



A Guidance Program for Sustainable Development by Reusing Environmental Waste and Making Housing Supplements

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Abstract :

The low level of knowledge of recycling housing supplements, which wastes a lot of the economy and resources of the family that pay to buy other new supplements, which negatively affects the resources and economy of the family, so it was necessary to raise awareness of the importance of recycling housing supplements and raise the level of knowledge for them, and to know the types that we are working on recycling of housing supplements, whether they are wooden, metal, glass, or plastic supplements, or fabrics.

The research aims to raise awareness and raise the level of knowledge for recycling housing supplements. And reduce the consumption of family economics. And designing different models for some housing supplements taking advantage of the available materials. And employing new materials in updating old supplements. and to learn about the guidance program and the basics of its construction in recycling wood, glass, metals, plastics and fabrics with housing supplements and protecting the environment from pollution. And in order to preserve grace.

This study was conducted on a sample consisting of (60) university students and the sample was taken from King Khalid University, College of Home Economics, and the choice was made by chance from the college. The most important results concluded that **there are differences in the level of awareness of the sample before and the level of dimensional awareness** in favor of the level of dimensional awareness. There are no differences in the level of pre- and post-awareness according to the area of residence, as the area of residence is not influential in bringing about change. There is a relationship between the level of education of the mother and the level of education of the father and the level of awareness of the student. It was found that the more the mother and father educated, the more aware their student daughter of recycling housing supplements. There are also differences in the level of dimensional awareness according to the level of income, which means that the higher the income, the higher the level of awareness of recycling. There is also an inverse correlation between the level of awareness of recycling and the number of brothers for the student, and this means that the more siblings, the lower the level of awareness of recycling.

Keywords- Guidance program - sustainable development - reuse of environmental waste - residential supplements

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Introduction:

The science of home economics is a comprehensive science whose programs have expanded to include multiple fields revolving around the study of man and the surrounding environment and the problems of the family, home management and interest in housing, furnishing and beautification, and then it is an art because of its diverse skills with its innovative and creative aspects on the one hand and performance on the other (Lotfi and Nawar: 1998). The idea of recycling began during the First and Second World Wars, where countries were suffering from a severe shortage of some basic materials such as rubber, which prompted them to collect those materials from waste for reuse and years later the recycling process became one of the most important methods of waste disposal management, due to the many environmental benefits of this process, and for many years direct recycling through producers of scrap waste materials was the basic form of recycling. Manufacturing But with the beginning of the nineties, the focus began on indirect recycling, i.e. the manufacture of waste materials to produce other products based on the same raw material such as: recycling glass, paper, plastic, aluminum and other materials that are now recycled and industrialists have found that if the recycling program is taken seriously, it can help reduce the cost of raw materials and the cost of operation as well as improve their image as permanent interested in environmental pollution. And there are a lot of supplements for the dwelling, but the lesson is not the high or luxury of the complementary pieces, but the lesson of taste in their choice and in the extent of their suitability for the place, and among those supplements that are used in the beautification of the rooms of the house: lampshades, statues, antiques, watches, small tables (dressing tables) and scattered pillows, parafanas, fish tanks, and shelves on which silver, non-silver, and Chinese decorative tools are placed, And mirrors (Rania Abdel Rahman: 2007) as the dwelling is not just a space surrounded by walls or ceiling, and is not intended for a number of rooms and utilities, but is intended to form these units and furnish them with the necessary pieces and arrange and coordinate. (Lily Al-Qahtani: 2000 (. This process is done by classifying and separating waste on the basis of the raw materials in it and then recycling each material separately, and one of the most recycled things to benefit from in different fields is plastic, paper, aluminum and iron. In addition to organic materials that can be carbonized to produce organic fertilizer, recycling can be achieved by separating these things from garbage by mechanical separation of granules. And magnetic separation of iron, and manual separation (looking) for the rest of the components, but the best means of recycling is separation from the source so that the producers of garbage put each type of waste in separate containers, and that achieves the greatest purity of the material to be recycled, and there are many metal, plastic and paper products that are manufactured by recycling (Salah Mahmoud Al-Hajjar: 2004) .

There is an urgent need to recycle housing supplements to maintain family economics, and for the low level of knowledge of the process of recycling housing supplements, it was necessary to address the study of this topic through this guidance program.

Search problem:

The dwelling is beautified by adding some artistic touches that give the rooms of the house a distinctive character that expresses the personalities of its owners, regardless of the type, style or level of furniture and furnishings of the house, it is necessary to add those beautiful artistic touches that make the house a paradise sought by the individual after the trouble of working outside the home, and the lesson is not the luxury of cosmetic pieces or their cost, but the lesson is good taste in choosing them, and the extent of their suitability for the place where they are placed (Kawthar Kujak: 1993 (. But it is necessary to pay attention not to exaggerate the use of supplements, as it can be used by humans tools and luxury things that give aesthetic touches to the house and provide him with an atmosphere of comfort and pleasure without waste or extravagance, and also a person can reuse some things that he considers waste in making supplements instead of throwing them as waste, As this can reduce the pollution of the environment with my recycled objects and reuse. Recycling is a way to move towards environmental reform, which is environmentally safe if it is done at a small cost that has achieved the greatest benefit (Mohammed Najib Abu Saada: 2005) through which materials are recovered and things are repaired in

order to reuse them, and finally rethink the remaining waste and create new technology that helps to benefit from this remaining waste (Abdul Bari Al-Nuwaihi: 2004). The choice of decorative supplements such as flowers, pictures, paintings and other materials, as they may be practical such as simple barriers, pillows and candles, and may be for decoration only, or combine the two, it is one of the necessary things that must be available in the dwelling, but it should be completed not to dominate it regardless of its function, it reflects the personality, taste, and background of the user, and enhances decorations at the same time (Ahmed: 2001) . The innovative aspect of the dwelling is an important aspect is a creative human behavior and is the first stage of creativity as it is based on the discovery of the new, and helps the designer to create new ideas for the work of decorative supplements give the character of change and renewal in the dwelling (Ali: 1998). Thus, decorative supplements play a major role in the work of many artistic formations and touches and comfortable compositions (Mahdawi: 2002). The development has continued in the world of interior design supplements and beauties to obtain a beautiful shape and technology has played an important role in highlighting its various materials such as metals, wood, plastic, glass, fabrics, and others that are involved in the manufacture of these vital and cosmetic supplements for housing (Ahmed: 2001). It indicates the importance of these components, which increase admiration and appreciation through the external appearance and treatments and the way to deal with them and employ them according to the foundations and principles that all lead to the creation of the design that is in line with the function of the internal composition (Berens, 2004). And beautification in the interior design of the dwelling is the self-expression of the human being who enjoys and indicates the privacy of the self expresses him, and his formative ambition (Ali: 1997). It is important that the pieces of furniture look beautiful from all angles, by exploiting the spaces in a smart way, and using decorative supplements with them, to reach an elegant and functional housing at the same time (Robertson: 1998). In addition, the finishing touches played by decorative supplements in the dwelling, contribute a lot to giving the final look, and play a major role in the improvement procedure in general (Julian and Parham: 2000). Mohammed Najib Abu Saada (2005) explained that recycling is a way to move towards environmental reform and is safe and affordable. He also explained (Abdel Bari Al-Nuwaihi: 2004) that rethinking the recycling process works to create new forms that can be used to benefit from them.

The problem of the research is that the low level of knowledge of recycling housing supplements, which wastes a lot of the economy and resources of the family that pay to buy other new supplements, which negatively affects the resources and economy of the family, so it was necessary to raise awareness of the importance of recycling housing supplements and raise the level of knowledge for them, and to know the types that we are working on recycling of housing supplements, whether they are wooden, metal, or Glass, plastic, or fabrics, which necessitated that we take this topic to study and produce the results.

Through this research, the following questions can be answered:

- 1- Can the level of knowledge be raised by recycling housing supplements?
- 2- Can the decline in the family economy be overcome or curtailed?
- 3- Is it possible to make new designs of housing supplements by recycling them?
- 4- Is it possible to benefit from all the old housing supplements and make it usable?
- 5- Is there knowledge of how to recycle housing supplements?

Objectives:

- 1- The main objective of raising awareness and raising the level of knowledge for recycling housing supplements.
- 2- Reducing the consumption of the family economy.
- 3- Designing different models for some housing supplements taking advantage of the available materials.

- 4- Employing new raw materials in updating old supplements.
- 5- Identifying the guidance program and the basics of its construction in recycling wood, glass, metal, plastic and fabrics with housing supplements.
- 6- Protecting the environment from pollution.
- 7- In order to preserve grace.

Importance:

The importance of this program lies through the following premises:

- 1- Raising awareness of recycling housing supplements for sample members.
- 2- Introducing the sample members to the term recycling, and gaining information about the recycling process in general and then home supplements in particular the recycling process.
- 3- Enlightening the research sample on how to rotate housing supplements of various types and give information about them.
- 4- Helping the research sample to obtain creative ideas by taking advantage of the recycling of analgesic supplements. This is done by displaying some products that can be used in beautiful works that benefit the home.
- 5- Unveiling the curtain is the exit of many researches in this field.
- 6- Reducing extravagance by saving the grace of recycling housing supplements.

Research hypotheses:

- 1- Does it take advantage of recycling housing supplements to reduce the money spent buying new and reduce the spending of family economies?
- 2- Do housing supplements contribute to giving new and beautiful changing designs?
- 3- Does recycling housing supplements contribute to the creation of new things that did not exist before?
- 4- Does recycling housing supplements contribute to reducing the source of money spent on it?
- 5- Do you contribute to the recycling of supplements and decorations of the house?
- 6- Do you contribute to the recycling of housing supplements using all discarded materials and reworking them in a beautiful and decorated way.

Research method:

First: Human Limits

The number of members of the study sample (80) students from the Department of Home Economics fabricated teams (first - second - third - fourth).

Second: Time Limits

The study tools were applied to the study sample of university students during the second semester of 1436/1437 AH.

Third: Geographical boundaries

The study was conducted at the College of Management and Home Economics at King Khalid University, Saudi Arabia.

Scientific terms and procedural concepts used in the research:

Recycling: It is the process of chemical processing of consumables so that they are returned to the raw form of this material and manufactured again and used for purposes other than those for which it was previously used.

Recycling: It is the process of recycling and using waste, whether domestic, industrial or agricultural, in order to reduce the impact of these wastes and their accumulation on the environment.

Housing: The dwelling is not just a space surrounded by walls or ceiling, and it is not intended for a number of rooms and utilities, but it is intended to form these units and furnish them with the necessary pieces and to arrange and coordinate them (Laila Al-Qahtani: 2000)

The beauty of the dwelling : defined as the aesthetic level that the decorative supplements confer in the dwelling resulting from taste and aesthetic sense (Mustafa et al.: 2003).

Decorative accessories: procedurally defined as accessories that are used in decorating the elements of the dwelling and its furniture (Muhammad Al-Ashmawi: 1984).

Study sample:

This study was conducted on a sample of (60) university students and the sample was taken from King Khalid University, College of Home Economics, and the selection was made by chance from the college.

Study and data collection tools:

It was represented in:

First: The student's general data form.

Second: A questionnaire for the pre- and post-test for recycling housing supplements.

Student general data form:

It contains the general data of the student, which included the following data:

Residential area: (city - village)

Number of brothers: means the number of brothers of the student.

Educational level: (uneducated - read and write - intermediate and secondary education - university education and postgraduate studies) and includes the father and mother

Monthly level within the family: It was divided into three low income levels - medium income level - high income level

Address	Lecture Objectives	Lecture Description
Recycling in general	1- To introduce the student to learn about recycling in general. 2- The student should know a simple overview of housing supplements using recycling.	The aim of this section is to provide a range of information covering the recycling or refining process, and related activities. Recycling helps to reduce the amount of some of the materials that need to be produced from raw materials. Some of these materials, (glass - paper - plastic). The recycling process not only helps maintain certain levels of raw materials, but also helps conserve energy in the production of new products. . Recycling old products to turn them into new products generally requires less energy than making new products from original raw materials..

	<p>3- The student should be introduced to simple models of recycling.</p> <p>4- To introduce the student to benefit from local environmental waste, in addition to benefiting from some raw materials and developing them to suit the housing.</p>	
Wood Recycling	<p>1 - To introduce the student to spreading awareness of the importance of recycling.</p> <p>2- To introduce the student to save a lot of money spent on new supplements</p> <p>3- To introduce the student to provide solutions for recycling and benefiting from wood supplements.</p> <p>4- The student should know the design of different models for some decorative supplements by taking advantage of the available materials .</p>	In it, we talk about wood and how to recycle it beautifully, with illustration with wonderful pictures and models about recycling wood waste into housing supplements that benefit from them, such as converting wood into a chair or office suitable for the living room, and also it is possible to recycle an old bed into wonderful seats or an old door to his office that benefits from them, and that this affects the economics of the modern family and is aware of the importance of wood recycling and recycling in general.
Metal Recycling	<p>1- The student should know the recycling in general.</p> <p>2- The student should recognize the importance of metal spin.</p> <p>3- The student should learn about the steps of recycling metal waste at home.</p>	In it, we can talk about the definition of recycling _ and how to recycle metals inside the home and its importance of recycling and also we can talk about the steps of recycling metals _ and models for recycling metals and how to benefit
Plastic Recycling	<p>1- The student should learn about the disposal of household waste in a civilized way that contributes to preserving our environment and health</p> <p>2- The student should learn about the conservation of natural resources.</p> <p>3- The student should learn about reducing the amount of waste by taking advantage of it</p> <p>4- The student should know how to recycle plastic in beautiful ways</p> <p>5- The student should know the simplest ways to form plastic</p> <p>6- The student should learn about spreading awareness of the separation of waste among people.</p> <p>7- To introduce the student to the disposal of household waste in a civilized way that contributes to preserving our environment and health</p> <p>8- The student should know that everyone should participate in this process, from productive companies and large industries to organizations, small businesses and people in the home..</p>	Recycling Sunday is the most important scientific means used to reduce waste and useless materials, which may mainly cause many environmental damages, as recycling projects include more than one category, including recycling plastic, paper and cardboard, and many countries tend to exploit waste and recycle it to benefit from it, as it is processed and converted into useful materials. Plastic recycling projects include the collection, sorting and processing of plastic waste for treatment, it is possible to return it to what it was or convert it to other products, and this process requires the passage of this waste through several steps to obtain the desired product. New plastics and their formation by multiple methods.
Glass recycling	<p>1- The student should know the glass and the properties of glass</p> <p>2- The student should know how to recycle glass</p> <p>3- The student should learn about the preparation of bottles before converting them into housing supplements.</p> <p>4- The student should know some of the ideas and methods used to recycle them</p> <p>5- To introduce the student to community awareness and raise the practical level of glass recycling as supplements to housing.</p>	In it, we talk about glass and ways to rotate and prepare before recycling it and give beautiful and creative ideas to decorate empty bottles instead of throwing them and benefiting from them and then using them as a complement to housing and decorating housing.
Fabric Recycling	<p>1- The student should know the recycling of fabrics beautifully.</p> <p>2- The student should know the preservation of sources</p> <p>3- The student should know how to reduce the amount of waste and make it useful in a</p>	In it, we talk about exploiting old things and ways to take advantage of old things in the house is a skill that many women do not have, collecting these things and thinking about recycling them and producing other useful things that can be used requires high skill, and

	<p>beautiful way</p> <p>4- The student should learn about encouraging citizens to preserve the environment by taking advantage of the rest of the fabrics.</p>	<p>the most important of those things that can be reproduced are fabrics, such as upholstery fabrics, curtain fabrics, silk, satin, chiffon, cotton and organza fabrics, these fabrics can be converted into wonderful household pieces that add an aesthetic touch to home furniture. Fabric residues How to take advantage of curtain fabrics and upholstery There are several ways in which the remaining fabrics of upholstery or curtain fabrics can be used, it is possible to use these fabric residues in the manufacture of a trash can and decorate it with some other fabrics such as satin to give it an aesthetic touch, and it can be placed in one of the corners of the house as well as tissue boxes can be made, in addition to using these fabrics in the manufacture of a cover for the tube or laundry sabbath It can also be used to cover some tools in the bathroom with the use of some Accessories that add an aesthetic touch to it</p>
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The first lecture: (recycling)

Lecture Objectives:

- 1- The student should learn about recycling in general.
- 2- The student should know a simple overview of housing supplements using recycling.
- 3- The student should be introduced to simple models of recycling.
- 4- The student should learn about benefiting from local environmental waste, in addition to benefiting from some raw materials and developing them to suit the dwelling.

Introduction:

The tremendous industrial and technological development led to an increase in the disposal of the amount of consumables that can be disposed of by burying them under the surface of the earth or dumped in the depths of the sea and oceans, and all these methods constitute a great environmental burden, and work to increase pollution to the sources of air, water and soil, hence the urgent need to find alternatives to those methods, so the optimal solution was the recycling process of consumables, whether plastic, glass, rubber, fabrics, oils or any material Other rigid or liquid.

Definition of recycling:

It is a chemical treatment process for consumables so that they are returned to the raw form of this material, manufactured again and used for purposes other than those for which they were previously used.

What is the importance of refining or recycling?

The main reasons why we should all rely more on refining:

- Energy saving.
- Cleaning nature from industrial waste.
- Reducing waste in landfills.
- Preserving and supporting the environment.

Energy saving is very important if we are to effectively reduce the future effects of global warming. Did you know that if we can recycle one aluminum plate, we can save enough energy to run a TV for about 3 hours!! (regardless of the varying power required by TVs), but this gives you a simplified understanding of how great energy savings can be achieved through refining or recycling products..

Nature conservation (from forests and rivers) is becoming increasingly important in the issue of recycling. It's estimated that (in the United States) about 40 million copies of newspapers thrown away each day, equivalent to throwing about half a million trees end up in landfills every week.!!!

Reducing landfills is very important to clean up the environment and to restore the nature of these spots. The information mentioned in the previous paragraph indicates the large volume of waste that is sent weekly to landfills, and this estimate is only for one product (the daily newspaper), so how about the rest of the products combined?. !!!

We are able to help protect the environment by recycling across a number of methods. It is important to be aware of the importance of refining certain materials to reduce not only existing landfills, but also to reduce the establishment of future landfills built as a result of excess garbage. We can also help improve the environment by maintaining forests and rivers, by reducing deforestation to save the environment and wildlife from extinction.

Recycling objectives of the house:

Governmental and non-governmental agencies in all countries of the world competed to benefit from their waste in a sound and economically feasible manner in several ways, including:

- 1 / Design different models for some decorative supplements taking advantage of the available materials.
- 2 / Consumption of the remaining waste and make it of value and aesthetic importance.
- 3 / Exploiting the remaining old materials and recycling them to make decorative supplements that beautify the spaces and spaces of the dwelling.
- 4 / Recycling the house contributes to the creation of new and innovative designs to beautify the house.
- 5 / Benefiting from local environmental waste in addition to benefiting from some raw materials and developing them to suit the dwelling.
- 6 / Recommendation and attention to educate individuals about decorative supplements and exploit them and make something innovative and new.

Types of rotation and a simple summary of each:

1 / Wood recycling: We benefit from wood recycling as fuel for power generation plants and used for cooking stoves and for the manufacture of compressed wood for the manufacture of furniture, furnishings and floor cladding, and by recycling wood we get the necessary decorative supplements to give comfort to the home.

2 / Recycling fabrics: exploit the old materials of fabrics curtains and sofas to beautify the pieces of the dwelling and make them more beautiful and attractive and in simple ways inexpensive and many designers exploited these fabrics and examples of this designer Nada Al-Hamdan, where she exploited several arts and merged to make something new and different, such as the use of decoupage techniques or knitting fabrics in new and attractive ways.

3 / Plastic recycling:

Most types of plastic are characterized by ease of recycling and relatively low cost due to their need for not large amounts of energy, which is much less than what needs to manufacture a new material from the ground up, as recycling of plastic is more widespread and common.

4 / metal recycling:

Studies have confirmed that the recycling of minerals conserves natural resources, reduces gas emissions, saves energy and reduces precaution.

Simple models for recycling:



Second lecture: (wood recycling)

Lecture Objectives:

- 1- To introduce the student to spreading awareness of the importance of recycling.
- 2- To introduce the student to save a lot of money spent on new supplements.
- 3- To introduce the student to provide solutions for recycling and benefiting from wood supplements.
- 4- The student should know the design of different models for some decorative supplements by taking advantage of the available materials.

Introduction:

Lecture Vocabulary:

Recycling: It is the process of converting waste or useless products into new materials or products of better quality or usefulness. .

Analgesic supplements:

"Supplements of any luxuries: "It is what is used from the best and most valuable materials to enjoy them because they provide the most wonderful feeling of comfort and satisfaction in the home" (Webster, 1988). It also means "the tools that can be used by the unit through the beauty of the shape and color and

the comfort it provides for all family members, and it increases the good and splendor of the house such as lampshades, floor furnishings, pendants, curtains and bedspreads" (Samia Al-Samman: 2003).

Decorative supplements can be defined procedurally as the luxuries that are used to decorate the elements of the dwelling and its furniture, such as (curtains, paintings, plant arrangements, bedspreads.... etc) It is the main factor in the formation of the general appearance of the room.

There are many things in every home that we no longer need, and here we must take advantage of them as much as possible, which is called recycling, as this has become widespread in the recent period, and among these things that should not be disposed of and used at home are "wood", suitable to turn into a seat for your child or even a sofa in the living room.

No one is aware of the importance of wood in the interior decoration of homes, wood as a material can make the house an attractive and comfortable place, and in our topic we will give you home ideas to revive old wood, and exploit it to make beautiful things in your home, With these ideas you can get unique pieces of furniture, by recycling old wood, ideas will add a special feature to your home, without having to spend a lot of money to get new furniture for your home.

In the pictures below, there are several innovative and simple ideas to exploit old wooden pieces, but we suggest keeping wood in its natural form in order to preserve its personality, and you will be able to revive the old wooden furniture instead of throwing it away and buying new furniture for your home.

And now take a quick look at the contents of your home from time to time, to catch your eyes furniture that has disappeared fashion, and its colors have faded, and it remains necessary to replace or change it, or even get rid of it, because it dates back many years ago, such as old wooden furniture with a style that reminds you of the family home, or grandfather, grandmother, or some pieces that parents keep despite changing the house completely because it brings back certain memories to them, which spoils the shape of the rest of the house, so you can keep With memories, the smell of the family home, elegance and the latest furniture fashion trends at the same time, by transforming old furniture into dazzling pieces of décor, and reusing them in simple ways mentioned by Amazing Interior Design, to exploit old furniture pieces to obtain a distinctive décor..

1-In this picture turn wood into a wonderful seat:



2- Converting wood for his office suitable for the living room:



3- Converting wood into a piece of décor:



4- Converting the old (bed back) to a wall panel:

You can take advantage of the back of the old bed that is no longer usable, and cut it in simple ways, to turn it into a hanger attached to a board that you can write down positive phrases or important needs on, and you can also paint it to completely change its shape



1- Converting an old door to his office:

An old-fashioned wooden door, whose creak forced you to get rid of it, is the one that you can turn into a wooden library in a simple way, by converting its paragraphs into openings that allow stacking books, and supporting it against the wall



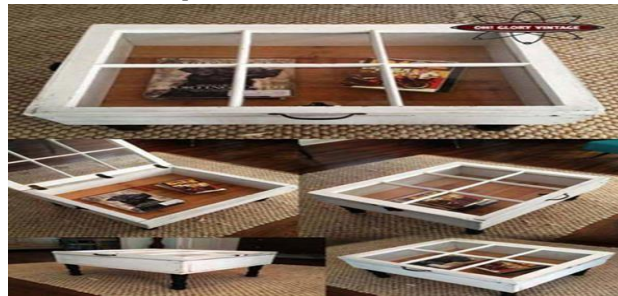
2- Garden benches instead of an old bed:

From an old bed, to a wooden sofa, you can make it by using the rest of the contents of the mattress instead of disposing of it, by exploiting the back, as the background for the sofa, and the rest of the pieces as the body of the sofa..



3- An old wooden window turns into a salon table:

An old window that can be transformed into a simple salon table, in the middle of your hall, and use its four spaces as drawers for the table



4- Converting pieces of wood for salon chairs.



The third lecture ...(Metal Recycling)

Lecture Objectives:

- 1- The student should know the recycling in general.
- 2- The student should recognize the importance of metal spin.
- 3- The student should know the steps of recycling metal waste at home.

Introduction:

We can define recycling as an interrelated process that begins with collecting materials that can be recycled and then sorted according to their types to become products that can be used again and from these products that are usually recycled metals inside the home.

The importance of metal recycling:

- 1 / Recycling metal products inside the home contributes to opening the nucleus of small private projects in the field of productive families and contributes to increasing family income
- 2 / Also the importance of metal recycling as it reduces environmental pollution by finding alternatives to the products used that cause environmental pollution

3 / It is used to give an aesthetic view inside the house.

One of these metal wastes in the house is aluminum, including a beverage box, foil bottle tops, baking trays etc. and also copper metals and kitchen utensils made of it.

Most local authorities are now working to provide a way to dispose of empty cans either by collecting them on the side of the road or in a warehouse for recycling so that this waste is utilized and others are encouraged to do the same as in this way you can help protect the environment and save energy .

Steps to recycle metal waste at home:

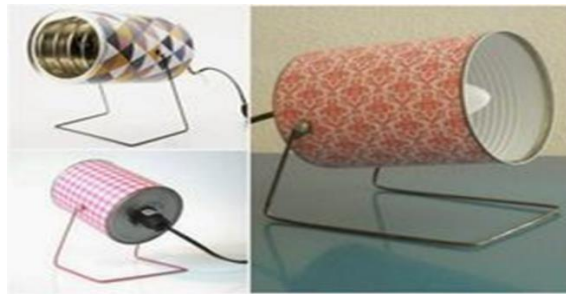
All collection points at remanufacturing for charity accommodate aluminum cans and aluminum foil used in food wrapping or found in certain products..

- Cutting aluminum cans and lifting colors from them
- Aluminum can be recycled without the use of additional materials.

☑ They are aesthetically used at home as cans of tomatoes and canned fruits in many works of art.

Decorating at home is used to save some of the existing items such as decorative tools and cosmetics or placed as masterpieces in living rooms, offices and others.

1- Metal cans used for canning can be recycled into aesthetic forms such as turning them into lampshades:



2- And also convert them into boxes to keep pens on desks:



3_ The use of spoon minerals in making aesthetic roses....



4- Using metals available at home from spoons through which we can hang cups and others on them.....



The fourth lecture ...

(Plastic Recycling)

Lecture Objectives:

- 1- The student should learn about the disposal of household waste in a civilized way that contributes to preserving our environment.
- 2- The student should learn about the conservation of natural resources.
- 3- The student should know how to reduce the amount of waste by taking advantage of it
- 4- The student should know how to recycle plastic in beautiful ways.
- 5- The student should know the simplest ways to form plastic.
- 6- The student should learn about spreading awareness of the separation of waste among people.
- 7- The student should learn about the disposal of household waste in a civilized way that contributes to preserving our environment and health.
- 8- The student should know that everyone must participate in this process, from the producing companies.

Introduction:

Recycling is one of the most important scientific means used to reduce waste and useless materials, which may mainly cause many environmental damages, as recycling projects include more than one category, including recycling plastic, paper and cardboard, and many countries tend to exploit waste and recycle it to benefit from it, as it is treated and converted into useful materials. Plastic recycling projects include the collection, sorting and processing of plastic waste for treatment, it is possible to return it to what it was or convert it to other products, and this process requires the passage of this waste through several steps to obtain the desired product. One of the most important of these steps is the process of collecting these wastes and then sorting them, and the sorting process includes separating plastic waste from others, as well as separating different types of plastic from each other, and then washing them using special machines to ensure that there are no impurities, and then they are dried. At an advanced stage, this waste is cut using shredders and turned into small pieces and then into the raw material, which is prepared to produce new plastics and form them by various methods. The recycling of plastic waste has great benefits represented in getting rid of environmental hazards resulting from traditional methods of disposal, such as burning or burying it, as well as providing various job opportunities that bring economic benefit to society, in addition to that, it is one of the important factors in saving energy. Although this process brings all these benefits and positives to the industry and society, it still faces many obstacles, part of which is the lack of support, which leads to its limited spread, so attention must be drawn to the importance of this industry because it is one of the best ways to get rid of at least environmental risks..

- Plastic injection machine:

It is a device used in the formation of plastic, which is a component of an oven in which the plastic is melted and then the molten plastic is injected into the molds to obtain the desired shape, and the temperature of the furnace or heaters changes depending on the quality of molten plastic and the amount of its internal energy, and this machine is the most used in the production of plastic.

Types used in the plastic recycling process: -

- Polyethylene terephthalate: This type of plastic is used in the manufacture of water bottles and plastic cans .
- High density polyethylene: used in the manufacture of shampoo and detergent cans.
- Polyvinyl chloride.
- Low density polyethylene: used in the manufacture of shopping bags.
- Polystyrene.
- Polypropylene: It is used in the manufacture of dishes and food containers and is one of the best types of plastic

- How to recycle plastic:

Most types of plastic are characterized by ease of recycling and relatively low cost due to their need for not large amounts of energy, which is much less than what a manufacturing process needs for a new material in the first place, which made plastic recycling factories one of the most recycling factories spread even in developing and poor countries, and what drives this growth in the plastic recycling sector in addition to simple operating costs is the availability of inexpensive recycling machines and the availability of support from the authorities Environmental and governmental in order to reduce the risk of plastic waste on the environment.

The proportion of plastic waste in household waste may reach 20% in many Arab countries, and although some Arab countries are oil and it is the source of all plastics, the potential risks of this waste make recycling urgent to protect soil, plants, wildlife and groundwater, and it is important to know that plastic waste needs hundreds of years to decompose naturally in the ecosystem, which makes it has a chronic and accumulated problem, and one of the most important damages caused by this waste to the environment is to kill many living organisms, whether small or large, and destroy soil fertility and pollute water sources with toxic elements contained in some products made of plastic. In terms of the possibility of recycling, plastics are divided into several sections: some of them can be recycled in easy and simple ways, some of them need complex additional treatment before they can be recyclable, and some of them cannot at all, which are materials that are not formed by heat, such as the lids of electricity cans and some types of lanterns. There are many types of plastic, as they are more than 50 manufactured materials so far, and there are many uses with them, but there are general stages of recycling, and in some countries that have an advanced system in recycling, the process starts from homes and institutions producing waste, while some companies operating in some other countries are forced to take the first step, which is sorting, which is a long process and needs a lot of labor, which reduces the return, and whether the sorting is done at home or in Recycling plants The process that plastic products then go through is similar for both cases.

It goes through the following stages :

Steps to Plastic Recycling

1 - Sorting: It aims to obtain pure plastics from the impurities of other materials, because the presence of impurities from other plastics leads to weakening the properties of the products manufactured from them, and sorting is carried out in several forms, there is home sorting followed in some developed countries, which needs collection points or containers dedicated to different types of plastic, and the best techniques used are machines similar to ATMs in homes, where you determine the type of plastic material and sort it, and can be identified On the main types of plastics through the number inside the recycling

triangle, and in the event that home sorting is not done, it is sorting in factories and this process needs a lot of labor, and in many developing countries no kind of sorting is conducted, so waste containing organic materials, metals, plastics and others reaches the factory, which increases the burden of sorting and raises its costs.

2 - Washing: Washing aims to get rid of dirt stuck to plastic from the remnants of organic materials and others, and the washing process is often done with a solution of caustic soda with hot water.

3 - Crunches: to convert packages and large objects into chips and small pieces that are easy to deal with, and plastic may be re-washed after the crunching process in order to obtain more pure materials.

4 - Granulation: It is the conversion of pieces and chips into granules so that they are similar to the granules obtained when manufacturing plastics from petroleum derivatives, and this process facilitates the sale of recycled granules at reasonable prices without the need to convert them into fully manufactured products.

5 - Formation: In this process, the granules are converted into a usable final product through injection, blowing or extrusion, which are the known production processes for plastic. It is important not to reuse recycled plastic for the same purpose as the previous one for which it was used, as well as the need not to use it to preserve foodstuffs, especially when dealing with high temperature or freezing, and it is also important that there is cooperation by citizens with recycling agencies and institutions in sorting what they issue of plastic waste because this saves a lot of effort and money. Plastic recycling today is a stand-alone industry with its leading specialized companies and it can be said that recycling saves millions of tons of crude oil annually, both used in the manufacture of plastics and used as fuel..

Obstacles facing the plastic recycling process.

The process of recycling plastic suffers from many obstacles that limit its development, despite being a process to protect the environment, and one of the most important of these obstacles facing plastic recycling is the lack of material support allocated to it from the manufacturing country, especially with the high prices of waste and waste collected in addition to the decrease in imported compared to it, all of this made the activity not receive sufficient support, in addition to that, the low quality of the product resulting from recycling compared to the original product reduced of the spread of the industry. Keywords: plastic recycling, plastic recycling, plastic recycling project, plastic recycling in Egypt, plastic recycling factory, plastic recycling steps .



In our society, we need a culture of recycling to exploit waste and waste and to reduce the impact of this waste and its accumulation on the environment.

One of the materials that we use a lot is plastic bottles, so did we think about converting this huge amount of those bottles that we use into useful things? We will show you some ideas in this post, perhaps it will direct us to the idea of recycling and exploiting what is around us.

1- At a center for the elderly in Rizal City, Philippines, the Association of the Elderly converted more than 3,000 used plastic bottles into the walls of a building for the elderly and 800 used glass into windows..



2- In a park in Atlanta, Georgia, one of the states of America, a group of three people made a cave that protects you from the cold weather if you live in one of the northern regions, they used 5000 plastic bottles as a kind of art aimed at reducing the problem of waste, and this project is affiliated with the University of Georgia.



3- In one of the British gardens, colored plastic bottles were used in the construction of a wall for an agricultural nursery



We turn to home ideas for the exploitation of plastic water bottles

1. Can be used as a cap to close a bag by cutting the top of the bottle



2- Can be used as an archive to save books, newspapers and magazines



3- Can be used as a pencil case We may have used this idea before



4- Or can be used in lighting

5- Or add a zipper and use it as a box or piggy bank



6- It can also be used as a vase for growing flowers, houseplants and seedlings



7- A simple idea for drip irrigation and thus save water



The fifth lecture ...(Glass Recycling)

Lecture Objectives:

- 1) The student should recognize the glass.
- 2) The student should recognize the properties of glass.
- 3) The student should know how to recycle glass.
- 4) The student should know the processing of bottles before converting them to housing supplements.
- 5) To familiarize the student with knowledge of some of the ideas and methods used to recycle them.
- 6) The student should learn about awareness and raise the practical level of glass recycling as a complement to housing.

Introduction:

Glass:

It is a colorless material made mainly from sand and can be colored and is used in the work of hundreds of products that we use in our daily lives in the form of bottles and glass cans, which is a safe material for health and is not affected by the materials stored inside.

Properties of glass:

- 1) Transparency: It is characterized by homogeneous clear transparency through which all light rays pass and has the ability to reflect and break light
- 2) Hardness: its ability to resist scratching and friction.
- 3) Resistance to chemicals.

Glass Recycling:

It is the process of converting glass waste into usable products and converting them into a beautiful and attractive form used as a complement to housing décor so that the packages are not previously used to store chemicals, medicines or pesticides.

Project idea and objectives:

The idea is based on recycling empty bottles and making different products that can be used in a variety of forms, instead of throwing them in garbage cans.

Why a bottle recycling project?

There are many reasons why bottle recycling is preferred over other glass waste, the most important of which is that bottles can be exploited in a variety of forms and they do not need specific tools or equipment to work, in addition to that, they are able to endure and work for a long time when they turn into other products and can be marketed and benefited from.

- Preparing bottles before turning them into supplements for aesthetic housing:

The bottle is collected and all contaminants are removed inside, washed well with soap and water, the adhesive paper is removed if found by placing it in boiling water until the paper begins to separate from the bottle, sterilized with heat, then used and decorated.

Examples of bottles:

Vinegar bottle – concentrated juices – canned juices – olive oil bottle – rose water – orange blossom water – cheese bottle – jam and pickles, tomato paste glass – flat bottles – plates – cups – mirrors – windows – glass jars.

Ways to recycle them:

1-1 Use it in doors as decoration or part thereof, in windows or fixed openings in the walls to introduce light or in glass lampshades:

Through drawing on glass, which is one of the very beautiful arts, and the results that can be obtained are very wonderful, especially rays of light, so the drawings shine in the most wonderful colors

1.2 How to rotate?

* Ensure the cleanliness of the surface of the glass or mirrors used, then move or place the design behind the glass and then paint over it.

* National determine the drawing with a glass limiter and leave it to dry completely, then color it with a brush or dropper, preferably placed in a place interspersed with light to highlight the beauty of the view.



2.1 Use the empty box as an ornament to be placed on a fixed shelf in the toilets or in the sitting area as an expiation placed on a table

Through the use of different materials with empty glass cans, we can turn them from a cheap and old bottle into a wonderful masterpiece

2-2 How to rotate?

Dried roses or wheat ears or sea algae are placed in a bottle and the more beautiful it is then oil is poured on the roses to the top of the bottle and we leave a little space then close the bottle well and tie ribbons or burlap ropes on

The neck of the bottle is in the form of a rose and the color of the ribbon is suitable for the color of the bottle content and the word ((oil bath)) can be written if it is oil and write ((wax)) if it is wax or choose a word or phrase in beautiful handwriting on a piece of cardboard or paper and then pierced with a punch and tied with a thread with the neck of the bottle.



There is another way: by placing stones and sea algae and fill with water to the top and leave a distance of 1 cm and pour a little oil and then take a plastic paper placed over the oil flat and punched from the middle and put a candle thread inside the hole and use long-term wax.

2-3 glass cans for wax

This idea can be used with the versatility of the way it is produced and rotated

How to rotate?

* Choose a specific wax and color grated and melt it in a saucepan and stir it with a wooden spoon and then put it inside the empty bottle after installing the candle thread inside and thus can be used lanterns ignite at night in outdoor sessions or inside the house.

*Another safe way to make a candle in empty glass is:

By placing stones and sea algae and filled with water to the top and the water can be colored in the desired color and leave a distance of 1 cm and pour a little oil and then take a plastic paper placed over the oil flat and punched from the middle and put a candle thread inside the hole, and so use a long-lasting candle and safe more hygienic so that it does not contain lead, and plastic paper works to protect the candle thread from water, And the oil works to float the plastic sheet.

* Also used as a candlestick: placed on stairs, shelves or on a table

How to rotate?

This is done using a piece of openwork lace fabric and sticking it from the inside on the walls of the bottle and adding a candle inside it and used in bathrooms or window frames and decorating them with ribbons and placing them on the table or in the sitting place.



2-4 Family Photo Frame

How to rotate?

By placing the image inside the empty package and sticking it to the walls of the package and shells or stones can be used to decorate it from the inside or outside with glue and placed in the place of storage and organization or on the seating table.



2-6 vase and colored in glass colors:

How to rotate?

They can be produced in very, very many forms so that before coloring them, parts of them are covered with adhesive tape in the form of lines, then they color the blanks, and then these lines are removed and very beautiful shapes appear to us, and they are taken out with decoupage or using beads and different materials on them.



2-7 Container for pens or kitchen utensils:

How to rotate?

So that it is encased or colored and then decorated with its ribbon.

2-8 Used for planting flowers or plants:

Here they give a wonderful aesthetic shape and are used in kitchens, home gardens, stairs inside the house or on a shelf.

How to rotate?

Pierced from the bottom and then colored in a suitable color with the color of the flowers planted in it and prefer to choose attractive colors.



9_ To serve food in it

How to rotate?

Wash and clean well, then put food or ornaments in it and add a ribbon or rope for decoration



Used with home lighting as a cover.

How to rotate?

By placing the color bottle case in place of the main lighting cover to give the lighting the color of the new bottle or by placing small lights inside the bottle and fixing it with strong ropes or chains.



The same idea can be used with the multiplicity and difference of raw materials according to taste and desire for the shape and color of the final product of the person. For all the previous ideas. An example of covering the case with crochet threads, wool, burlap ropes or inlay with stones and beads



The sixth lecture.

(Fabric Recycling)

Lecture Objectives:

- 1- The student should learn about the conservation of natural resources.
- 2- The student should know how to reduce the amount of waste and make it useful in a beautiful way
- 3- The student should learn about encouraging citizens to preserve the environment by taking advantage of the rest of the fabrics.
- 4- The student should know the beauty of fabrics.

Introduction:

Many sought to get rid of old fabrics, when upholstering sofas or replacing new curtain fabrics, thinking that they could not benefit from them.

Exploiting old things and ways to take advantage of old things in the house is a skill that many women do not have, collecting these things and thinking about recycling them and producing other useful things that can be used requires high skill, and the most important of those things that can be reproduced are fabrics, such as upholstery fabrics, curtain fabrics, silk, satin, chiffon, cotton and organza fabrics, these fabrics can be converted into wonderful household pieces that add an aesthetic touch to home furniture.

Methods of recycling fabrics:

There are several ways through which the remaining fabrics of upholstery or curtain fabrics can be used, it is possible to use these remnants of fabric in the manufacture of a trash can and decorate it with some other fabrics such as satin to give it an aesthetic touch, and it can be placed in one of the corners of the house as well as tissue boxes can be made, in addition to using those fabrics in the manufacture of a cover for the tube or laundry sabbath and can also be used to cover some toolsQuality in the bathroom with the use of some accessories that add an aesthetic touch to it such as beads or roses, those fabrics are used as a cover for an old chair, whether in the living room or kitchen with embroidery of this cover to give an aesthetic appearance, and the remains of the fabric are used to make a small curtain and place it over an old painting or on one of the walls as a kind of change in the décor of the house, and it can be used to make small games for children, and it can also be used as a decoration for the living room or children's room, where these fabrics are cut into pieces Small in the form of hearts, roses or doves, use them to make small bedspreads and decorate them with lace and beads and put them on the yellow or inside the niche, as well as make small pillows that are placed in the corners of the empty house.

How to benefit from the rest of the types of fabric:

The remnants of organza fabrics can be used in the manufacture of dried rose bags and placed in the school wardrobe or in the car or in the bathroom to give a beautiful smell and a wonderful view, and it can also be used to make small bedspreads and put them in the bedrooms or in the salon, in addition to being used in decorating gifts and sweets boxes as well as used to decorate a small towel with some beads and roses, so it is a wonderful cover that can be used to cover the tea pot, while chiffon can be used to make shawls and uses beads to decorate them Or handkerchiefs or a wonderful tie for hair, while silk can be used to make small bags embroidered with beads that can be used on occasions, as well as can be painted on a piece of silk cloth, giving a wonderful piece of art, and satin can be used to cover the Sabbath of dried roses or an old basket, it turns it into an aesthetic form, as well as used as a small wallet for makeup tools, and it can also be used to make bags for children. Great ideas to take advantage of fabrics There is a set of beautiful ideas that help you get rid of the remnants of old fabric and at the same time help you take advantage of them, you can collect square pieces of brightly colored fabrics and sew them to become a wonderful brightly colored bedspread that can be used during picnics and trips, and you can also exploit old embroidery drawings by surrounding them with some fabrics and making a very comfortable pillow, asWhat you can make pockets in that pillow will give it a wonderful shape, in addition to the possibility of making bags to put your child's books in wonderful and amazing colors, and you can turn a small skirt into a wonderful bag with adding some aesthetic touches to it such as embroidery, and you can also participate with your child in the manufacture of some small toys that he loves, by exploiting some old brightly colored sherbet in making some toys, this will develop the child's skills and make him feel the value of manual labor, and you can also make Wallet for money, napkins or making a color box out of fabric.

1- Exploiting the rest of the fabrics in the work of children's pillows



2- Exploiting the car tire by covering it with cloth and becoming a beautiful chair



3- Use the rest of the fabrics by making a pencils wallet



4- Predominance of gift boxes with cloth:



5- Making styre with fabrics:



Previous studies:

1 - study Magda Shawky (2008) where the study aimed to take advantage of the plastic potential of small textile pieces in the enrichment of artifacts and benefit economically, instead of disposal, has applied the study in 2007 in the first semester and the sample on the students of the band fold Faculty of Specific Education in Tanta has been the number of sample 60 students divided into two groups experimental and control and the tool used is the card to evaluate the technical performance prepared by the researcher, The researcher used the experimental approach has been the variables of the study side of the plastic and techniques used The researcher has made an enrichment program in the artifacts The researcher has reached a number of results were as follows: There are no statistically significant differences between the average scores of the members of the control group and experimental in the dimensional application in the technical performance in the artifacts, also there are statistically significant differences between the average Pre- and post-test in the experimental group, the study has reached a set of recommendations, where the study recommends taking advantage of all the new raw materials and trying to benefit from their raw materials, taking advantage of how to implement artifacts with the simplest raw materials in the work of small economic projects that benefit materially to members of society, conducting courses and awareness and training programs for students of the College of Education, teachers and women in general in society on ways to benefit from the available raw materials in the production of creative artistic designs that can be economically benefited.

2 - aimed at the study of Sarhan (2011) to how to exploit the remnants of fabrics and pieces consumed to make other new products following scientific methods, has followed the research descriptive approach applied, has been the search on a random sample of women in the city of Jeddah, strength (180) women included different data has been the limits of the research research is limited to the study of the recycling of fabric residues for use in furniture supplements through the production of different models of furniture supplements represented in the covers for devices and kitchenware.

Spatial boundaries: The study in Saudi Arabia will be applied in Jeddah. Time limits: The study will be applied during the vertical year 1431/1432 AH, the research used the applied descriptive approach, where the descriptive approach is based, and a questionnaire form was used, and the processing was statistically, and one of the most important

Results: It is clear from the study that the waste of fabrics and pieces consumed can be greatly utilized through recycling processes and the production of multiple kitchen supplements, which contributes to increasing aesthetic aspects. It was also clear through the study that there is a relationship between personal characteristics (educational level, income, and marital status) and the willingness to practice recycling waste fabrics and benefit from them in the production and manufacture of kitchen supplements and this relationship can be adapted as follows: There is a direct relationship between the educational level and the practice of recycling fabrics, the higher the educational level, the greater the desire to recycle ratios. To increase knowledge. There is an inverse relationship between income and encouraging recycling among the research sample, the higher the income, the lower the desire for recycling work among the study sample. The study sample indicated in high proportions the possibility of working on the use of fabric residues in the work of products for kitchen supplements and benefit from them significantly. The study sample also indicated a high percentage of their support and encouragement to work in women's ready-made clothing factories that work in recycling fabrics and benefit greatly and effectively. One of the recommendations of this study is to raise awareness among women and housewives of the importance of recycling fabrics and its role in society from an aesthetic point of view as well as in terms of preserving the environment. And work to encourage recycling work through the establishment of seminars, lectures and exhibitions of the products that are produced and specialized in recycling the waste of fabrics and consumable parts. Also supporting and encouraging those wishing to open factories and home workshops for the work of recycling clothes and leftover fabrics in order to increase income and occupy women's leisure time. Conducting further studies on the possibility of benefiting from the remnants of fabrics in the community to manufacture multiple products as well as home accessories and identifying mechanisms and methods that help to increase their use in this field. (Thana Mustafa Sarhan (2011) Recycling of fabric residues for use in furnishings supplements Journal of Specific Education Research - Egypt p)

- Study (Rehab Ahmed Ahmed: 2012): entitled (Study of the environmental and economic return from recycling paper waste).

The aim of the study was: to shed light on the problem of paper waste in Egypt from an environmental and economic point of view, as this waste is a neglected economic resource that we have not yet been able to make optimal use of and needs a lot of attention to it for good use of it instead of turning it into a source of many environmental problems.

The aim of the study was:

Shedding light on the problem of paper waste in Egypt in terms of the environment and economic, where these wastes are a neglected economic resource that has not yet been able to recover optimally from it and needs to pay attention to it for good use of it instead of turning it into a source of many environmental problems and the goal was:

Identify solid waste and the negative effects it constitutes, whether in terms of environmental, economic or health, identify methods of solid waste treatment and choose the best one, environmental awareness work for individuals on methods of proper disposal and safety of waste Identify the different ways to

process paper files and find the best and most appropriate, environmental awareness work for individuals methods of proper disposal and safety of waste, Preserving the environment from environmental pollution resulting from these wastes by following a scientific method that is environmentally safe, encouraging the use of recycled materials. The most important results were:

There is a direct relationship between the increase in the amount of solid jurors and the paper waste they contain and the increase in the rate of environmental pollution, there is a direct relationship between the recycling of paper waste and the decrease in the rate of environmental pollution, there is a positive relationship between

'The habit of recycling paper shaves and increasing the economic and environmental return as a whole as a result of the reduction in waste paper recycling losses compared to other non-paper recycling processes.

1- Study (Rania bint Ali Ahmed Abdul Rahman: 2007) entitled (furniture and decorative supplements in the Saudi housing between originality and modernization.

The aim of the study: to identify the various environmental raw materials manufactured from them and shed light on their aesthetics and the study followed the descriptive and analytical approach this in addition to the applied study that included the work of the researcher, which amounted to 100 designs were completed depending on the design and its foundations and elements and the use of the golden sector and perspective and the isometric cube and coloring and giving it the contact using the computer with the installation to retain the aesthetics of folklore and show them clearly and on the new designs and use them in different and diverse directions and included tools Computer research, which was used in the work of innovative designs from the work of the researcher and a digital camera, field studies of museums and some houses of a heritage nature in the research area.

The researcher reached a set of results, the most important of which are: that the inventory and characterization of some pieces of furniture and traditional decorative supplements was important for fear of their extinction over the years, as well as their studies and analysis led to the possibility of benefiting from the aesthetic values and artistic richness in them in the implementation of modern designs in a manner that keeps pace with the times and the Saudi environment and confirms their identity.

The computer contributed to the speed and ease of offering and changing the ideas of designs while working to achieve and develop designs for furniture and decorative supplements, in terms of diversity and richness in shape, texture, color and reshaping the old in a contemporary way.

Results and discussion

Student Data Form

Form Number :

1 Residential area:	Village	()	city	()
3- Mother's work:	Work	()	Don't work	()

4 Educational level:

Father	Mother	Educational level	Serial
		My mother.	1-
		He reads and writes.	2-
		He holds a primary degree.	3

		He holds a preparatory degree.	4
		Holds a high school diploma or equivalent.	5-
		He holds an above-average qualification.	6-
		He holds a university degree.	7-
		He holds a master's degree.	8-
		He holds a doctorate.	9-

5 Monthly household income in pounds :

From 9000 and above	6000 to less than 9000	3000 to less than 6000	1000 to less than 3000	Less than 1000	Income Categories in Pounds
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Questionnaire to measure awareness of home supplement recycling

	Question	All the time	Sometimes	At all
1-	Recycling housing supplements.			
1	Know the meaning of recycling housing supplements?			
2	Know the aesthetic value of recycling?			
3	Do I know how to exploit simple materials and turn them into good home supplements?			
4	I know how to hide housing defects using recycling?			
5	Do I know how to exploit old materials and recycle them to bring comfort to the house?			
6	Do I know that recycling a house costs a small price?			
7	Do I know that the material cost of recycling is lower compared to what is new?			
8	Know that recycling works to reduce environmental pollutants?			
2-	Plastic recycling.			
9	Ever heard of how to recycle plastic?			
10	Would I like to be an active element in making use of plastic at home?			
11	I think the best solution to get rid of plastic is to recycle it?			

12	Realize the importance of plastic recycling?			
13	Do I know that plastic can be recycled in more than one beautiful way?			
14	Do I accept to buy recycled products from plastic?			
15	Do you accept the idea of establishing collection centers in residential areas to receive recyclable materials?			
16	Agree with that plastic waste is natural and there is no harm to humans?			
17	Do you support plastic waste recycling technology as housing supplements?			
18	Do I apply waste recycling at home, even if only for simple things like plastic reuse?			
3-	Wood recycling.			
19	Know that there is an importance to raise awareness of recycling wood supplements?			
20	Do you realize the appropriate solution with damaged or old furniture, which is recycling?			
21	Know the importance of wood in the interior decoration of homes?			
22	Do I recycle wooden furniture at home?			
23	Do you realize that recycling wood supplements saves a lot of money spent on buying them?			
24	Do I have ideas for recycling wood supplements?			
25	I think there's a relationship between recycling and family economics?			
4-	Metal recycling.			
26	Ever heard of the metal recycling process?			
27	Do I collect empty metal cans at home?			
28	Do you accept buying reused metal products in a new form?			
29	Can I reuse household metals in a simplified way, such as making a pencil case from metal cans instead of throwing them away?			
30	Can I beautify empty metal cans aesthetically?			
31	Do you think recycling metal waste brings an economic return?			
32	Think recycling metal waste is easy?			

33	Can I turn empty metal cans at home into a pen holder in the office?			
34	I like the final shape of the recycled metal?			
35	Can I turn household metal into aesthetic pieces easily?			
5-	Fabric recycling			
36	Know the meaning of recycling housing supplement fabrics?			
37	Realize the importance of recycling the fabrics of housing accessories (such as curtains - furnishings)?			
38	Do I know that the fabrics of housing supplements reduce the expenditure on them from the family budget?			
39	Would you benefit from recycling the fabrics of your home supplements again?			
40	Recycling of analgesic supplement fabrics helps create new works of art?			
41	Do you benefit from recycling complementary fabrics by making different designs?			
6-	Glass recycling.			
42	Know the meaning and how to rotate glass as a supplement to the dwelling?			
43	Know how to use empty bottles for creative purposes instead of throwing them in the garbage?			
44	I have ideas, experience and skill in recycling glass as a complement to the home?			
45	Can I rotate the glass to complement the dwelling in a beautiful, attractive and wonderful way?			
46	I like the final shape after recycling the glass?			
47	Know how to make a candlestick inside or outside the dwelling using glass cans?			
48	Know how to use glass containers to make pencil cases or flower vases in a simplified way?			
49	I like recycling glass waste as a complement to the dwelling and using it instead of throwing it away?			
50	Love buying recycled bottles?			
51	I see recycling old glass cans as a home complement an ideal solution to reduce family economy?			

Sixth: Data Analysis and Statistical Transactions Followed:

Some statistical methods were used to detect the relationship between the variables of the study and hypothesis testing, including the following:

1 - Calculation of frequencies, percentages, arithmetic averages and standard deviations for all variables of the study: which include (area of residence - number of brothers - educational level of the mother and father - work of the head of the family - monthly income of the family).

3 - T test to find out the significance of the differences between:

A- Residential area (rural - urban).

(b) Working and non-working heads of households .

4 - Calculate the analysis of variance ANOVA in order to find out:

A - the significance of the differences between the different educational levels of the mother and father.

B - The significance of the differences between the different income levels of the family.

5- Pearson's correlation coefficient

Results and discussion

First: Sample Description

1- The area of residence of the head of the family (rural - urban): -

CCountries (1) Percentage distribution of the study sample according to the area of residence

Residential area		Number	Percentage
Village		8	13.3
city		52	86.7
Total		60	100

It is clear from Table (1) that the sample consists of 60 students from the village and the city, where the percentage of female students who live in the city was 86.7%, and the percentage of female students who live in the village is 13.3%, and it is noted that the percentage of female heads of households in the city is approximately two-thirds of the sample.

2- Work of the head of the family (workers - non-workers): -

Table (2) Percentage Distribution of Study Sample by Work of Head of Household (Workers - Non-Workers)

Mother's work	Number	Percentage
Non-workers	20	30.3
Workers	40	69.7
Total	60	100

It is clear from Table (2) that female students whose mothers are employed by 69.7%, and that the percentage of female students whose mothers are not working is 30.3%.

3- The educational level of the mother and father of the family:

Table (3) Percentage Distribution of Study Sample by Mother's Education

Teaching the head of the family	Number	Percentage
Low level of education	4	6.4
Intermediate level of education	41	68.3
High level of education	15	25
Total	60	100

It is clear from Table (3) that the highest percentage in the level of education of the mother was for the average educational level, which amounted to 68.3%, followed by the high educational level, where the percentage reached 25%, and the lowest percentage was for the low educational level.

Father's education

Table (4) Percentage distribution of the study sample according to the level of education of the father

Level of education of the head of household	Number	Percentage
Low level of education	2	3.3
Intermediate level of education	34	56.7
High level of education	24	40
Total	60	100

Second: The level of education of the head of the family

It is clear from Table (4) that the highest percentage in the level of education of the father was for the average educational level, which amounted to 56.7%, followed by the high educational level, which reached 40%, and the lowest percentage of the low level of education, which amounted to 3.3%.

1- Monthly family income level:

Table (5) Percentage Distribution of Study Sample by Monthly Household Income

Monthly household income	Number	Percentage
Low income level	1	1.7
Average income level	52	86.7
High income level	7	11.7
Total	60	100

It is clear from Table (5) that the highest percentage in the level of household income was for the level of middle income at 86.7%, followed by the level of high income at 11.7%, and the lowest percentage was for the level of low income at 1.7%.

2- Number of student brothers: -

Table (6) Percentage Distribution of Study Sample According to the Number of Female Brothers

Number of brothers	Number	Percentage
one brother	2	3.3
Khan	3	5
Three brothers	3	5
Four Brothers	6	10
five brothers	10	16.7
six brothers	36	60
Total	60	100

It is clear from Table (6) that the largest percentage of the sample are those who have six brothers, where the percentage reached 60%, followed by those who have five brothers, where their percentage reached 16.7%. While the rest are simple proportions.

The first hypothesis:

There are no differences in the sample level in the level of pre-awareness and the level of post-awareness

Table (7) Significance of the differences between the average scores of the study sample according to the pre- and post-test

n = 60

Level of awareness of housing supplements	Pre-test n = 60		Post-test n = 60		Value of t	Significance level
	Average	Standard deviation	Average	Standard deviation		
Level of tribal awareness	35.2222	8.6217	51.0726	10.95175	14.955	0.05
Level of dimensional awareness	27.6889	10.00184	42.018	8.10920	15.998	0.01

It is clear from Table (7) that there are no statistically significant differences in the level of awareness according to the area of residence

The first hypothesis:

There are no differences in the sample level in the level of pre-awareness and the level of post-awareness

Table (7) Significance of the differences between the average scores of the study sample according to the pre- and post-test

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Level of dimensional awareness	27.6889	10.00184	42.018	8.10920	15.998	0.01

It is clear from Table (7) that there are statistically significant differences in the level of pre- and post-awareness in favor of the level of post-awareness.

Second, the second hypothesis: there are no differences in the level of pre- and post-awareness according to the area of residence

Table (8) Significance of the differences between the average scores of the study sample according to the different area of residence

n = 60

Level of awareness of housing supplements	Reef n = 8		Attended n = 52		Value of t	Significance level
	Average	Standard deviation	Average	Standard deviation		
Level of tribal awareness	42.9185	11.03999	55.8297	8.26323	13.688	Gerdal
Level of dimensional awareness	28.7185	6.91273	44.2114	8.06164	19.483	Non-function

It is clear from Table (8) that there are no statistically significant differences in the level of awareness according to the area of residence

The third hypothesis is that there are no differences in the level of pre- and post-awareness according to the mother's work

Table (9) Significance of the differences between the average scores of the study sample according to the difference in the mother's work (workers - non-workers)

n = 60

Level of	Non-Workers = 20	Workers = 40	Value of t	Significance
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awareness of housing supplements	Average	Standard deviation	Average	Standard deviation		level
Level of tribal awareness	53.0667	6.01896	37.6294	13.54545	245.182	Non-function
Level of dimensional awareness	44.3961	4.23102	29.1218	10.86820	263.261	Non-function

It is clear from Table (9) that there are no statistically significant differences between the average scores of the study sample in the level of awareness according to the work of the mother

Fourth hypothesis: - There are no differences in the level of awareness according to the level of education of the mother and father

Table (10) One-way analysis of variance for the level of education of mother and father

n=60

Level of awareness of housing supplements	Contrast source	Sum of squares	Degrees of freedom	Average squares	P value	Significance level
Maternal education level	Between groups	40609.930	2	20304.965	1479.3	0.01
	Inside groups	6165.050	61	13.731		
	Kidney	46774.980	59			
Father's education level	Between groups	9283.092	2	4641.546	747.973	0.01
	Inside groups	2786.271	61	6.206		
	Kidney	12069.363	59			

Table (10) shows that there is a relationship between the level of education of the mother and the level of education of the father and the level of awareness of the student and the application of the Tukey test shows that the greater the education of the mother and father the greater the awareness of their daughter student recycling housing supplements

Fifth hypothesis: - There are no differences in the level of awareness according to the level of monthly income

Table (11) One-way analysis of variance of awareness level according to household monthly income level n = 60

Level of awareness of housing	Contrast source	Sum of squares	Degrees of	Average squares	P value	Significance level
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supplements			freedom			
Level of tribal awareness	Between groups	52618.653	2	26309.327	1101.4	Non-function
		1073.028	61	2.390		
	Inside groups	53691.681	59			
	Kidney					
Level of dimensional awareness	Between groups	42090.929	2	21045.464	1247.3	0.000
		7574.876	61	16.871		
	Inside groups	49665.805	59			
	Kidney					

It is clear from the table that there are differences in the level of dimensional awareness according to the level of income and by applying the tukey test, it means that the higher the income, the higher the level of awareness

Sixth hypothesis:

There is no statistically significant correlation between the level of consciousness and the number of siblings.

To validate the hypothesis statistically, the correlation coefficients were calculated in a way that

Table (12) Pearson's correlation coefficients between the level of consciousness and the number of siblings

Level of awareness of housing supplements	Number of children
Level of tribal awareness	-0.645**
Level of dimensional awareness	-0.711**

** D at 0.01 * D at 0.05 without non-D stars

- Illustrated from the table

There is an inverse correlation between the level of awareness and the number of siblings as a whole at a level of 0.01 moral, which means that the more children, the lower the level of awareness.

Recommendations

- Take advantage of the recycling of housing supplements to reduce the money spent to buy new and reduce the spending of the family budget
- Housing supplements contribute to giving new designs changing and beautiful
- Recycling housing supplements contributes to the creation of new things that did not exist before
- Recycling housing supplements reduces the amount of money spent on it

- Recycling of housing supplements and decorations contributes to the beauty of the place and shape
- Contribute to the recycling of housing supplements using all discarded materials and rework in a beautiful and decorated way
- Recycling or recycling should be part of an integrated national plan for waste.
- Conducting awareness campaigns for citizens, old and young, to urge and encourage them to buy and use remanufactured products.

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