pre or post any religious event that pollutes lakes
10. Survey on how many people don't follow the plastic ban rule and **why** in your neighbourhood.
11. Do a lifecycle analysis of a certain product – and then discuss options on reuse/ reduce or refuse

12. Gather ward level population data ((BBMP/BESCOM sources)and gather ward level waste collection infrastructure (vehicles/ bins/trucks/ cleaners/waste pickers). Find out if they are sufficient or insufficient. Get municipal data on what the ideal situation should be. Advocate through letters for more infrastructure wherever situation demands.
13. Design a (electric?) vehicle which can handle waste best (no waste on the ground)
14. Survey: Interaction with waste pickers(informal and municipal waste workers) to learn about their problems and their rights
15. Follow a waste vehicle to understand problem areas first hand (for older students)
16. Compost wet waste by 3 different methods. Record and Compare quality/ time taken
Field visit to hebbal testing centre for compost testing)
17. Learn, touch and see the various microbes in different composting

18. Grow food in pots –one without compost and one with compost. Compare and record progress
19. Find out lifecycle of organic waste : measure 1st day to 30th day (volume); heat/ moisture (temperature measurement in aerobic composting)
20. Visit a Community shredder – (there is one in kormangala 3rd block). Study the volume of waste. Price of compost
21. Reject waste: A) Count number of sanitary napkins /diapers a person uses in a month. B) Find out disposal methods. C) Find out their effect on environment.D) find out alternatives- case studies on many NGOs making cloth pads
22. Create an advertisement for sustainable hygiene products
23. Find out different sustainable products traditionally used in India and now exported to abroad(such as tendua leaf plates in Germany)
24. When you buy a cosmetic or a detergent learn to read the label, composition and research on its toxicity.
25. List in your house items coming from petrochemistry
26. Compare the toxicity of methane versus carbone
27. Make your own Bio enzyme cleaner (in a reused bottle measure 1 part jaggery powder, 3 parts citrus peel, 10 parts water) Mix every day, let gas escape, if you add yeast ready in 2 weeks if not 2 months for washing dish, floor, bathroom, shampoo...

28. Grow own foods (simple greens like methi/ amaranthus/ coriander/) and draw their growth time line. How long does it take to grow
29. Calculate how much water you can harvest if you get 100mm of rainfall giving the surface of a roof
30. Compare how much water to produce 1kg of sugar, 1kg potato, 1kg rice, 1kg of beef
31. Percentage of drinking water available on the Planet (3%)
32. Average consumption of water per capita ? Find different ways to reduce water consumption
33. Compare different mode of transport reject of CO2 for 1km (Cycle o, Train 11g, Car 50g, Bus 90g, Plane 360g) calculate to go from Bangalore to Mumbai with these different modes!
34. Create a seed bank in school

Do, Think, Analyse!

Films to watch : Circle of poison (Documentary) . Add more!

We can create lesson plans for senior level school kids on following topics:

1. Case study of community composting in Alleppy on how to manage waste as a community
 - Lesson on “What is plastic? Molecular make up of plastic. Polymer/petroleum/ structure of plastic. / Why it can’t be absorbed in soil or water.”
 - Lesson on Economics of waste trade: waste coming in from US cheaper than within cities because of petroleum products are heavily subsidized.
 - Lesson on Science behind composting – microbes/ browns and green /air.
 - Understanding the concept of Carbon sink(absorbing carbon from the air) and linking it to climate change and Green house gases .
 - Lesson on gender and media studies (analyse messages of Use and throw vs. Use and wash wrt sanitary waste
 - Lesson on Worldwide wastage of food is almost 40% but the reason is different depending of the country study why (US food wastage after buying mostly processed food, restaurant but in India wastage at the storage level for grains, vegetables during distribution not efficient)

- Research on the great Pacific garbage patch ? what is made of and where is it located ?
- Why eating seasonal and local fruits is more sustainable ? A papaya versus a kiwi
- Research on countries who have permitted GMO and why its use is controversial. Which GMO plant is allowed in India
- Benefits of growing our own food? Benefits of community supported agriculture? Plan field visits to farmers/ organic Mandya.
- Understand trade and middleman in food.
- Understand biodiversity and nutrition- How many types of rice and millets were consumed before in your family
- Understand farmer debts and suicides in context of food and industry
 1. Understand Oil waste disposal and effects of the reuse of oil (Hasirudala: has a unit that allows biofuel made out of used oil.)
- Understand why prices of vegetables fluctuate
- Understand nutrition of processed food
- Understand practices such as palak grown on sewage water , injecting colour in pomegranate/ water melon(test them?)
- Research on milk/meat containing hormones, antibiotic and its impact on human being when consume