

EcoPencil cycle

How environmental is your pencil?

be a flowchart showing the various steps in the process. Students should summarise and put into their own words the 13 steps shown on the EcoPencil Cycle printed in *DMAG*.

HSIE: Living in Communities

Discuss the materials and labour needed to make pencils. If a student were to set up a pencil factory, what would they need? As well as the raw products (e.g. timber) they'd need things like land, water and power. They would also need labour - that is, people to work.

Discuss the role a pencil making plant has in its community - e.g. provides jobs directly but also in support roles such as local stores where workers might shop. Discuss the roles and responsibilities of a company to its community.

Science and Technology: Material World - byproducts

As a class, read the story on page 52-54 in *DMAG*. Discuss the byproducts in the EcoPencil cycle, how does Faber-Castell use and re-use them?

What about water and air pollution? What does Faber-Castell do to ensure it is environmentally responsible?

Extension exercise

Ask students to investigate how a common material is made - for instance glass, iron, plastic, wool, paper, cotton etc. They should present a process diagram on each and identify its byproducts. They should also look into environmental

ways to treat the byproducts and waste products.

Science and Technology: Environment Matters

Discuss the value of forests to the Earth. What do they do? What is the difference between a plantation and an old-growth forest? Why is it better to take wood from a plantation?



A well-managed plantation is a sustainable resource. Cutting down plantation trees is not bad for the environment provided that new trees replace them. Discuss also the different types of trees. Many plantation trees are not natives. Is it better to have plantation trees than cleared land? (Yes). Why would Faber-Castell also plant native seedlings as well as pines?

Discuss the difference between renewable and non-renewable resources. Why are trees renewable? What products come from non-renewable sources?

Science and Technology: Cycles in our world

Investigate the life cycle of a tree and discuss what germination is. Identify what the tree's needs are and what would threaten its survival.

Discuss the things that trees provide: shelter, homes, oxygen etc. Investigate how trees influence other cycles in our world, such as evapotranspiration.

As a class, plant seeds for different species of trees. Once seedlings have grown, transplant the seedlings into the school playground or ask students to take them home to plant. As a class record the heights of the seedlings/saplings over time.

Maths: Extension Exercise

From the class results above, work out the average height of seedlings after two weeks, four weeks etc. Work out which species grows the fastest.

Art: Forest life

Ask each student to draw or paint a detailed picture of a forest scene. This should include different types of trees and plants, plus plenty of wildlife. Display the pictures around the classroom and ask students to write fact boxes about the animals shown to display with the pictures.

About DMAG

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