The Polyester Dream

Post-War Consumerism and 'Better Living Through Chemistry' · 1950–1980

Name _____ Class _____ Date _____

GUIDING QUESTION

Was the postwar promise of cheap, easy-care synthetic clothing a sign of progress or a problem passed to the future?

PART 1

Before you read

1. Read the guiding question. Write down what you already know, or think you know, about it.

2. Predict one way your answer might change after reading the sources.

PART 2

Read

The post-war era was the age of 'Better Living Through Chemistry.' Synthetic fibers made clothing cheaper, more durable, and easier to care for—and seeded a global problem of plastic pollution that scientists would not measure for decades.

DuPont began commercial production of its polyester fiber, Dacron, in 1953. Within two decades, polyester double-knits filled American closets, and the leisure suit had become a symbol of 1970s fashion. Wash-and-wear blends, permanent-press finishes, and stretch fibers such as spandex, invented in 1958 and introduced the next year, reshaped not only clothes but the laundry room. Synthetic fibers made fashion more affordable and convenient and, unlike wool, cotton, or linen, did not biodegrade. Scientists reported plastic debris on the open ocean as early as 1972, but the shedding of microscopic fibers from synthetic clothing in the wash was not studied systematically until the 2010s.



A DuPont trade booklet of dyed Dacron polyester and Antron nylon swatches-the synthetic palette sold to American mills and garment makers. E. I. du Pont de Nemours & Company, "Dacron & Antron Colour Story," fabric sample booklet. Science History Institute, via Wikimedia Commons. No known copyright restrictions.

PART 3

Timeline

For each event, write one sentence on why it mattered.

1953

Dacron Introduced

DuPont begins commercial production of Dacron polyester; Brooks Brothers sells the first Dacron-blend wash-and-wear shirts.

1959

Spandex Introduced

DuPont chemist Joseph Shivers's stretch fiber, invented in 1958, is introduced as 'Fiber K' and later branded Lycra—foundation of modern shapewear, swimwear, and activewear.

1960s

The Double-Knit Craze

Polyester double-knits become a dominant fashion fabric, prized for wrinkle resistance and vivid color.

1972

Plastic on the Open Sea

Edward Carpenter and Kenneth Smith report plastic particles widespread on the surface of the Sargasso Sea—an early scientific signal of marine plastic pollution.

PART 4

Key terms

Write the letter of the matching definition beside each term.

_____ **Polyester**

_____ **Planned obsolescence**

_____ **Wash-and-wear**

_____ **Petrochemical**

_____ **Microplastics**

A. 1950s advertising term for clothing that could be washed and worn without ironing.

B. Plastic pieces smaller than five millimeters, including fibers shed from synthetic clothing during washing.

C. A synthetic fiber made from petroleum-based chemicals, valued for being cheap, wrinkle-resistant, and quick-drying.

D. Designing or marketing products so they go out of date or wear out quickly, encouraging people to buy replacements.

E. A chemical made from petroleum or natural gas, including the raw materials for synthetic fibers.

PART 5

Primary source workshop

These excerpts are quoted word for word, including the spelling and language of their time.

DOCUMENT A

The Kitchen Debate (as reported in The New York Times)

The New York Times, reporting Richard Nixon and Nikita Khrushchev, July 24, 1959 (published July 25, 1959)

> He said American houses were built to last only twenty years ... "We build firmly. We build for our children and grandchildren." Mr. Nixon said he thought American houses would last more than twenty years, but even so, after twenty years many Americans want a new home or a new kitchen, which would be obsolete then.

Context: Vice President Nixon and Soviet Premier Khrushchev argued about consumer goods at the American National Exhibition in Moscow. Nixon's defense of constant replacement captured the Cold War idea that abundant, ever-newer products proved capitalism's superiority.

Source: The Kitchen Debate. Teaching American History, Ashbrook Center. 1959-. https://teachingamericanhistory.org/document/the-kitchen-debate/

Historical context
What was happening when and where this was created?

Intended audience
Who was meant to read, hear, or see it?

Purpose
Why was it created? What did its creator want to happen?

Point of view
Whose perspective does it show, and whose is missing?

DOCUMENT B

Plastics on the Sargasso Sea Surface

Edward J. Carpenter and Kenneth L. Smith Jr., March 17, 1972

> Plastic particles, in concentrations averaging 3500 pieces and 290 grams per square kilometer, are widespread in the western Sargasso Sea. ... Increasing production of plastics, combined with present waste-disposal practices, will undoubtedly lead to increases in the concentration of these particles. Plastics could be a source of some of the polychlorinated biphenyls recently observed in oceanic organisms.

Context: Two Woods Hole oceanographers published one of the first scientific reports of plastic pollution in the open ocean. They found mostly plastic pellets rather than textile fibers, but their warning came at the height of the polyester boom.

Source: Edward J. Carpenter and Kenneth L. Smith Jr. Plastics on the Sargasso Sea Surface, Science 175 (4027): 1240–1241. Science (abstract via PubMed, National Library of Medicine). 1972-. https://pubmed.ncbi.nlm.nih.gov/5061243/

Historical context
What was happening when and where this was created?

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Point of view
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Corroborate
Compare "The Kitchen Debate (as reported in The New York Times)" (The New York Times, reporting Richard Nixon and Nikita Khrushchev, July 24, 1959 (published July 25, 1959)) with "Plastics on the Sargasso Sea Surface" (Edward J. Carpenter and Kenneth L. Smith Jr., March 17, 1972). Where do they agree, where do they differ, and what might explain the differences?

PART 6

Discuss

1. According to Carpenter and Smith, how much plastic did they find in the Sargasso Sea, and what did they predict would happen?

2. The Kitchen Debate excerpt is a reporter's summary in the New York Times, not a transcript. How does that affect how we use it as evidence of what Nixon and Khrushchev believed?

3. Nixon defended a system in which products become "obsolete." How does the idea of planned obsolescence help explain the rise of polyester and disposable fashion?

4. Scientists now find microplastic fibers from synthetic clothing in oceans, drinking water, and human tissue. Were the 1972 warnings ignored, and who should bear responsibility now: producers, consumers, or government? Argue.

PART 7

Write: claim, evidence, reasoning

Answer the guiding question in one paragraph, using the documents and the reading.

Claim	Answers the guiding question directly in one or two sentences.
Evidence	Cites at least two primary sources by name and at least one fact from the reading.
Reasoning	Explains how each piece of evidence supports the claim.
Sourcing	Notes at least one limitation of a source: who made it, when, and why.

PART 8

Exit ticket

1. In one sentence, how would you answer the guiding question now?

2. What piece of evidence would most change your mind?

Keep exploring

IMPACT

The Cost of 'Miracle' Fibers

How synthetic clothing became a source of microplastic pollution.

https://www.threadingamerica.com/topics/cost-of-miracle-fibers

INNOVATION

The Wash-and-Wear Revolution

The shirt that promised to retire the iron.

https://www.threadingamerica.com/topics/wash-and-wear

MATERIAL CULTURE

The Leisure Suit Phenomenon

How polyester became the most-mocked fabric in American fashion.

https://www.threadingamerica.com/topics/leisure-suit-phenomenon

Places: Pennsylvania

SOURCES AND CREDITS

Edward J. Carpenter and K. L. Smith Jr. Plastics on the Sargasso Sea Surface. Science. 1972-. https://www.science.org/doi/10.1126/science.175.4027.1240

The History of LYCRA Fiber. The LYCRA Company. https://www.lycra.com/en/about-lycra-fiber/history-of-lycra-fiber

Dacron shirts (DuPont promotional photograph). Hagley Museum and Library. 1955. https://digital.hagley.org/1972341_1502

Image: E. I. du Pont de Nemours & Company, "Dacron & Antron Colour Story," fabric sample booklet. Science History Institute, via Wikimedia Commons. No known copyright restrictions.

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