



The **EDUCATIONAL TECHNOLOGY** lesson plan provides teachers and students with the opportunity to investigate the impact climate change is having on the environment through classroom activities.

SUBJECT MATTER (SCHOOL DISCIPLINE / LEARNING AREA)–The EDUCATIONAL TECHNOLOGY

LESSON- Technologies used to manufacture fibres and textiles

OBJECTIVE - Integrating environment and climate change subconsciously to the learning outcome *Technologies used to manufacture fibres and textiles* using digital games' web 2.0 tools. Thus, the students will be able to learn about *Technologies used to manufacture fibres and textiles* consciously while they are raising awareness on the environment and climate change subconsciously using digital games. These games can be applied to indoor and outdoor learning environments, distance and traditional (face-to-face) classrooms.

Learning Objectives of the lesson:

Upon completion of this lesson, students will be able to:

- **define textile and fiber and fabrics ;**
- **the source and classification of natural textile fibres;**
- **fibre properties and how they impact on use environmental issues related to natural fibres.**

Learning outcomes and environmental awareness and climate change implications -

students will gain a broad understanding of the types and sources of different fibres, examining their origins and observing their differences; they will be challenged to transfer knowledge to new situations and projects, building on technical skills and past experiences. Textile projects will give students the opportunity to be creative, independent learners and to explore functional and aesthetic aspects of textiles, demonstrate responsibility in decision-making and encourage



individuals to express ideas and opinions; students will develop an appreciation of the factors affecting them as textile consumers. Current technologies and innovations that continue to emerge in the textile industry will be addressed with emphasis on their economic, social and environmental consequences. The outcome is to assess and appreciate the dynamic nature of textiles and their use to develop solutions for personal, social and global issues

Description of the game and activities and technical specs: The digital game will consist of identifying and classifying types of fibres, apply knowledge and understanding of the properties and performance of textiles to the development and manufacture of textile items; The purpose of the game is to enable students to discuss environmental and sustainability issues.

Key points for the teacher to underline: define textiles; explain the correlation between textiles and fiber; discuss the characteristics of fiber; types of fibers (natural, animal, mineral, plant); types of textile, including natural, synthetic, blended, woven, non-woven and knitted textiles; sensitivity towards environmental concerns.

INSTRUCTIONS/ PROCEDURES

Teacher- Question 1 – What are fibers, fabrics, textiles ?

The teacher explains the terms „ fibre’, „ fabrics’’, „ textiles’’ „ yam’’; explain different sources to get fibers, different types of clothing materials, different plants, animal and synthetic fibers, different methods to get fabric from yam, classification of textile fibres and related properties.

Activity 1

The digital game is designed for the students to study a concept map of fabrics, fibres, and then answer some questions related to it.

Web 2.0 tool digital game model: multiple choice quiz <https://learningapps.org/20468897>



Teacher – Question 2 – What is the evolution of clothing and fashion ?

The teacher explains the fashion of early civilization, the way fashion and clothes evolved throughout the history. Students will learn about the history of clothing as well as about clothes worn by people around the world (e.g. people learned to make clothing from natural resources as protection from weather. Animal skins and hair, plants, grasses and tree bark were some of the materials used. Clothing was very simple, the daily battle for food and shelter left little time to decorate clothing. In Africa, the South Pacific, and parts of Asia, people needed protection from the sun and rain. In Northern Europe, where the weather is colder people dressed in animal skin. We wear clothes to protect our body against heat, cold, rain, dust and insects. At the same time we wear clothes to look good. That is why many of us want to wear clothes that are in fashion. People in different regions of the world wear different kinds of clothes the kind of clothes people wear mainly depends on the climate of the place. The traditional clothes worn by people in each country vary considerably from region to region.). Give information about the steps and items needed for garment manufacturing.

Activity 2

This digital game is designed to challenge students to fill in the blanks with information about clothing construction, using the correct word. This will enable students to actively engage in learning about the properties and performance of textiles, textile design and the role of textiles in society.

Web 2.0 tool digital game model: fill in the blanks https://www.educaplay.com/learning-resources/7423938-clothing_construction.html

Teacher - Question 3 – What is the future of fabrics and textiles in the context of ?

The teacher explains specific properties each fibre has and how this affects end use. If fibre samples are available, learners should examine them at this point – consolidates understanding. (e.g. positive and negative aspects of all fibres and therefore fabrics have an environmental impact); teacher explains that natural fibres are sustainable but not necessarily environmentally friendly.



Activity 3

The teacher will describe the following digital game – fashion designer - Learners will need access to a range of products made from natural fibres as discussed during this lesson. This game activity is based on learners identifying / considering the fibre / fabric for each product and making judgements and own notes based on: the fibre's inherent properties; the product's main function; how the properties support function/use. Learners' own classification table supports this activity.

Web 2.0 tool digital game model: matching columns game
https://www.educaplay.com/learning-resources/10163531-clothing_fashion.html

Follow -up discussion

To check students' understanding of definitions of fibers, fabrics, textiles, yarn To assess their intake of information to ensure they took notes and have an understanding of characteristics and classifications of materials, clothing.

Assessment/ Evaluation

Upon completion of the three activities, ask students to create a PowerPoint presentation to demonstrate various ways to recycle clothing and textiles- investigate local opportunities to renew and recycle clothing and textiles (e.g., turn used textiles into new products, identify recycling opportunities such as consignment stores, thrift shops, shelters.