

HOME SCIENCE (321)

TUTOR MARKED ASSIGNMENT

1. Answer any one of the following questions in about 40-60 words

A) After studying Home Science at Senior Secondary Level, one is equipped with many skills. Mention two opportunities using these skills for wage employment or self employment.

Answer:- The possible job opportunities for wage employment, self employment and entrepreneurship at the entry level or after successfully completing senior secondary education may be:

A. Opportunities for wage employment

- i. Staff of consumer organization/forum
- ii. Advisor of consumer rights
- iii. Sales representative of consumer goods and services
- iv. Representative of saving and investment schemes
- v. Employee of saving and investment schemes
- vi. Staff in show rooms of furniture, equipment and other household goods, government emporium, craft centers, production units of household commodities
- vii. Employee in nursery school, day care center, creche, balwadi
- viii. Caretaker in guest house, hotel rooms, office
- ix. Laboratory attendants in Home Science colleges and schools offering Home Science
- x. Employee in a dry cleaning shop
- xi. Staff of catering center, dietetics department in hospitals, cafeteria, canteen, food commodity store, etc.
- xii. Employee in a garment manufacturing firm, textile industry, designing unit, etc.

B. Opportunities for self-employment/entrepreneurship

- i. Producer of household craft items, decorative articles and creative items
- ii. Owner of a nursery school, day care center, creche, balwadi
- iii. Owner of a guest house or paying guest accommodation
- iv. Tailor and/or finisher for stitched garments, eg., sewing buttons, doing hemming or attaching a fall on sari etc.
- v. Owner of boutique, knitted garment unit, weaving unit and fabric enrichment unit
- vi. Owner of dry cleaning shop
- vii. Owner of a canteen
- viii. Supplier of packed meals and food service from home
- ix. Owner of bakery, processed and preserved foods
- x. Manager of outdoor catering service for parties

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- B) Because of urbanization, joint family seems to be completely vanish from our society. Do you think that joint family has advantages over nuclear family? Give reasons to support your answer.**

Answer :- The shift from joint families to nuclear families is a noticeable trend due to urbanization. However, both family structures have distinct advantages and disadvantages. Here are some arguments in favor of joint families having advantages over nuclear families:

There are several advantages of a joint family:

1. It encourages family members to be co-operative and accommodating. Work, especially agricultural work, can be shared.
2. It allows for the old, the helpless and the unemployed in the family to be looked after and cared for.
3. Rearing of small children becomes easier, especially when both parents work.
4. A child gets emotional and economic support in the event of the death of a parent.
5. There is greater financial security.

Joint families also have their problems.

1. Women are sometimes badly and unequally treated.
2. Often disputes arise among the members over property or the running of a business
3. Some of the women have to do all the housework, and they get very little time or opportunity to develop their personality.

2. Answer any one of the following questions in about 40-60 words.

- A) List any four major characteristics of cognitive development in middle childhood.**

Answer :- Cognitive development in middle childhood, typically defined as ages 6 to 12, involves significant growth in various intellectual capabilities. Here are four major characteristics of cognitive development during this stage:

1. Concrete Operational

- a. Thinking: Logical Thought:

Children in middle childhood begin to think logically about concrete events. They can understand the concept of cause and effect and perform operations like addition and subtraction with concrete objects.

- b. Conservation:

They grasp the concept of conservation, understanding that quantity doesn't change even when its shape does. For example, they realize that pouring water from a tall, thin glass into a short, wide one doesn't change the amount of water.

2. Improved Memory and Information Processing:

a. Working Memory:

Their working memory improves, allowing them to hold and manipulate information for longer periods. This is crucial for tasks like mental arithmetic and following complex instructions.

b. Metacognition:

They develop metacognitive skills, meaning they become aware of their own thinking processes. This allows them to plan, monitor, and evaluate their approach to learning and problem-solving.

3. Language and Communication Skills:

a. Vocabulary Expansion:

Children's vocabularies grow significantly, and they become more adept at using language to express themselves and understand others. They also start to grasp more complex grammar and sentence structures.

b. Pragmatics:

They improve in the practical use of language, understanding nuances like sarcasm, humor, and idioms. They learn to adjust their communication style based on the context and the listener.

4. Improved Attention and Executive Functioning:

a. Selective Attention:

Their ability to focus on relevant information and ignore distractions enhances, which is vital for academic tasks.

b. Planning and Organization:

They develop better executive functioning skills, including planning, organizing, and executing tasks. This helps them manage schoolwork, complete multi-step tasks, and follow schedules.

B) Write two differences between fine muscular coordination and gross muscular coordination and support your answer with appropriate examples.

Answer:- Fine muscular coordination and gross muscular coordination refer to different types of motor skills involving different muscle groups and levels of precision. Here are two key differences between them, supported by appropriate examples:

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Fine Muscular	Gross muscular
<p>a. <u>Small Muscle Groups:</u> Involves the coordination of small muscles, particularly those in the hands and fingers.</p> <p>Example: Writing with a pencil, threading a needle, or typing on a keyboard all require fine motor skills because they depend on precise movements of the fingers and hands.</p> <p>b. <u>High Precision:</u> Requires a high level of precision and accuracy to perform tasks smoothly.</p> <p>Example: Playing a musical instrument like the piano or violin involves fine motor coordination as it requires precise finger movements and timing.</p>	<p>a. <u>Large Muscle Groups:</u> Involves the coordination of larger muscles, including those in the arms, legs, and torso.</p> <p>Example: Running, jumping, or throwing a ball are examples of activities that require gross motor skills because they involve the movement and coordination of larger body parts.</p> <p>b. <u>Low Precision:</u> Requires less precision and more overall body movement and strength.</p> <p>Example: Swimming or cycling involves gross motor coordination, where the focus is on the smooth and coordinated movement of larger muscle groups rather than precise control.</p>

3. Answer any one of the following questions in about 40-60 words.

A) Mention the names of any four personnel involved in housekeeping in a hotel or corporate office.

Answer:-In the housekeeping department of a hotel or corporate office, various personnel work together to ensure cleanliness and maintenance. Here are four key roles typically involved:

1. **Executive Housekeeper:**

Responsible for overseeing the entire housekeeping department, including budgeting, staff management, and ensuring high standards of cleanliness are maintained.

2. **Housekeeping Supervisor:**

Manages and coordinates the activities of the housekeeping staff, conducts inspections, and ensures that all cleaning tasks are completed efficiently and up to standards.

3. **Room Attendant (or Housekeeper):**

Performs the actual cleaning tasks, such as making beds, vacuuming, dusting, and restocking supplies in guest rooms or office spaces.

4. Public Area Attendant:

Focuses on cleaning and maintaining the public areas of the hotel or office, such as lobbies, corridors, restrooms, and meeting rooms.

These roles are essential for maintaining the cleanliness, hygiene, and overall appearance of the establishment.

B) Design is a plan or a drawing produced to show the appearance of something before it is made. State any four factors you must consider while selecting a design for embroidery on a cushion cover/pillow cover.

Answer

When selecting a design for embroidery on a cushion cover or pillow cover, several factors should be taken into account to ensure the final product is aesthetically pleasing, functional, and durable. Here are four key factors to consider:

1. Fabric Type and Texture:

a. Suitability:

The fabric of the cushion or pillow cover should be suitable for the type of embroidery you plan to do. For example, delicate fabrics like silk may not support heavy embroidery, while sturdier fabrics like linen or cotton are better suited for more intricate designs.

b. Texture:

The texture of the fabric can affect the appearance of the embroidery. Smooth fabrics provide a clean look for detailed designs, while textured fabrics can add depth but may also complicate the embroidery process.

2. Design Complexity and Size:

a. Complexity:

Consider the complexity of the design relative to your embroidery skills and the time you have available. Simple designs are quicker to execute and are less prone to mistakes, while complex designs can be more visually appealing but require more time and precision.

b. Size:

The size of the embroidery design should be proportionate to the cushion or pillow cover. A design that is too large may overwhelm the cover, while a design that is too small may not have the desired impact.

3. Color Scheme and Compatibility:

- a. Color Harmony:
Choose colors that complement the fabric of the cushion or pillow cover. The thread colors should harmonize with the background fabric and the overall decor of the room where the cushion will be used.
- b. Contrast:
Ensure there is enough contrast between the thread colors and the fabric so that the embroidery design stands out clearly.

4. Theme and Purpose:

- a. Theme:
The design should align with the theme or style of the room. For example, a floral design may be suitable for a traditional or rustic setting, while geometric patterns may fit better in a modern or contemporary decor.
- b. Purpose:
Consider the intended use of the cushion or pillow. Decorative pillows might allow for more elaborate and delicate embroidery, whereas functional cushions that will be used frequently might need simpler, more durable designs.

4. Answer any one of the following questions in about 100-150 words.

A) A decision is selection of a course of action from alternative choices.”Justify the Statement with the help of an example by applying the four steps of decision making.

Answer:-

Step 1: Identifying the problem.

Your friend, Rahul and his family are not happy with their present rented house. They try to find out the reasons for it. They find the house too small for their needs because they are seven members and there are only two rooms to live in. There is very little open space for drying clothes. The kitchen is also very small. Above all, the neighbourhood is not very clean. Hence, Rahul’s family wishes to change their house and preferably buy a house of their own. The underlying problem is that of their present house and selection of a new one.

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Step 2: Find out information and possible courses of action.

Rahul's family should try and find out everything about the alternate houses available to them. The different localities and types of house (ie., flat or bungalow), number of rooms, feasibility and affordability of rent for a larger house versus owning a house, etc. To find out all the information, the family can take the assistance of a property dealer and consult their friends and neighbours for advice and experience. Ideally, Rahul's family should explore all possible alternatives within the constraints of their resources, especially time, energy and money. This will also help them to set certain limits within which alternatives can be thought of.

Step 3: Evaluation of alternate courses of action.

To make it easy, Rahul's family should consider two to three alternatives at a time and as one is rejected a new one should be added for consideration and evaluation. Each alternative should be clearly analyzed for its consequences and ability to meet family goals and values. The desirable and undesirable consequences of an alternative should be considered to select the best choice. At the end, Rahul's family may decide to defer the purchase of their own house for the moment, as they do not have enough savings. Rahul's father may already be paying the installments for their car. So, he cannot afford to buy the house on installments until the car payments are taken care of. Thus, the family may decide to continue to live in a new rented accommodation despite knowing that owning a house would be the best solution to frequent changing of houses and paying a monthly rent. They now have to consider all alternatives for rented accommodation, ie., their list of alternative course of action has narrowed down to selecting a house on rent.

Step 4: Selecting the best course of action.

After looking at a number of houses Rahul's family decides to select a three bedroom flat on the ground floor in a near by new locality which is very clean and well planned. It has big houses, broad roads, a good market and is not very far from Rahul's father's office and the children's school. This house has a lot of open space in front and back, so that their children can play freely, there is adequate space for drying clothes, and Rahul's mother can also have a small kitchen garden. The rent is affordable and Rahul's father hopes that after paying off the car loan he can soon plan to save enough for making a down payment for a new house and pay off the remaining amount in easy installments. Thus, Rahul's family is very happy in their new house.

B) To achieve our goals with limited resources, we have to follow a systematic method. Briefly describe the four steps of management process with the help of an appropriate example.

Answer:-Management involves the following steps:

1. Planning
2. Organising
3. Controlling
4. Evaluating

Step 1: Planning

The first step in management consists of thinking in advance of what needs to be done i.e., planning. A simple way to plan is to make a list of all the things that need to be done. Since certain things have to be done first and others later, arrange them in a proper order or in a sequence. If you take the example of your trip to your grandparent's house, you planned all the things that needed to be done. After that, you collected the things and shopped for the others. For example, you first took money from the bank and then went to the station to buy tickets for the journey. You collected your ticket and the other things like bedding, soap, clothes, towels etc; you packed them in a suit case. While doing this you had arranged each activity in sequence in which it was to be done.

In short, during planning think about the following: -

- i. What is to be done? –
- ii. Who will do the work? –
- iii. How will it be done? –
- iv. When will it be done? –
- v. What resources will be used?

Step 2: Organising

After planning, you have to organize your resources and your work so that the plan is carried out properly. Organizing involves assembling resources and fixing responsibilities.

Let us now go back and once again examine the example given earlier.

When you were planning for your trip to your grandparent's house, you decided to go to the station to purchase tickets, that is, you fixed the responsibility on yourself. But a plan may not always involve you only. For example, if you decide to buy the ticket for your trip, you may decide to do it yourself, or you may take the help of your brother or your mother.

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Thus, after deciding who does what, you set about collecting or assembling everything that you needed to prepare for the trip. All these activities of fixing responsibilities and collecting resources make up the second step of management, that is, organizing. While assigning tasks to other people, we must make sure that –

They have the time and ability to do that work and are willing to do the same.

For example,

if you could not go and get the ticket yourself, you could have asked your brother to buy the ticket, because his office is close to the railway station. Thus he will be in a position to buy the ticket.

Organizing ensures that:

- i. all the planned work gets done,
- ii. there is proper distribution of work,
- iii. work gets finished on time,
- iv. time, energy, and other important resources are saved, and
- v. your planning is successful.

This means that since the work gets distributed among two or more persons, it saves time and energy.

Step 3 : Controlling

Once the plan is ready and the resources are organized, actual work starts. Controlling is necessary at this stage, because activities must move according to the plan. Can you look at the earlier example? We have discussed there that if you cannot get tickets, you have to think of an alternative arrangement. So, if you really have to do what you have planned, you need controlling your activities to see that the original plan is implemented.

Controlling is also known as putting a plan into action. As the plan is being carried out, you also have to check the progress of your plan. When you do this, you may sometimes find a changed situation which calls for a fresh decision. For example, suppose you had planned to go on 15th, but find that no ticket is available, what will you do? You may have to decide on one of the following:

- i. Change the train; or
- ii. Change the date of departure; or
- iii. Cancel the trip.

Since you may not like to cancel the trip, you decide either to take a different train or decide on a different date for the same train. This arrangement is called controlling. You make adjustments as the plan is being carried out or implemented. You change or control your activities so that your plan is not a failure. This is also called flexibility.

Controlling means carrying out the activities as planned and organized earlier.

Step 4: Evaluating

Evaluating, means checking the progress of your plan and taking corrective measures if needed.

For example –

when you cook a meal for your family, you want to taste whether it is done properly or not. You also see whether everything is made in adequate amounts. Evaluation helps you to check your mistakes and improve your work and product.

Thus evaluation helps you to understand your weaknesses and mistakes so that it is checked and will not be repeated in future. This is also called looking back or “feedback”.

Though you may find that evaluation is listed as the last step, it is done at each stage of management i.e. planning, organizing, and controlling. You have to evaluate at every stage so that you do not regret in the end. Since you are constantly evaluating your work, you come to know the defects of your planning, organizing and controlling. Sometimes, you are in a position to bring a change in your planning and/or organizing and controlling. If you can, you tend to improve end results and complete the process smoothly and successfully. If not, you learn to do a better job in future.

5. Answer any one of the following questions in about 100-150 words.

- A) On the basis of structure, yarns are classified into three types. Write difference between yarn and thread. Also describe the characteristics of all the three types of yarn with suitable diagrams.**

Answer:-

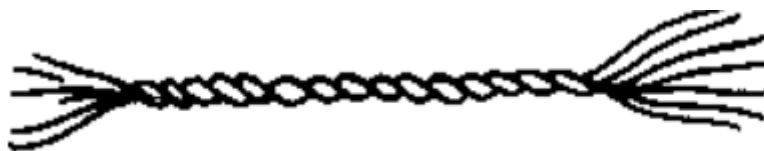
On the basis of their structure, yarns are broadly classified into three types:

- i) Simple yarns
- ii) Complex/Novelty yarns
- iii) Textured yarns

i) Simple Yarns

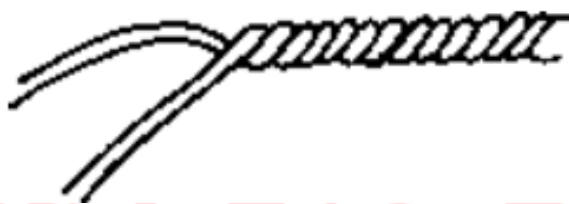
A yarn which is smooth and uniform and evenly twisted is called a simple yarn. It is commonly used for making fabric like poplin and cambric. Simple yarns are further classified into three types.

A simple single yarn is an assemblage of fibres evenly twisted together.



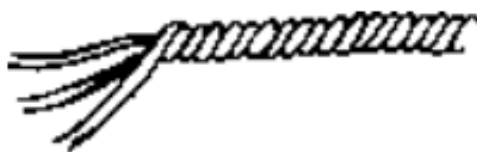
Simple single yarn

A Simple Ply yarn is made of two or more singles evenly twisted together. If the ply has two singles it is called a 2-ply and so on. This type of yarn is found in a 2 by 2 rubia fabric. It has 2 ply yarns in both directions of the fabric.



Two Ply yarn

Similarly, 3 ply yarns or 4 ply yarns are also available.

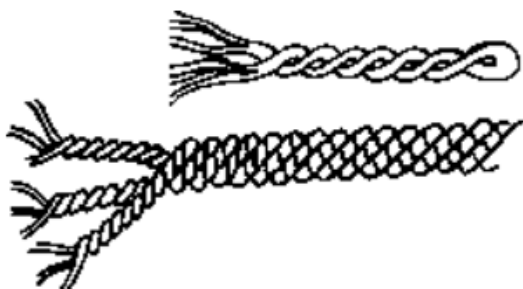


Three Ply yarn



Four Ply yarn

A simple cord yarn is made of two or more ply yarns twisted together. To see a cord yarn, take a clothes line used for drying clothes and untwist it.



Making a cord yarn : Take two or more ply yarns. Twist them together. It will make a cord yarn.

ii) Complex/Novelty Yarns

A yarn which makes a fabric is not always smooth and uniform. Just unravel a 'Khadi' fabric and see the yarns that make it. You will see that these yarns are not even, but are thick in some places and thin in the other. Such yarns are known as Complex yarns. Complex yarns are the uneven yarns which may be thick and thin or have curls, loops, twists and even differently coloured areas along their length. Due to this fancy look of the yarns they are used to add interesting effects in fabrics. Like simple yarns, the complex yarns may also be single or ply.

A single complex yarn is usually unevenly twisted to make it thick and thin in places. This is the type of yarn which is found in the 'Khadi' fabric.

Before discussing the complex ply yarns, recall that a ply yarn is made of two or more single evenly twisted yarns. In complex ply two or more complex yarns are twisted around each other to form loops, curls and knots to create fancy effects. Many knitting yarns are complex ply yarns which give interesting textures on sweaters.

Another type of yarn that you all must have seen is a Core yarn. Just pull out the elastic from one of your old socks. You will see that this elastic has been wrapped by another yarn of cotton or nylon. Such a yarn is called a Core Yarn and is classified as a Novelty Yarn. Some examples of complex and novelty yarns are illustrated below along with their descriptions.



(a) SLUB yarn with thick and thin places



(b) SPIRA or GIMP- combination of soft, thick yarns twisted with fine, hard yarns



(c) BOUCLE- two different yarns are fed into the loom at different speeds for a varied effect



(d) LOOP – stiff fibres form loops which spring out of the core yarn



(e) SNARL – very highly twisted yarn



(f) KNOP – ground yarn is held under tension as knops are built up a fast speed



(g) CHENILLE – a woven cut fabric yarn

iii) Textured Yarns

When you unravel a sweater, you find that the yarn which was straight when you knitted has now become curly. This yarn can now be called a textured yarn.

What is texturizing?

Texturizing is a treatment usually given to a manmade filament, after which it becomes curly or acquires some forms of loops, coils or crimp.

Do you recall the properties of manmade filaments like nylon and polyester from the previous lesson? Yes, they are smooth, slippery, light in weight and have a low absorbency.

Hence fabrics made from simple filament yarns are uncomfortable to wear. When such filament yarns are textured they look denser, become bulky, and more stretchable. Due to their changed texture, spaces are created between yarn. This makes the fabric breath better and become more absorbent and therefore comfortable to wear.



(a) Coiled



(b) Peaked Crimped



(c) Rounded Crimped



(d) Curled



(e) High bulk – stretched and relaxed

B) In order to get a design on the fabric, dyes can be applied at different stages of fabric production. Briefly describe the stages of dye-application with suitable diagrams.

Answer:-

Stages of dye application:

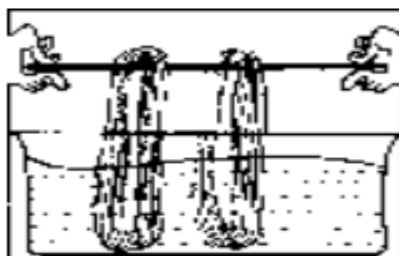
When we go to the market we find it is not only fabrics which are dyed but sewing threads and knitting yarns are also available as dyed materials. Dyeing may be done during.

i) Fibre Stage:

Both natural and manmade fibers can be dyed at this stage. It gives very uniform dyeing and fast colours. But there is a lot of wastage during further processing of fibres.

ii) Yarn stage :

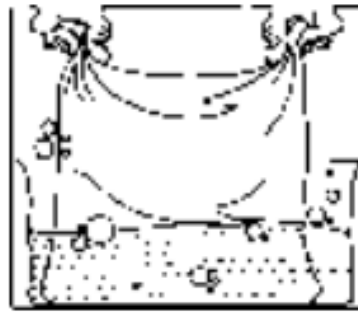
Sometimes yarns are also dyed, especially when they have to be sold as such. Hence in embroidery thread, sewing threads and knitting yarn, dyeing is done at the yarn stage.



Dyeing at yarn stage

iii) Fabric stage :

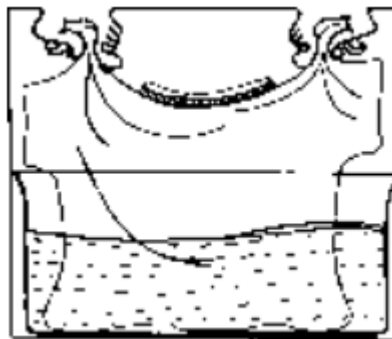
This is the most popular stage of dyeing. Most of the fabrics which are dyed in a single solid colour are dyed at this stage. This method is a fast method and it is easy to match colours. Blended fabrics can also be dyed.



Dyeing in fabric form

iii) Garment dyeing:

Sometimes, after stitching the garment, there is a need to dye it, for example, dupattas for suits are dyed after making.



Garment dyeing

6. Prepare any one project out of the given below –

- A) Sixteen year old Nisha is often feeling tired and weak and has pale and yellowish skin. Mention four rich sources of the nutrient to overcome the symptoms. Also plan a recipe of a evening snack for her using the rich sources of the nutrient along with the method of cooking used. How your chosen method of cooking will help in the conservation of nutrients.

Answer :-

Project: Addressing Nutrient Deficiency in a 16-Year-Old

Introduction:-

Nisha, a 16-year-old girl, is experiencing symptoms of tiredness, weakness, and pale yellowish skin, which are indicative of anemia, likely caused by iron deficiency. This project outlines rich sources of iron, a nutritious evening snack recipe incorporating these sources, and the cooking method that conserves nutrients.

Four Rich Sources of Iron

1. Spinach: A leafy green vegetable high in non-heme iron.
2. Lentils: Legumes that are an excellent source of iron and protein.
3. Red Meat (Beef): Contains heme iron, which is more easily absorbed by the body.
4. Pumpkin Seeds: A plant-based source of iron, also rich in magnesium and zinc.

Evening Snack Recipe: Iron-Rich Spinach and Lentil Patties

Ingredients:

1. 1 cup of cooked lentils
2. 1 cup of fresh spinach, finely chopped
3. 100g ground beef (optional for non-vegetarians)
4. 1 small onion, finely chopped
5. 1 clove garlic, minced
6. 1 egg (for binding)
7. 1/4 cup whole wheat breadcrumbs
8. 2 tablespoons pumpkin seeds, crushed
9. Salt and pepper to taste
10. Olive oil for cooking

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Method of Cooking:

1. Preparation:

- a. Cook the lentils according to package instructions until tender. Drain and let cool.
- b. If using ground beef, cook it in a pan until browned. Set aside.

2. Mixing:

- a. In a large bowl, combine the cooked lentils, spinach, cooked ground beef (if using), onion, garlic, egg, breadcrumbs, and crushed pumpkin seeds.
- b. Season with salt and pepper.
- c. Mix well until all ingredients are combined and the mixture holds together.

3. Shaping:

- a. Form the mixture into small patties, about the size of your palm.

4. Cooking:

- a. Heat a non-stick pan over medium heat and add a small amount of olive oil.
- b. Cook the patties for about 3-4 minutes on each side, until they are golden brown and crispy.

5. Serving:

- a. Serve the patties warm, with a side of yogurt dip or a fresh salad.

Nutrient Conservation through Cooking Method

The chosen method of cooking, pan-frying, helps in conserving nutrients in several ways:

a. Minimal Cooking Time:

Pan-frying requires less time compared to boiling or baking, which helps in preserving the nutrient content, especially iron.

b. Controlled Temperature:

Cooking at medium heat prevents the destruction of heat-sensitive nutrients.

c. Minimal Water Usage:

Unlike boiling, pan-frying uses little to no water, preventing water-soluble vitamins and minerals from leaching out.

d. Retention of Iron:

Combining plant-based (non-heme) iron sources like spinach and lentils with animal-based (heme) iron sources like beef enhances iron absorption.

Conclusion

To address Nisha's symptoms of iron deficiency, incorporating iron-rich foods like spinach, lentils, beef, and pumpkin seeds into her diet is crucial. The recipe for Spinach and Lentil Patties is not only nutritious but also appealing and easy to prepare. The chosen cooking method ensures maximum nutrient retention, helping Nisha overcome her deficiency and improve her overall health.

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