

Synthetic Fiber Chart

Summary

This lesson will help students distinguish differences between the synthetic fibers--nylon, acrylic, polyester, acetate, rayon, and spandex.

Main Core Tie

Sewing Construction & Textiles 1

[Strand 3 Standard 1](#)

Time Frame

1 class periods of 45 minutes each

Group Size

Individual

Materials

1 1/2-inch square sample pieces of fabric of each of the six synthetic fibers--enough for entire class

Staplers

A copy of the synthetic fiber chart for each student

A transparency copy of the 3 note outlines (see attachment)

Other items may be needed according to any supplemental information you may wish to add--examples given were various household items made from nylon (and any of the other synthetic fibers) to demonstrate the diversity of the fibers and acetone (fingernail polish remover), and to demonstrate how acetate dissolves in acetone

Background for Teachers

Please be familiar with the information that is on the attached note outlines. It also may help to have personal experiences and advice to share concerning each of the synthetic fibers. This information could come from your day-to-day life.

Student Prior Knowledge

Students do not need to have any prior knowledge of the synthetic fibers in order to complete this lesson.

Intended Learning Outcomes

Students will be able to identify basic fabric samples of the six synthetic fibers. They may also learn different characteristics of each as well as how to take care of them.

Instructional Procedures

Hand out a synthetic fiber chart to each student and explain how this activity will work. The teacher will be handing out a fabric sample for each of the four spaces on the chart. Students will then need to staple or tape the sample onto the corresponding space. Finally, the students will take notes on the specific fiber in the space provided as the teacher goes over the overhead outline with them.

Begin this procedure as a class, starting with nylon. Hand out the nylon samples, wait a bit for the

students to staple them to their papers, and start going over the information on the note outline transparency.

After you have finished going over nylon, you may want to show examples of items that you have collected from your home or closet that are made out of nylon. This shows the diversity of nylon as a fiber. If you do not want to use supplemental information, move on to the acrylic, repeating the steps.

Go through the same steps for the remaining fibers as you have done previously, adding any supplemental information as you go.

When you come to acetate on the chart, you may want to show students the experiment of acetate dissolving in acetone (fingernail polish remover). If the fabric sample is 100% acetate, it should dissolve completely when placed in acetone--the only thing that should remaining in the acetone is the dye from the fabric.

Have students hand in the completed chart.

Assessment Plan

Correct the fiber chart for completeness and correctness, making sure that the fiber samples are in the correct spots and the notes have been written in the correct boxes.

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