

National Curriculum of Pakistan
2022-23

CLOTHING AND TEXTILE

Grades 11-12



NATIONAL CURRICULUM COUNCIL SECRETARIAT
MINISTRY OF FEDERAL EDUCATION AND
PROFESSIONAL TRAINING, ISLAMABAD
GOVERNMENT OF PAKISTAN

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It is with great pride that we, at the National Curriculum Council Secretariat, present the first core curriculum in Pakistan's 75-year history. Consistent with the right to education guaranteed by Article 25-A of our Constitution, the National Curriculum of Pakistan (2022-23) aspires to equip every child with the necessary tools required to thrive in and adapt to an ever-evolving globalized world.

The National Curriculum is in line with international benchmarks, yet sensitive to the economic, religious, and social needs of young scholars across Pakistan. As such, the National Curriculum aims to shift classroom instruction from rote learning to concept-based learning.

Concept-based learning permeates all aspects of the National Curriculum, aligning textbooks, teaching, classroom practice, and assessments to ensure compliance with contemplated student learning outcomes. Drawing on a rich tapestry of critical thinking exercises, students will acquire the confidence to embark on a journey of lifelong learning. They will further be able to acknowledge their weaknesses and develop an eagerness to build upon their strengths.

The National Curriculum was developed through a nationwide consultative process involving a wide range of stakeholders, including curriculum experts from the public, private, and non-governmental sectors. Representatives from provincial education departments, textbook boards, assessment departments, teacher training departments, *deeni madaris*, public and private publishers, private schools, and private school associations all contributed their expertise to ensure that the National Curriculum could meet the needs of all Pakistani students.

The experiences and collective wisdom of these diverse stakeholders enrich the National Curriculum, fostering the core, nation-building values of inclusion, harmony, and peace, making the National Curriculum truly representative of our nation's educational aspirations and diversity.

I take this opportunity to thank all stakeholders, including students, teachers, and parents who contributed to developing the National Curriculum of Pakistan (2022-23)

Dr. Mariam Chughtai

Director

National Curriculum Council Secretariat

Ministry of Federal Education and Professional Training

Clothing and Textile Progression Grid Grade 9 and 10

Domain A: Introduction to Clothing and Textile

Standard 1: Students will acquire a comprehensive understanding of both conventional practices in the textile and clothing industry and the complexities of technical textiles to make informed decisions across various sectors, including healthcare, construction, and automotive applications.

Grade 09	Grade 10
<p>Benchmarks: By the end of course, students will be able to:</p> <ul style="list-style-type: none"> ● demonstrate a comprehensive understanding of the textile and clothing industry by explaining the physical and chemical properties of natural and synthetic fibers. ● describe textile conversion processes, categorizing end uses of textiles and clothing, recognizing clothing types, and identifying fabrics and clothing items based on their characteristics. 	<p>Benchmarks: By the end of course, students will be able to:</p> <ul style="list-style-type: none"> ● explain technical textiles, including their categorization, key properties, and applications. ● Identify and propose different types of fibers to be used for in technical textiles
Student Learning Outcomes	
<p>Students will be able to: [SLO:TC-09-A-01]:</p>	<p>Students will be able to: [SLO:TC-10-A-01]:</p>

<p>explain the basic physical and chemical properties of natural and synthetic fibers, yarn and fabrics.</p> <p>[SLO:TC-09-A-02]:</p> <p>demonstrate an understanding of how these properties impact the performance and characteristics of textile materials.</p> <p>[SLO:TC-09-A-03]:</p> <p>describe the conversion processes of textile fibers into clothing and explain end uses of different textiles and clothing.</p> <p>[SLO:TC-09-A-04] (Practical):</p> <p>categorize products based on their functional and aesthetic attributes, considering factors like durability, comfort, and fashion trends.</p>	<p>explain technical textiles, encompassing their categorization, key properties, and diverse applications in various industries.</p> <p>[SLO:TC-10-A-02]:</p> <p>identify and recommend suitable fiber types for specific applications in technical textiles, considering their unique properties and performance requirement</p> <p>[SLO:TC-10-A-03]:</p> <p>develop logical strategies for fiber selection for technical textiles, including but not limited to health care, construction and automotives.</p>
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Domain B: Textile fibers, yarns and fabrics

Standard 1: students will be equipped with the ability to differentiate between types of textile fibers, yarns and fabrics, and develop understanding of the different manufacturing processes of yarns and fabrics and the composition of different clothing used in daily life.

Grade 09	Grade 10
<p>Benchmarks: By the end of course, students will be able to:</p> <ul style="list-style-type: none"> Select appropriate fibers based on specific end uses, demonstrating knowledge of both the sources and 	<p>Benchmarks: By the end course, students will be able to:</p> <ul style="list-style-type: none"> Classifyof both conventional and technical yarns and fabrics. They will discuss the basics of yarn manufacturing processes, yarn characteristics, and diverse yarn types.

<p>characteristics of various fibers in the context of textile and clothing applications.</p>	<ul style="list-style-type: none"> • Use various fabric types, including woven, nonwoven, and knitted fabrics and show their understanding of production techniques.
<p>Student Learning Outcomes</p>	
<p>Students will be able to:</p> <p>[SLO:TC-09-B-01]: identify the different classes of natural and synthetic textile fibers used in textile the industry.</p> <p>[SLO:TC-09-B-02]: explain the types of fibers and indicate the care to be taken in maintaining the fabrics made of a particular type of fiber.</p> <p>[SLO:TC-09-B-03]: explain the sources of the natural and synthetic fibers and their processing/manufacturing techniques.</p> <p>[SLO:TC-09-B-04](Practical): Perform physical, chemical, and burning tests for the identification of textile fibers</p>	<p>Students will be able to:</p> <p>[SLO:TC-10-B-01]: distinguish between the different types and classes of textile yarns and fabrics.</p> <p>[SLO:TC-10-B-02]: discuss the conversion technologies of fibers into yarns, including basics of blow room, carding, drawing, roving and ring spinning technologies.</p> <p>[SLO:TC-10-B-03]: Describe the transformation of fibers or yarns into fabrics, encompassing nonwoven manufacturing, as well as weaving and knitting processes .</p> <p>[SLO:TC-10-B-04]: discuss common traits of yarns and fabrics considering their physical and mechanical properties.</p>

Domain C: Textile Industry in Pakistan and Careers in Textile and Clothing

Standard 1: Demonstrate comprehensive knowledge, skills and practices from different content areas required for a career in textile and clothing industry and understand the operational processes involved in textile and clothing manufacturing.

Grade 09	Grade 10
<p>Benchmarks: By the end course, students will be able to:</p> <ul style="list-style-type: none"> • Identify career paths within the industry • Apply operational procedures crucial for business success, and showcasing textile and clothing design skills. 	<p>Benchmarks: By the end course, students will be able to:</p> <ul style="list-style-type: none"> • Build a portfolio based on their skills, learning experiences, expected professional growth and to pitch it in the class.
Student Learning Outcomes	
<p>Students will be able to:</p> <p>[SLO:TC-09-C-01]: discuss the different sectors of the textile and clothing industry of Pakistan and abroad to be chosen as a career.</p> <p>[SLO:TC-09-C-02]: (practical) Design different clothing articles (exhibition).</p> <p>[SLO:TC-09-C-03]: explain fundamental techniques of profit maximization and cost minimization of producers in the textile and clothing industry.</p> <p>[SLO:TC-09-C-04]:</p>	<p>Students will be able to:</p> <p>[SLO:TC-10-C-01]: analyze specific niches within the textile and clothing industry, identifying areas of personal interest and professional potential.</p> <p>[SLO:TC-10-C-02]: report the reasoning behind the dynamics, trends, and opportunities within chosen areas of focus in the textile and clothing industry.</p> <p>[SLO:TC-10-C-03]: review choices to work in the textile and clothing industry and learn to align their interests with industry demands.</p> <p>[SLO:TC-10-C-04]: Create a portfolio for their future in textile and clothing industry based on their learning experience and skills and pitch their idea.</p>

discuss the cottage, small-medium and large scale manufacturing of textiles.

Domain D: Fabric Manufacturing Techniques

Standard 1: demonstrate an understanding and uses of techniques involved in fabric manufacturing, including woven, nonwoven and knitted fabrics.

Grade 09	Grade 10
<p>Benchmarks: By the end course, students will be able to:</p> <ul style="list-style-type: none"> develop expertise in winding, warping, and sizing processes, showcasing precision and efficiency in the critical stages of textile production 	<p>Benchmarks: By the end course, students will be able to:</p> <ul style="list-style-type: none"> Explore and experiment with various fabric manufacturing techniques, demonstrating the ability to create basic woven, nonwoven, and knitted fabric design and analyze the intricate clothing designs of both woven and knitted fabrics.
Student Learning Outcomes	
<p>Students will be able to:</p> <p>[SLO:TC-09-D-01]: describe yarn winding principles to achieve optimal tension, precision, and efficiency in textile manufacturing processes.</p> <p>[SLO:TC-09-D-02]:</p>	<p>Students will be able to:</p> <p>[SLO:TC-10-D-01]: explain the basic concept of fabric manufacturing on a weaving machine considering the conventional and shuttleless weaving machines.</p> <p>[SLO:TC-10-D-02]:</p>

<p>explain warping techniques, ensuring precision and uniformity in the arrangement of yarns for optimal weaving efficiency.</p> <p>[SLO:TC-09-D-03]:</p> <p>discuss yarn sizing techniques, ensuring uniform coating to enhance strength, weaveability, and quality in the fabric manufacturing process</p>	<p>Describe the uses of the knitting of fabrics and their manufacturing, including the circular and flat knitting machines.</p> <p>[SLO:TC-10-D-03]:</p> <p>explain the nonwoven fabric manufacturing techniques and explore the applications of the nonwoven fabrics.</p> <p>[SLO:TC-10-D-04](practical):</p> <p>prepare fabric pieces of woven fabric on frame, knitted fabrics using hand knitting and nonwovens using binder.</p> <p>[SLO:TC-10-D-05](practical):</p> <p>experiment with the different structures of woven and knitted fabrics.</p>
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Domain E: Chemical Processing of Textiles

Standard 1: Demonstrate proficiency in chemical processing techniques for fibers, yarns and fabrics, including pretreatment, dyeing, finishing, and coating processes in textile and clothing industry by analyzing and carrying various chemical treatments.

Grade 09	Grade 10
<p>Benchmarks: By the end course, students will be able to:</p> <ul style="list-style-type: none"> • Demonstrate essential skills in textile chemical processes for the pretreatment of textiles including singeing, 	<p>Benchmarks: By the end course, students will be able to:</p>

desizing, scouring, bleaching and mercerization, and mastering the basic dyeing and printing techniques of vat, direct, and reactive dyes.

- Conduct advanced textile chemical processes, including disperse and pigment dyeing, and intricate color-matching methods.
- Apply specialized finishing techniques, such as softening, water repellency, flame retardancy and antimicrobial treatments, applied to diverse textile materials.

Student Learning Outcomes

Students will be able to:

[SLO:TC-09-E-01]:

explain textile chemistry and fundamental chemical processes in textile pretreatment, including singeing, desizing, scouring, bleaching and mercerization.

[SLO:TC-09-E-02]:

discuss various dyeing techniques, including continuous and pad batch techniques of vat, direct, and reactive dyeing.

[SLO:TC-09-E-03]:

explain textile printing and its techniques emphasizing on screen, digital, block and rotary printing and the types of dyes and pigments used in printing.

[SLO:TC-09-E-04](practical):

develop practical skills in preparing and executing chemical

Students will be able to:

[SLO:TC-10-E-01]:

Master advanced textile dyeing techniques, including disperse and pigment dyeing, and develop expertise in intricate color-matching processes.

[SLO:TC-10-E-02]:

discuss textile finishing and coating processes, types of mechanical and chemical finishing methods, types of coating materials and methods

[SLO:TC-10-E-03]:

evaluate problems related to finishing and coating processes including sustainability aspects

[SLO:TC-10-E-04](practical):

Apply specialized finishing methods, such as flame

processes of pretreatment, dyeing and printing to prepare dyed and printed fabrics.

retardancy and antimicrobial treatments, to diverse textile materials, showcasing practical skills in chemical processing.

Domain F: Environment, Health and Safety Compliance in Textile Industry

Standard 1: Develop an understanding of key concepts pertaining to implementation of regulations, standards, and practices aimed at safeguarding the environment, ensuring the health and safety of workers, and promoting responsible and sustainable manufacturing processes.

Grade 09	Grade 10
	<p>Benchmarks: By the end course, students will be able to:</p> <ul style="list-style-type: none"> • Apply key concepts to mitigate environmental impacts, protect the well-being of workers, and contribute to the overall sustainability of the manufacturing process by incorporating cutting-edge technologies, circular economy principles, and proactive environmental stewardship.
Student Learning Outcomes	
	<p>Students will be able to:</p> <p>[SLO:TC-10-F-01]:</p> <p>understand how to implement sustainable practices to minimize environmental footprints in textile manufacturing.</p>

	<p>[SLO:TC-10-F-02]:</p> <p>explain how to ensure the welfare of workers through advanced occupational health and safety measures in the textile industry</p> <p>[SLO:TC-10-F-03]:</p> <p>Illustrate how to contribute to the sustainability of textile manufacturing processes by integrating innovative technologies and adopting circular economy principles.</p>
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Domain G: Quality Control and Inspection of Textiles and Clothing

Standard 1: Acquire the ability to implement quality control measures, ensuring adherence to industry standards and specifications in the production of textiles and clothing by conducting textile testing and inspection of fibers, yarns, fabrics and garments.

Grade 09	Grade 10
<p>Benchmarks: By the end course, students will be able to:</p> <ul style="list-style-type: none"> conduct thorough inspections of textile and clothing products, identifying defects, and implementing corrective measures to maintain high-quality standards. 	<p>Benchmarks: By the end course, students will be able to:</p> <ul style="list-style-type: none"> Evaluate ways to cultivate a mindset of continuous improvement, fostering an environment where quality control processes are regularly reviewed through audits, refined, and optimized to adapt to evolving industry standards and market needs
<p>Student Learning Outcomes</p>	

<p>Students will be able to:</p> <p>[SLO:TC-09-G-01]:</p> <p>explain the fiber characteristics like fiber length, finesse and strength, and analyze the said characteristics by fiber testing.</p> <p>[SLO:TC-09-G-02]:</p> <p>discuss the yarn properties like this, mass variation, hairiness and strength and possible ways of determining these properties.</p> <p>[SLO:TC-09-G-03]:</p> <p>demonstrates skills for fabric inspection for its functional and properties and assess the quality of fabric by providing the fabric grading points.</p>	<p>Students will be able to:</p> <p>[SLO:TC-10-G-01]:</p> <p>discuss how to implement total quality control management and identify areas for improvement to enhance efficiency to achieve customer demands.</p> <p>[SLO:TC-10-G-02]:</p> <p>explain about evolving industry standards and market trends, and proactively integrating relevant changes into quality control procedures.</p> <p>[SLO:TC-10-G-03]:</p> <p>evaluate the conduct and reports of regular quality audits.</p>
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Domain H: Garment Manufacturing

Standard 1: Ability to understand the garment production process, including design, pattern making, cutting, sewing, and finishing and discuss the challenges and innovations in garment manufacturing.

Grade 09	Grade 10
<p>Benchmarks: By the end course, students will be able to:</p> <ul style="list-style-type: none"> demonstrate skills in design and pattern making and the ability to conceptualize innovative designs, translate them into precise patterns, and apply industry-standard techniques to optimize garment fit and aesthetics. 	<p>Benchmarks: By the end course, students will be able to:</p> <ul style="list-style-type: none"> discuss fabric cutting techniques, sewing operations, various stitches and garment construction methods utilizing modern technologies.

	<ul style="list-style-type: none"> explain different garment finishing techniques, like pressing, trimming, hemming, button and zipper and embellishments.
Student Learning Outcomes	
<p>Students will be able to:</p> <p>[SLO:TC-09-H-01]: conceptualize and create innovative garment designs that align with industry trends and consumer preferences.</p> <p>[SLO:TC-09-H-02]: translate design concepts into precise patterns, ensuring optimal garment fit, functionality, and aesthetic appeal.</p> <p>[SLO:TC-09-H-03]: apply industry-standard techniques in design and pattern making, incorporating best practices to meet the quality.</p>	<p>Students will be able to:</p> <p>[SLO:TC-10-H-01]: demonstrate skills in fabric cutting techniques, by explaining them and develop fabric pieces for garment production.</p> <p>[SLO:TC-10-H-02]: analyze various stitches and garment construction methods to assemble garments with precision and quality</p> <p>[SLO:TC-10-H-03]: explain garment finishing techniques, like pressing, trimming, hemming, button and zippers, embellishments and packaging</p>

Domain I: Fashion and Design

Standard 1: Demonstrate knowledge of ethical considerations and social responsibility in fashion design, conceptualize design ideas on paper and through modern tools like CAD, understanding branding, market trends and cultural diversity in fashion.

Grade 09	Grade 10
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<p>Benchmark: By the end course, students will be able to:</p> <ul style="list-style-type: none"> ● demonstrate knowledge and skills in the art of fashion sketching and illustration, communicating design ideas visually and utilizing tools such as computer-aided design (CAD), and virtual prototyping. ● acquire understanding of the entrepreneurial aspects of fashion design, showcasing the ability to strategically launch a clothing line through a pitch deck taking into account the landscape of the fashion industry. 	<p>Benchmarks: By the end course, students will be able to:</p> <ul style="list-style-type: none"> ● creatively solving design challenges with evolving trends and market demands. ● demonstrate understanding of ethical considerations and social responsibility in fashion design, actively promoting fair labor practices, diversity, and environmental sustainability.
<p>Student Learning Outcomes</p>	
<p>Students will be able to:</p> <p>[SLO:TC-09-I-01]: art of fashion sketching and illustration, effectively communicating design ideas visually.</p> <p>[SLO:TC-09-I-02]: incorporate technology into the design process, utilizing tools such as computer-aided design (CAD), 3D modeling, and virtual prototyping.</p> <p>[SLO:TC-09-I-03]: acquire an understanding of the entrepreneurial aspects of fashion design, including launching a clothing line, managing a brand.</p>	<p>Students will be able to:</p> <p>[SLO:TC-10-I-01]: solve design challenges, adapting to evolving trends and market demands.</p> <p>[SLO:TC-10-I-02]: recognize the impact of cultural diversity on fashion abroad and in pakistan.</p> <p>[SLO:TC-10-I-03]: address ethical considerations and social responsibility in fashion design, promoting fair labor practices, diversity, and environmental sustainability.</p>

Domain J: Textile Marketing and Merchandising

Standard 1: Master the textile value chain, conducting market analysis, evaluating merchandising techniques, and formulating effective branding and marketing strategies. They will demonstrate advanced knowledge of consumer behavior, supply chain management, and the impact of e-commerce in the textile industry.

Grade 09	Grade 10
<p>Benchmarks: By the end course, students will be able to:</p> <ul style="list-style-type: none"> ● demonstrate understanding of the textile value chain, conducting market research and analysis to identify trends, consumer preferences in the textile market. ● assess merchandising techniques, including selection, sourcing, pricing, and presentation strategies tailored to textile products, formulate effective branding strategies for textile products. 	<p>Benchmarks: By the end course, students will be able to:</p> <ul style="list-style-type: none"> ● formulate marketing strategies for textile product sales, encompassing traditional advertising, promotion, and contemporary digital marketing techniques. ● demonstrate an understanding of consumer behavior within the textile market, supply chain management specific to the textile industry, recognizing the role of e-commerce, online retail platforms, and digital marketing.
Student Learning Outcomes	
<p>Students will be able to:</p> <p>[SLO:TC-09-J-01]:</p> <p>discuss the textile industry, including its structure, value chain, and key players.</p>	<p>Students will be able to:</p> <p>[SLO:TC-10-J-01]:</p> <p>develop effective marketing strategies for textile products, including advertising, promotion, and digital marketing techniques tailored to the industry.</p>

[SLO:TC-09-J-02]:

develop skills in market research and analysis to identify trends, consumer preferences, and competitive landscapes within the textile market.

[SLO:TC-09-J-03]:

explain merchandising techniques specific to textile products, including selection, sourcing, pricing, and presentation strategies to optimize product appeal and sales.

[SLO:TC-09-J-04]:

examine branding strategies for textile products, emphasizing brand identity, differentiation, and effective positioning within the market

[SLO:TC-10-J-02]:

analyze consumer behavior within the textile market, considering factors that influence purchasing decisions and preferences.

[SLO:TC-10-J-03]:

explain supply chain management within the textile industry, including procurement, production, distribution, and logistics.

[SLO:TC-10-J-04]:

argue the role of e-commerce in textile marketing, including online retail platforms, digital marketing, and the integration of technology for sales optimization.



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