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Lesson Plan 4

Short Term Plastic Products, are they sustainable?

Objectives

Students will learn and understand the following:

Short term plastics products, what are they:

Plastic ballpoint pens, toothbrushes, disposable lighters, disposable razors.

All these products have a short life of less than two months when used daily, are not refillable, are not recyclable and are destined for the landfill, or end up in waterways.

All these plastic products used to be made from recyclable, refillable or biodegradable materials.

Choose one short term plastic product: Plastic Ballpoint Pen

Students will learn the history of the pen, focusing on the feather quill; its creation, use, effectiveness as a writing implement, its importance in history.

They will learn the history of ink and how the feather quill established the font of the English alphabet and how letters were sealed and sent.

Students will carve their own quill and write a letter detailing the project, seal it with wax and mail it.

They will create their own wax stamp seal using some dowel, oven bake clay and engraving tools.

They will then draw conclusions based on their experience of writing a letter using a quill.

Materials

Turkey feathers, carving knives, ink pots, paper, envelopes.

Dowel, oven bake clay, toothpicks, paint, glue, elastic bands.

Procedure

Shave off the feathers to leave enough room on the barb for the hand to hold it.

Follow steps to carve a nib into one end.

Practice writing the letters of the alphabet, upper and lower case using pots of ink.

To make your wax stamp seal, design your personal crest on paper then transfer it onto a piece of clay. Bake the clay to harden it, cool and then glue to the piece of dowel.

Paint your piece of dowel to personalize it.

Hold together with three elastic bands until set.

Write out a rough draft of the letter you plan to mail outlining the project. Complete your good copy using your quill.

Let the ink dry on the letter and the address, then melt some sealing wax onto the envelope and seal with your personalized crest.

Notes for each student to make, including questions and conclusions.

Map out the timeline of the pen from the reed pen to the quill to steel fountain pens, ballpoint pens and then the introduction of plastic writing instruments.

Discuss why the quill was the mainstay for writing instruments for almost 2000 years. What were its benefits and pitfalls. Was it biodegradable, sustainable? How long could you use it for? Was it easy to write with? Why was it replaced by a steel nib?

Why was the steel fountain pen replaced by the steel ballpoint pen?

Since the introduction of the plastic ballpoint pen, has this convenient throw away pen made writing easier or better?

How many plastic pens are landfilled each year?

Is it okay to continue the manufacture of short term plastic products?

What could we use today to write with that has no negative impact on the environment?

Conclusions

To complete this lesson plan, encourage a class discussion to determine what students felt they had learnt, and what if any changes they would make to their current choice of writing instrument.

Grade level 6/7

Four lessons, sixty minutes each.

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QUIZ

1. Which types of birds were chosen for quill making, and why?
2. Why were these birds selected?
3. Which feather was chosen from the bird, and why?
4. What does A.D. mean?
5. The Quill pen was in use from 600-1800A.D. How many years is that?
6. What writing instrument replaced the quill pen, and why?
7. Why would you use a slanted board when writing with a feather quill?
8. What is the Latin word for feather?
9. What was the ink made from?
10. What was the purpose of sealing a letter with wax?
11. What did the wax stamp seal tell the person who received the letter?

12. What are the environmental issues with the ballpoint pen?

13. What could you use to write with today that is environmentally more sustainable, and why?

14. The shape of the letters in the English alphabet were created with the quill pen. How are the letters different from other styles of writing in Asia?

15. What did they use in Asia to write with?

16. The word calligraphy means two words in Greek. What are they?