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Activity Idea – KS3 Design and Technology – from rubbish to innovation

Learning objectives

Rubbish is made out of materials that have different properties and can be reused. Entrepreneurs with an artistic flare can use rubbish to make new and desirable objects. With this activity, students will change their perception of rubbish, from thinking it is something that needs to be disposed of, to seeing it as a source of affordable materials that they can use to make new items and objects.

Resources

Design and Technology teacher needs to provide a bag of clean litter/rubbish to use. This could be litter that the students have picked up during the litter-pick, or rubbish that they have brought in from home. Some examples of items of rubbish that could be used include crisp bags, cans, sweet wrappers, plastic bottles, TetraPak containers, drinks cans, newspapers etc.

(Note: do not include glass bottles just in case they break. Compostable items such as apple cores and banana skins can be messy and/or smelly).

Curriculum links

KS3 DESIGN AND TECHNOLOGY
– Design and making



Activity ideas

Use items commonly found in rubbish to make new products.

1. Give each group of students an item of litter. Ask them to identify the material from which it is made and discuss the properties of that material, and then tell the class about it, e.g. Plastic drinks bottle is transparent, waterproof etc.
2. Ask the students to think about what properties the materials you use to make the following objects would need to be;
 - A handbag
 - A planter for a balcony
 - A lamp shade
3. Get the students to identify which pieces of litter have the potential properties for each of the objects. Many different items of litter could make each object. For example, you could potentially make a lamp shade with newspaper and coloured plastic drinks bottle.
4. Ask students to research and find information about how much rubbish we throw away. Also ask them to find two images of objects made of recycled materials. One image should be of an object where it is easy to tell what it is made out of and the other where it is hard to tell.
5. Ask each student to decide which object they would like to make with rubbish and choose which items of rubbish they will be using.
6. Before they start their design students need to consider;
 - Design/style implications of the rubbish material that they choose
 - How many pieces of rubbish they will need and how they will source them?
 - Any health and safety concerns, e.g. if they use cans, the metal can form sharp edges etc.
 - How they are going to work with the rubbish that they have chosen, e.g. How are they going to cut and stick it together?
7. Design their object that is going to be made from rubbish.
8. Students will need to collect the items of rubbish they are going to use for their project. Remind them to make sure that the items are clean before they bring them to school.
9. Make their object out of rubbish.
10. Display their objects.

Conclusion;

Display the objects the students have made. A message about the value of the materials that are found in litter and rubbish can be included here. Also how entrepreneurs and artists are using rubbish to make new objects.

