

GOOD PRACTICE EXAMPLE · GRADE 5 · TECHNOLOGY & ENTREPRENEURSHIP

Working with Textiles and Leather

From an AI-built lesson to hands-on stitching

Iliyana Kaloyanova · 22nd Secondary Language School “G. S. Rakovski”, Sofia, Bulgaria

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About the Lesson

Teacher, school, subject, grade and duration



Learning Objectives

What students should be able to do afterward



Lesson Flow

Five phases - from fabric swatches to a recap game



AI in Action

Four AI tools and the real products used in class



Results & Reflection

What the lesson showed and why it was selected

About the Lesson



TEACHER

Iliyana Kaloyanova



SCHOOL

22nd Secondary Language School “G. S. Rakovski”, Sofia, Bulgaria



SUBJECT & TOPIC

Technology & Entrepreneurship —
Working with Textile Materials



GRADE

5th grade



DURATION

40 minutes



CURRICULUM LINK

Bulgarian State Educational Standards

What Students Achieve



Recognize materials

Identify different textile materials and leather by sight and touch.



Distinguish fiber types

Tell natural, artificial and synthetic fibers apart.



Explain properties

Explain what “exploitation properties” means for a material.



Perform basic stitches

Carry out simple hand stitches on a textile template.



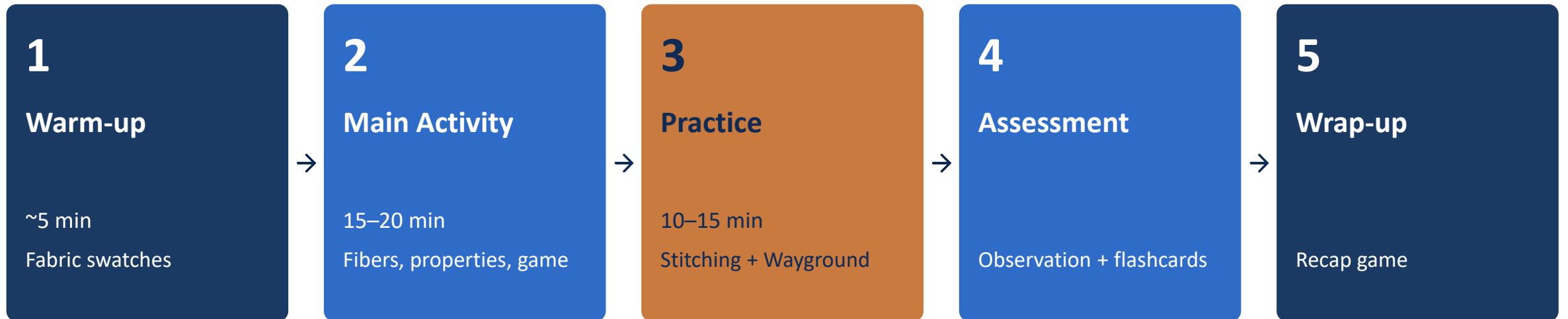
Work safely, as a team

Follow safety rules and collaborate during the practical task.



SECTION 3 • LESSON STRUCTURE

Lesson Flow - Five Phases



Four different AI tools support this single 40-minute lesson - each with a distinct, well-defined role.



FOUR AI TOOLS · ONE 40-MINUTE LESSON

From fabric swatches to a needle and thread

What follows: how each of the five phases actually unfolded in Iliyana Kaloyanova's classroom.

Fabric Swatches and Guiding Questions

No AI



The teacher shows different textile materials and asks: *“What are your clothes made of?”*, *“Which material is warmer?”* Students examine real fabric samples and make guesses.

Why show this honestly

The lesson plan correctly notes that this warm-up does not use AI - it relies on hands-on exploration with real fabric samples before any digital tool appears. AI enters only once students are already engaged with the physical materials.

Fibers, Properties and a Recognition Game

Presenting fiber types: natural, artificial and synthetic materials.

Explaining exploitation properties: softness, warmth, durability, water absorption.

A recognition game, built with AI, for identifying textile materials.

Discussing where each material is actually used in everyday life.

Видове влакна

Текстилните материали се получават от **влакна**, които се преплитат и образуват прежда и плат. Влакната се делят на два основни вида:



Естествени влакна

Получават се директно от природата — от животни или растения.

Химически влакна

Получават се чрез обработка на природни материали или по химичен път.

A Full Lesson Presentation, Built with Gamma

Tool: Gamma

Purpose of using AI: generating a complete slide deck, game-based tasks and visual materials for a more engaging, understandable lesson.

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*Create a Technology and Entrepreneurship lesson for 5th grade on Working with Textile Materials and Leather. It should include **a practical stitching task with different stitches, a reflection, a game for recognizing fiber types and material properties**, an explanation of what exploitation properties means, and applications of textile materials. Ask me questions if I've left anything out.*

The real prompt used by the teacher (translated)

The Actual Presentation Used in Class

Работа с текстилни материали и кожа

Технологии и предприемачество
• 5. клас

Илияна Калоянова
2026 г.



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Свойства на материалите

Експлоатационните свойства показват как материалът се държи при употреба. Те определят за какво е подходящ.

Материал	Мек	Топъл	Здрав	Попива вода
Памук	✓	—	✓	✓
Вълна	✓	✓	✓	✓
Коприна	✓	—	—	—
Полиестер	—	—	✓	—
Кожа	—	✓	✓	—

📌 **Пример:** Зимното яке трябва да задържа топлина. Спортните дрехи трябва да бъдат леки и еластични. Памукът е предпочитан през лятото, защото попива потта и диша.

Made with CANVA

Приложение на текстилните материали

Текстилните материали и кожата намират приложение в почти всяка сфера на ежедневието.



Дрехи и обувки

Най-масовото приложение — от ежедневни дрехи до специализирани облекла.



Дом и интериор

Завеси, спално бельо, мебели и килими — текстилът е навсякъде около нас.



Спорт и защита

Спортни изделия и предпазни облекла изискват специални синтетични влакна.



Кожа — специални изделия

Обувки, колани, чанти, якета и мебели — кожата е здрава и устойчива.

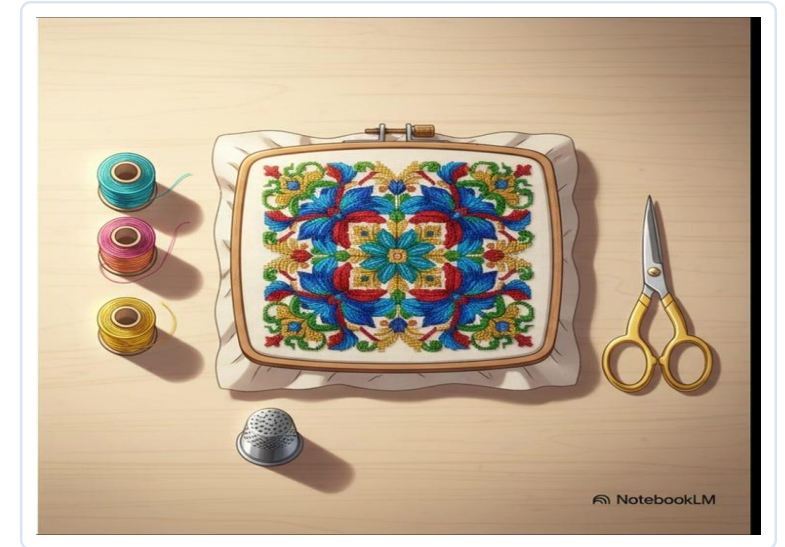
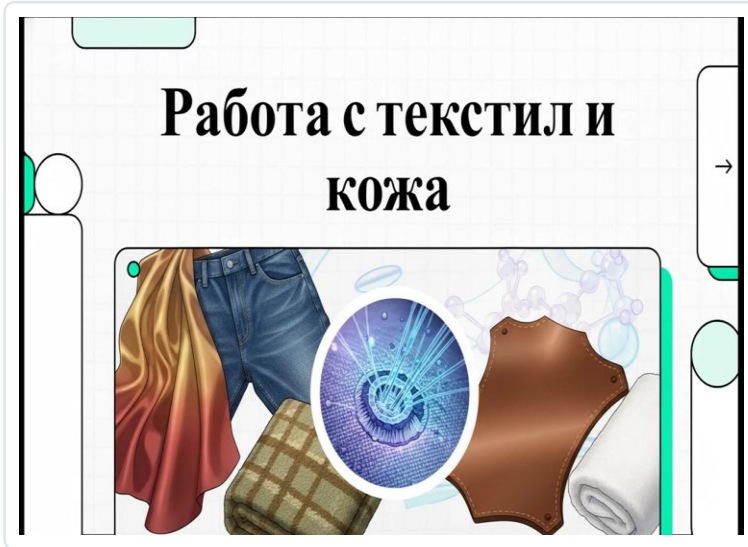
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AI IN ACTION · PRODUCT FROM THE LESSON

An AI-Narrated Video Overview

Tool: NotebookLM

Beyond the slide deck, the teacher generated an AI-narrated, 6-minute video overview of the lesson content with NotebookLM - turning the same material into an animated, narrated explainer.



Frames from the AI-narrated NotebookLM video overview

Practicing stitches: students practice a straight stitch, an overcast stitch and a decorative stitch on a textile template.

Recognition game (Wayground): once finished, students reinforce their knowledge through a fiber and material recognition game.

Differentiation: faster students design a decorative element; students who need more support work from a ready-made template.

PHASE 3 · PRACTICE AND APPLICATION (10–15 MIN)

Hands-On Stitching Practice

Практическа дейност: Основни бодове

Всеки ученик получава парче плат с очертани линии и изпълнява трите основни ръчни бода:

1

Прав бод

Използва се за съединяване на части.
Редовни, равни стъпки.

2

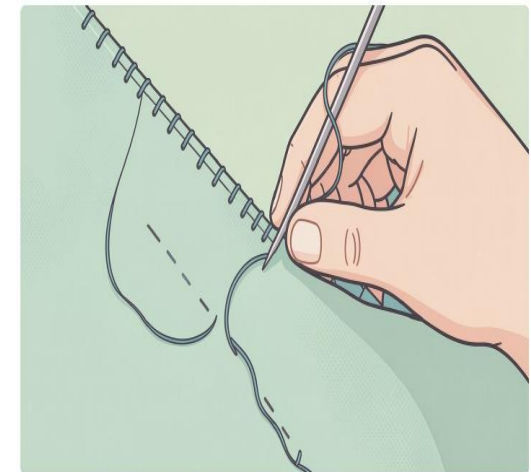
Обметъчен бод

Предпазва плата от разнищване по ръбовете.

3

Декоративен бод

Използва се за украса — може да бъде по-свободен и творчески.



✓ След бодовете: Ушей малък текстилен етикет, мини джобче или декоративна фигурка!

Differentiation and Review with Wayground

Tool: [Wayground.com](https://wayground.com)

AI supports differentiation too: an interactive “Pick the Right Answer” game (Wayground.com) lets faster students move ahead while others reinforce the basics at their own pace - and the same game closes the lesson as a whole-class recap.

Игра: „Познай влакното“



Учениците работят по **групи**. Всяка група получава мостри на платове и картончета със свойства. Задачата е да свържат материала с правилните свойства.

→ **Разгледайте мострите**

Пипнете, огледайте и усетете всяко парче плат.

→ **Обсъдете в групата**

Споделете наблюденията си — мек, топъл, еластичен?

→ **Свържете с картончето**

Намерете правилното съответствие между материал и свойства.

Made with GRAMMA

Checking Understanding as the Lesson Unfolds

Method: observation during work, questions, practical tasks, and participation in the games.

AI support: flashcards and game questions generated with AI (NotebookLM), used to reinforce and check recall.

Evidence of learning: students recognize materials, explain their properties, perform basic stitches, and answer questions correctly during the game rounds.



What Remains After the Lesson



Generated with AI

- “Pick the Right Answer” game - Wayground.com
- Lesson presentation - Gamma
- Reinforcement flashcards & video - NotebookLM
- Lesson content generated with ChatGPT



Traditional materials

- Needles and thread
- Fabric samples
- Scissors
- Computer, projector

How the Lesson Ends

Summing up the lesson with the “Pick the Right Answer” game on Wayground.com.

Homework: find three textile items at home and identify what material they're made of, what properties they have, and what they're used for.

Домашна работа

Вариант 1 – Изследовател

Намери у дома **три текстилни изделия** и определи:

- От какъв материал са изработени?
- Какви свойства имат?
- За какво се използват?

Вариант 2 – Дизайнер

Нарисувай **модел на текстилно изделие** и посочи:

- От какъв материал би било най-подходящо?
- Защо точно този материал?
- Какви свойства са важни за него?

 **Междупредметни връзки:** Човекът и природата • Изобразително изкуство • Български език

TEACHER REFLECTION

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Students took an active part and showed real interest in the hands-on activity. The game elements and AI resources increased their motivation and engagement.

Across this single 40-minute lesson, four different AI tools worked together: Gamma for the presentation, NotebookLM for flashcards and a narrated video, ChatGPT for content generation, and Wayground for the interactive games.

— Iliyana Kaloyanova

Why We Chose This Lesson



A Genuinely Hands-On, Vocational Subject

A Technology & Entrepreneurship example among the seven chosen lessons - AI supporting a hands-on craft skill, not just academic content.



Four AI Tools Working Together

Gamma, NotebookLM, ChatGPT and Wayground each played a distinct, well-defined role across one 40-minute lesson.



A Complete, Reusable Product

A full slide deck and an AI-narrated video the teacher can reuse and share with colleagues - not a one-off demo.

Thank you for your attention!

Lesson: Working with Textiles and Leather · Iliyana Kaloyanova, 22nd Secondary Language School “G. S. Rakovski”,
Sofia, Bulgaria

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