

Health is wealth

Learning the science behind healthy food

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Food is the single strongest lever to optimize human health and environmental sustainability on Earth.

The Lancet Commission (2019)¹.

In other words, what we put on our plate has a direct impact on both our bodies and on the bio-diversity of our planet². The current situation of the pandemic has highlighted the need to focus on the links between the food we eat, how we source it and how we are inter-connected to our environment.

This unit is linked to the learners' own context of what they eat and what this does to their body. It is easy to carry out with no complicated technical requirements or materials. It is multi-sensory and multi-disciplinary. This unit was created for grade 7 but it can be adapted to younger or older classes by choosing age appropriate concepts to be learnt. For example, older classes can study the economics of food chains, the impact of genetically modified food on our health and environment etc. (For this, see videos and read books by Dr Vandana Shiva, founder of Navdanya movement). At Mahatma Gandhi International School (Ahmedabad), the Café Project has been running since 2001, across the different classes from kindergarten to grade 12. In 2016, the Cafe project became part of the primary school education in Finland.

Different cognitive competencies can be covered such as measurements, ratio and proportion, weight and volume, decimal, fractions, percentage, calculation of profit and loss, estimation and standardisation of the recipe etc. in Mathematics. Arts and technology can be integrated with work on posters, graphics, menu cards. collage work etc. Similarly in Sciences, students can learn about different components of food, a balanced diet, states of matter, physical and chemical changes, use of simple machines in the kitchen etc. In languages too, writing recipes, hosting a food show, writing a food review blog etc can be done. Many skills are developed for critical thinking, awareness of the environment and self-awareness as well as life skills such as collaboration, communication etc.

Food is also linked to culture, to diverse festivals and these links can be explored. The proposed activities are just a glimpse of what is possible using a coherent pedagogy. This unit uses the Generated Resources Learning (GRL) methodology developed by Dr Anju Musafir-Chazot and Dr Chazot. This is an experiential learning methodology that promotes a sustainable pedagogy by using available resources and daily objects.

¹ https://eatforum.org/content/uploads/2019/07/EAT-Lancet_Commission_Summary_Report.pdf

² View TED talk- https://www.ted.com/talks/anju_musafir_everything_is_a_resource_to_learn_a_school_for_well_being

CYCLE 1: Learning about the food pyramid

1.Expressing Notion - Starter activity and group bonding

- Each child pretends to eat a particular dish and mimes the action in an exaggerated way. They walk around pretending to eat and are instructed to ‘offer’ their imaginary food to a friend. Each child mimes sharing the food with at least 10 other classmates.

02. Immediate feedback

- In pairs or sub-groups, they discuss the different kinds of food shared.

03 Exploring and Researching

- Children see a video on different types of macro and micronutrients found in food and look at the food pyramid. They write a short note on important points from the video.
- Students can open their snack boxes and in groups of 6/8 will categorise them according to different food groups like carbohydrates, proteins, fats, fibre, vitamins, etc.

04 Immediate Reflection

- Children discuss what kind of food are they generally consuming. Which category comes up more often, why?

05 Creation

- Flash a picture of the food pyramid on the projector or through a chart paper. Students guess which food was seen where on the pyramid. This is a good activity for visual concentration and recall and can be done a few times.
- At this stage, the teacher can give a handout or lesson that they can read together and discuss. They can even make questions/puzzles on the handout in groups of 4. Other groups can solve it in teams and by turns.
- In small groups, children draw or create a sculpture of an ideal food pyramid according to them and display their work. Here, they can use any medium – paper, collage, paint, recycled materials, clay etc.

06 Feedback

- Ask each sub-group to share with another sub-group. They give each other feedback on the food pyramid created, stating its strengths and weaknesses (Example: availability whether local or not, cost factor, health benefits etc).

07 Reflecting on learning experiences

- Children reflect on all the activities and write what, how and why each activity was done.

08 Feedback

- There is an overall feedback shared about what they learnt and how they felt.

Home activity:

- a. Record what kind of food they eat at home for a week- breakfast, lunch, snack and dinner.
- b. Collect the labels of foods that they enjoy eating or drinking. For this, they can even collect the empty packets (ex: juices, colas, biscuits, etc). They get it to school and display these in the classroom.

CYCLE 2 : What am I eating?

01 Starter activity

- Children sit in different corners and draw the food they eat the most often. All the drawings are mixed up and each child guesses who drew which drawing.
- Once they have guessed all the names, each child takes back her or his own drawing.
- In groups of 6/8, they categorise the drawings in different ways. For eg, based on taste, texture, colour, healthy, unhealthy, street, etc.

02 Immediate feedback

- They come and present their categories with explanation.

03 Exploring and researching (learner context)

- They are asked to bring food packets or labels from home (a couple of days notice is given). They analyse food labels and categorise them in different ways. For example: they analyse the sugar content in juices and soft drinks and make a chart representing the sugar content found in them.
- They understand the importance of a balanced diet and watch videos explaining the diseases caused due to unbalanced food.
- Experiments are performed where they test for starch, proteins and fats in the lab using common foods.

04 Immediate reflection

- They reflect on their own eating habits. Is their diet balanced or are they eating too much of a particular food item?

05 Creation (Art work, collage)

- They make a collage of healthy and unhealthy foods by using the labels, from magazines, newspapers, etc.
- They create word search using new vocabulary learned during the lesson.
- They can also create a list of foods they eat according to different food groups. They can further statistically represent which food group was eaten more by them by making bar graphs.

06 Feedback

- In groups they create charts on different food groups and importance of balanced diet, present their work and give feedback.

07 Reflecting on their learning experiences

- They reflect on their learning. What is the impact of the food they eat? Do they need to make changes in their food habits?

08 Feedback

They share the insights gained with each other.

CYCLE 3: From recipe to the plate – Running a cafe

(This can be made simple such as making lemonade/bhel/salad/ for a younger class)

01 Starter activity/Group formation

- Students are asked to think of an action that happens in a café restaurant and choose to play a role (it can be a chef, a client, a waiter etc) and mime it while walking in space. When the initiator says ‘stop’, they stop and guess what the action represents.
- Different dry spices/fresh aromatic herbs can be brought and put in numbered paper cups that are closed with paper taped on it. Make a few pricks on it to allow the fragrance to come through (Ex: Fresh coriander/mint/cardamom, lemon/ etc). Pass around the paper cups so that each student can smell and guess the spice/herb. After that, we can work on their sense of taste too with sugar, lemon, salt etc but the students must have their eyes closed or be blindfolded! For this they can be in pairs and one student takes a spoon and puts in the palm of the other child who can guess from the texture, smell it and then taste it to guess the item. We suggest that students can do this mindfully, quietly with calm, relaxing music playing in the background. Another extension is also to put different vegetables in small feely cloth bags and pass it around for students to guess the vegetable.
- Students are asked to work in groups of 4/6, and to enact the process of making a dish, step by step without speaking. Each group gets a chance to perform and others guess each step and the dish.

2.Immediate feedback

- Students discuss which the importance of different senses in cooking and eating. Which sense is important to them? The visual appeal of a dish? The taste or the smell? Or is each very important?

03 Exploring and researching (learner context)

- Students explore recipes of dishes they would like to make. The students can take a survey of other classes giving them options of the dishes they as a class can make. This will give the groups an idea of the exact number of plates they will be preparing.
- They then decide a recipe that follows a balanced diet. Students are asked to create those dishes using appropriate materials, ingredients and recipes.
- Now in groups, they write the process, steps, materials and ingredients (approx. measurements) used in making their dish. This helps them understand the process involved. Each group is then asked to find the exact number of serving size, quantity of

each ingredient that will be required and the cost of each ingredient. This will help us get the cost price of each serving. Once they have achieved this, they will find out of the selling price of the dish.

- Students go to a local market to buy the ingredients and also explore different brands and quality of products by reading food labels.

04 Immediate reflection

- They reflect on the type of recipe, quantity, pricing etc. They also reflect on their trip to the market and on the availability, pricing of products. How ecological is their sourcing? Is the ingredient local? How much of waste is generated by disposing the packaging if it is packed? Or can it be reused? Can they reduce the costs by switching the ingredients or source?

05 Creation (Mind map, posters)

- They create a mind/concept map of running a café in school. individually, This can be done in pairs or in groups of 4. They create a common mind map and share with other groups.
- As a class a new mind map is created using each groups idea.
- Now, the students assign different roles and responsibilities needed for the café such as chef, cleaners, servers, accounts team, managers, marketing team, etc. they vote and choose the role they want to try.
- Students create posters individually giving their café a name, logo and drawing their dishes artistically. Students present their poster and feedback is given for each poster using criteria defined by them.
- The best name and poster is chosen by the class and used for the final café. The others are displayed in class.
- The students run the café with each sub-group handling different domains such as cooking, serving, maintaining accounts, looking after clients etc. After that they calculate the profit or loss from selling their dishes.

06 Feedback

- Students seek and give feedback related to their own role, the dish prepared, how it was received by their ‘client group’ etc.

07 Reflection

- Students make connections in their understanding of different roles, their duties and the collaboration required amongst them. They reflect on what worked well, what was challenging, what needs to be improved. They also think about food habits, hygiene, health and whether their costing, quantity was appropriate. They reflect on how they can do things differently the next time. Most importantly, what did they feel? Which part or role did they enjoy the most? Cooking? Or serving? Or managing the accounts? What are the important skills they have learnt? Which new role would they like to take up for the next session for running the café and making a new dish?

08 Feedback

- They share what they have learnt through all these activities, how it relates to their life and whether they feel it has shifted anything in their beliefs or understanding about food and health. They can share the most important skill they feel they have learnt through this module.

Lesson Plan

Teacher's Name: VINITA RIKHI

Subject: HISTORY Class: XII

Topic/Lesson: BRICKS, BREADS AND BONES -THEME-1

No. Of Periods: 13 PERIODS as per CBSE & NCERT norms

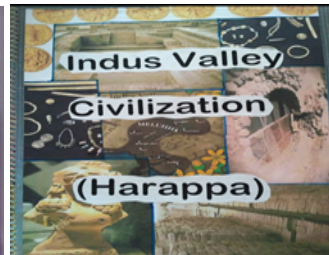


Learning objectives	- Familiarize the learner with early urban centres as economic and social institutions. - Introduce the ways in which new data can lead to a revision of existing notions of history - Illustrate steps of making archaeological reports.
Expected Learning Outcomes	The learner will be able to : - State and deduce the multi-lateral aspects of Harappa civilization in order to understand the first civilization of the world. - Develop an ability to use and analyse socio, economic, political aspects of Harappa - Infer and interpret multiple historical and contemporary sources and viewpoints of ASI and historians on Harappa in order to comprehend insight of civilization - Articulate and construct reasoned arguments from diverse perspectives and frames of reference in order to analyse archaeological reports.
Resources	NCERT Official Videos (the beads and bricks) , ICT capsules(created and downloaded), Documentaries & Movies (Mohenjo-Daro, QCA recommended resources: Indus Valley KS2 National History, published by Commonwealth Institute, 1996 Junior Focus, Indus Valley issue,) , Research Reports of ASI
Key Words	Terracotta, Priest King , Great Bath, Proto Shiva, Priest King ,Great Bath
Outline of content/Gist	The Story of the First Cities: Harappan - Broad overview: Early urban centres - Story of discovery: Harappan civilization - Excerpt: Archaeological report on a major site - Discussion: How it has been utilized by archaeologists/historians.

Learning Activities PKA/ Introduction	EXPRESSING NOTION A. <u>To Show class</u> – ➤ <i>Bead Jewelry</i> ➤ <i>Pictures of Harappan Town Planning</i> ➤ <i>Replica of Harappa Artifacts, which I gathered from national museum to create interest of students towards Harappa culture. (Raise inquisitiveness for concept as well as art and creative work)-ART EDUCATION</i> B. <u>TO Discuss</u> – ➤ what the artifacts tell us about the way people lived with regard to socio economic differences (gender based and societal difference based)- ➤ Discuss what they don't tell us. ➤ Ask the children to identify what they would still like to find out about life of Harappan people. ➤ Prompt them to compare the town planning of Harappa with today's houses like drainage ➤ Draw on the children's knowledge of what has survived from societies ➤ Ask them to compare this with what they know about the Civilization (SOCIOLOGY + ECONOMICS) EXPLORING & RESEARCHING ➤ Assist them with preparing mind map pertaining to socio-economic life ➤ Use ICT tools to explore more Virtual field trips • AR/VR Scanning For museums and field trips or 3 D Model • SKYPE Session with archaeologist or historian • Audio video clips • Reading Blogs For topics on- HARAPPAN ECONOMY (AGRICULTURE & CRAFT PRODUCTION, TRADE), TOWN PLANNING, RELIGION, DECLINE OF HARPPA CREATIVE EXPRESSIONS -EXPERIENTIAL LEARNING ACTIVITIES – (Indoor and outdoor activities) • Scaffolding activities like artifacts making-INDOOR	



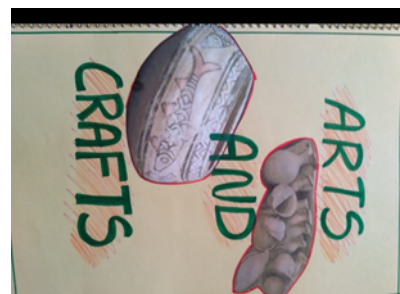
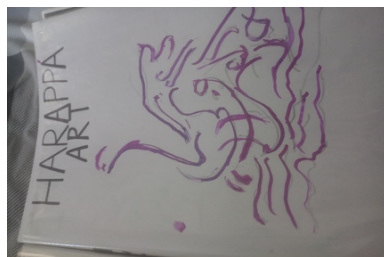
- Picture book on theme-INDOOR



- Making of Harappan Jewelry-INDOOR



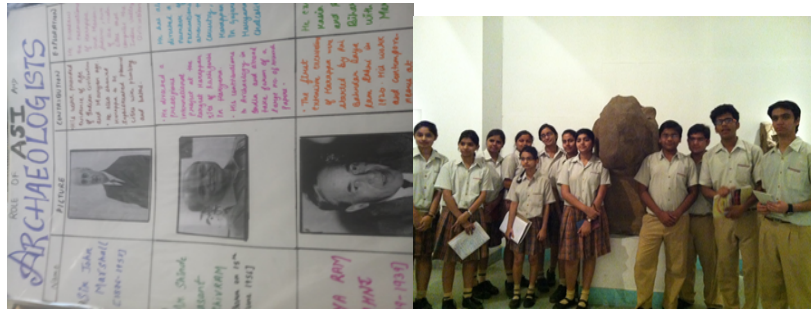
HARAPPAN ART



Imaginary or hypothetical situation like 'a day in Harappa', 'A day with a bread maker's son in an ancient city'



- Artifacts exploration at an Indus Valley excavation Site



- Creative Versions of ABCDE



- Exploratory research through Project with INCLUSIVE APPROACH



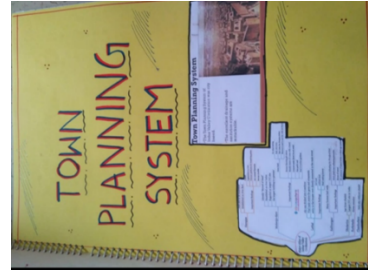
- Poetry writing on Harappa and excavations



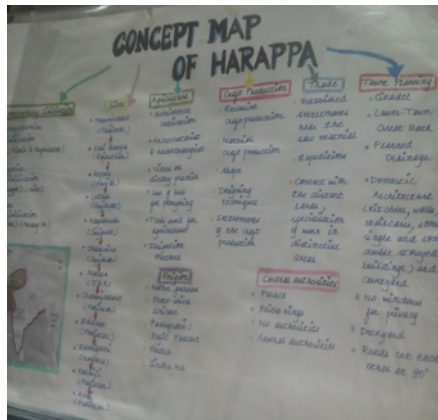
- Visit to History Museum



- Compare modern artefacts with Harappa artefacts



- Web Charts



Compare the striking features of the city of Mohenjo-Daro with modern urban centers.



- PPT -. Political and Economic History Preparation of chart (process) showing the important sites and features of early Harappan settlements

MAPPING

	 HUERISTIC ACTIVITIES REFLECTING ON THE EXPERIENCE- ➤ Power in learning in the action of doing the activity. ➤ The action of articulating thoughts. ➤ Bridge in the learning process that takes place when a student is involved in a-learning experience ➤ Recognition of the students' involvement. ➤ Basis for critical inquiry that values many forms of knowledge, including emotional intelligence and lived experience ➤ helpful for stimulating critical reflection	
Concept Building Activity (Analysis & Application)	Sociology- (<i>Social Stratification, Environmental Crises</i>) while teaching socio economic difference in Harappa and natural reasons for the down fall of Harappa Geography- (Indian subcontinent, Rivers, Vegetation and Soil, Maps, metallurgy) while doing mapping of area and metallurgical age English-Article writing, Note making, Comprehensions, letter to ASI) while reading and writing experiences of Harappa exploration Political science-(Governance, oligarchy, political powers)while covering the central authority of Harappa Hindi- while expressing creative notions on harrappa Mathematics – (Grid system , weigh and measure) while doing townplanning and roads of harappa Art – Bead Work, Jewelry Making, Seal making, Sculpture or artifact making IT- (Virtual trip, documentary making, ppt, research work, kahoot, ASI website, Microsoft apps,etc)	
Web Sources	-NCERT Official YouTube, NROER, Cietdict , E-Pathsahala,TED-Ed, Prezi, Khan Academy, NCERT ,Classmate Videos)	

Assessment Strategy	FORMATIVE STRATEGY- 3-2-1 strategy Idea wave/ Quick class check/ Summary Writing, /One Minute Essay/Analogy Prompt Misconception Check/peer Check/ Student Conference/, Observation/, Self-Assessment/Journal Entry/A-B-C Summary/ Debriefing/ Idea Spinner/Inside Outside Circle// Think Pair Share /Quick Write //Kahoot, Quiz /Hypothesis - What can we infer about the people and their way of life from the buildings, city planning and absence of weapons? - What can we infer about trade and their contact with the rest of the world from the seals and weights and measures found? SUMMATIVE STRATEGY Based on CBSE question paper blue print and competencies development through taxonomical patterns	
Notes for Extension/ Differentiation	To engage and resonate with a diverse classroom LEVEL3- - Simple Mind Maps - Story Narration in easy language - Motivational encouragement - Very Easy And Simple Questions - Create Short Clips like Tik Tok On Civilizations LEVEL2 Learning Situations through Watching a video, Creating artwork, Reading an article, Completing puzzles LEVEL1 - Think-Pair-Share Strategy- - Teach Up" principle based on peer group teaching - Different Sets of Reading Comprehension Activities - Creation of question banks - Delivering a presentation - Writing a report - Creating visual art to illustrate key events	
Skills Enhanced	Observation Skills, Analysis, Critical Thinking, Interpersonal Skills Active Engagement, Constructive Approach	
Home Assignment	- Explore about Harrapan explorations either through movie/ documentary - How far the archaeological studies help us to reconstruct the agricultural activities of the Harappan people. - The Harappan cities were the result of careful planning and engineering skill' Examine the statement in the light of evidence from the city of Mohejo Daro - Give any two strategies use by the scholars to identity the social	

	condition. • What information do we get from the study of burial system about the social conditions of Harappa • Give any two evidence that supports the view that there existed a between early and mature phase of Harappan civilizations.
Reflections (to be filled after the lesson plan is taken up in the class)	Students took keen interest