NADI SANGAM SCHOOL

HOME STUDY PACKAGE 12

YEAR 7

2021

1076 NADI SANGAM
SCHOOLYEAR 7

ENGLISH

WEEKLY HOMESTUDY PACKAGE 12

PART I DICTIONARY, LIBRARY AND MASS

A. DICTIONARY

Study the dictionary entry given below to answer question 1 and 2.

> **Mousse** n.1. a dish made with whipped cream or egg white.
>
> 2. a light substance for styling hair
>
> *Source: English Oxford Dictionary, 7th Edition 2007.*

1. How many meanings does the word Mousse have above?
2. What does the letter 'n' stand for?

B. LIBRARY

1. What do you call the person who draws pictures in a book?

2. What do you call the page that has the titles of the chapters in a book?

C. MASS MEDIA

1. Name any one of the written mass media?

PART II: **USAGE**

1. **Rewrite the following sentences using the instructions given in the brackets**.

(i) (Join the two sentences using the word (‘**but’.**)

Ashmita enjoys reading. She doesn’t enjoy singing.

(ii) (Join the two sentences using the word (‘**before’)**

The tired woman cooked dinner. She washed the dirty clothes.

2. **Change the sentences given below into a question beginning with: “Did”**

Little Manasa ate all the roast chicken.

3. **Rewrite in Reported Speech**

“The goat is in the rugby ground,” said Moape.

4. **Rewrite in Direct Speech**.

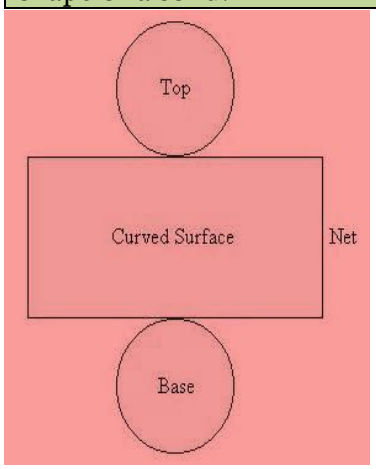
Swashna said that she would buy a new dress.

1076 NADI SANGAM SCHOOL
WEEKLY HOME STUDY PACKAGE 12

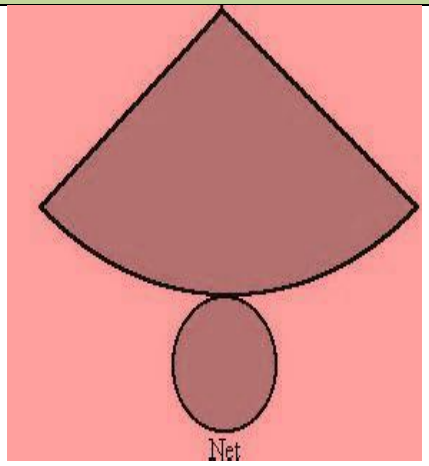
Subject: Mathematics **Year/Level : 7**

Strand	**M 4: GEOMETRY**
Sub Strand	**M4.3 : SOLIDS- Angles and Directions**
C L O	➢ ***Construct the different solids.*** ➢ ***Calculate the volume of the solids.*** ➢ ***Show the cross-section of the shape.***

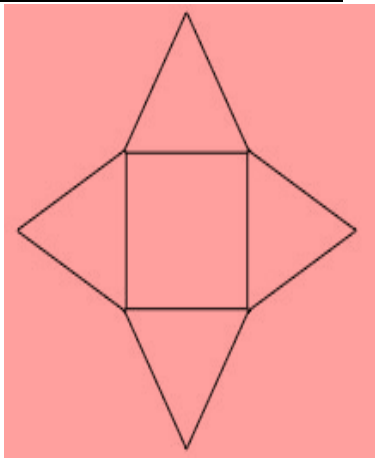
Geometry net is a 2-dimensional shape that can be folded to form a 3-dimensional shape or a solid.



net of a cylinder



net of a cone


net of a pyramid

1. Using the nets above , construct the shapes.

VOLUME OF CUBES

Volume of a Cube or Cuboid
A cube is a 3 dimensional shape. To work out its volume we need to know its 3 measurements.
The volume is found using the formula: Volume = Length × Width × Height
This is usually shortened by: $V = l \times w \times h$
Example:
Calculate the volume of a match box that is 8cm long, 4cm wide and 2cm high.
Hence: $V = l \times w \times h$
$= 8 \times 4 \times 2$
$= 64\ cm^3$

Exercise 4.3A

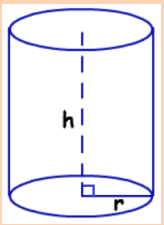
1. Find the volume of a treasure chest that measure 2m long, 1.5m wide and 2m high.

2. Find the volume of a pool that measures 3m high, 7m long and 4.5m wide.

3. If the volume of a cube is 4911cm³ then what is the length of each side of the cube?

4. The volume of a cuboid is 240m³. If its length is 5m and width is 12m, calculate its height.

VOLUME OF A CYLINDER



A cylinder is a solid with two congruent circles joined by a curved surface.
To calculate the volume of a cylinder the formula is:

$$V = \pi \times r^2 \times h \ (h = height\ r = radius)$$

Example. Calculate the volume of a cylindrical tin with a height of 12cm and radius of 8cm.

$V = \pi \times r^2 \times h$ (write formula) π is always constant = 3.14 or $\frac{22}{7}$

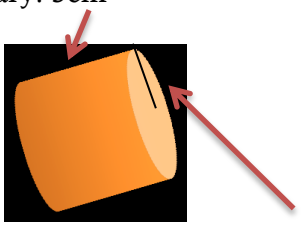
V = $\frac{22}{7}$ x 8 x 8 x 12 (substitute)

= $\frac{22}{7}$ x 64 x 12 (simplify)

= 2413.7 cm³

Exercise 4.3B

1. Find the volume for the given figure. Round off your answer to one decimal place where necessary. 3cm



2. A cylinder-shaped vase has a height of 12 inches and a diameter of 4 inches. What is the volume of the vase? Use 3.14 for π. Round to the nearest tenth.

3. Find the height of each cylinder. Round off to the nearest whole number.

i. volume: 9,189.2 cm³ radius: 15 cm

ii. radius: 13m volume: 1919m³

VOLUME OF CONE

A cone has one circular base and a vertex connected by a curved surface. The volume of a cone is one third the volume of a cylinder with the same height and same base.

The volume of a cone is: $\frac{1}{3}$ x base x height

$$Or \quad \frac{1}{3} \times \pi \times r^2 \times h$$

Example: Calculate the volume of a cone if the height is 12 cm and the radius is 7 cm.

Solution: $V = \frac{1}{3} \times \pi \times r^2 \times h$ (write formula)

Volume = $\frac{1}{3}$ x $\frac{22}{7}$ x 7 x 7 x 12 (substitute then simplify)

= 616 cm³

Exercise:

1. Calculate the volume of each cone.

a. Radius = 6 cm height = 5 cm

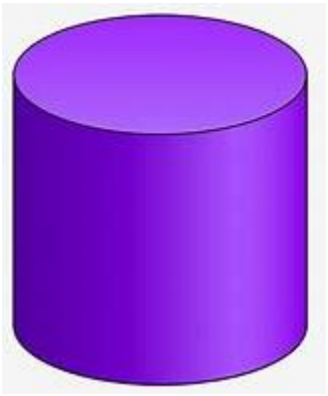
b. Radius = 7 m height = 7.2 m

2. Calculate the height of a cylindrical cone with a volume of 424 m^3 (cubic meters) and a diameter of 18 meters.

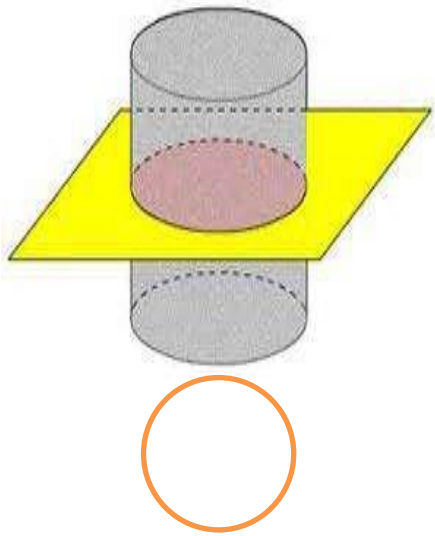
3. A guest house is in the shape of a cone. The house is 7.5 m meters high and 22 meters long. Find the volume of air that occupies the house assuming that it is empty.

CROSS SECTION OF SHAPES

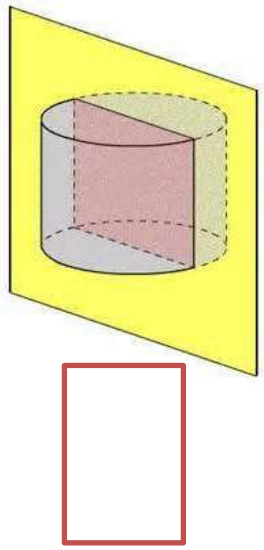
A cross section is the face you get when you make one slice through an object. The cut through the solid can be vertical, horizontal or at an angle. The cross section cannot always contain the piece of the original face. Below is a sample slice through a solid when sliced horizontally and vertically.



Original piece



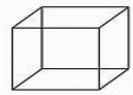
Horizontal



vertical cross section

Exercise:

Determine the cross section shape and complete the table with illustrations.

Solid	Horizontal cross-section	Vertical cross-section
Cube 		
Cylinder 		
Cone 		

1076 NADI SANGAM SCHOOL
YEAR 7
BASIC SCIENCE
WEEKLY HOME STUDY PACKAGE 12

STRAND	**STRAND 3 ENERGY**
SUB STRAND	**PRESSURE AND FORCE**
CONTENT LEARNING OUTCOMES	➢ **Explain what are different forces around us** ➢ **Explain how forces work and what role friction plays** ➢ **Understand the changes in pressure at different levels of water**

SUBS STRAND 3.3 FORCES

Pressure and Force

Introduction

- Many people have been killed or injured when their primus stove blew up, or when their kerosene or benzene light exploded.
- Many road accidents have happened when tyres blew up.
- In all these things, air is pumped to a high pressure and if not handled properly, they may explode.
- Pressure is the effect of forces at work on solids, liquids and gases.
- A force is a pull or push applied to an object.
- A force cannot be seen, but its effects can be seen.
- For example, when we push a trolley along the ground, we are applying a force to the trolley.
- Pressure and force can make things move.
- It can also change the direction and the speed of an object.

Activity 1

Pulling	Pushing	Twisting

4. Conclusion

Objects can be made to move by _____, _____ or _____ them.

Activity 2

4. Copy and complete.

We put some hard objects on damp _____. We dropped the hammer-bottle onto each of them. Each object made a _____ in the sand. The deepest hole was made by the _____ object.
The _____ hole was made by the larger of the two blunt objects.

5. Conclusion:
From this lesson we learn that the force was more spread on the _____ object. There was more pressure on the _____ object so it went deeper.

Word List: faster change move slower stop

A force can make something _____, or can _____ it moving. It can make it move _____ or _____. If something is already moving a force can make it _____ its direction.

FRICTION

- Friction is a **force** between two surfaces that are sliding, or trying to slide across each other.
- It is a force that **opposes** motion.
- Friction always **slows** a moving object down.
- **Resistance** is a type of friction.

Advantages of friction

(a) Prevents us from slipping when walking or running.

(b) Stops a moving vehicle.

(c) Keeps the position of an object on a surface.

(d) Produces fire.

(e) Holds or grips things.

(f) Sharpens a knife.

Useful friction

- **Friction** can be a useful force because it prevents our shoes slipping on the pavement when we walk and stops car tyres skidding on the road.
- When you walk, friction is caused between the tread on shoes and the ground.
- This friction acts to grip the ground and **prevent sliding**.
- Ice causes very little friction, which is why it is easy to slip over on an icy day. However, it is a good thing for ice skating and sledging.

Reducing friction

- Sometimes we want to reduce friction.
- For example, we use oil to reduce the friction between the moving parts inside a car engine.
- The oil holds the surfaces apart, and can flow between them.
- The reduced friction means there is less wear on the car's moving parts, and less heat produced.
- Some shapes, known as **streamlined shapes**, cause less air resistance than others.
- Airplanes and cars are streamlined, so that they move through the air as easily as possible.

CAN THE PRESSURE CHANGE?

- Pressure **increases** as water gets deeper.
- It is important for divers to be aware that too much pressure can **harm** their bodies.
- A diver cannot go past a certain depth unless he or she wears a special suit for his or her protection.
- Even divers in special suits have to be careful when coming back to the surface.
- It is not just the pressure that is harmful, but the change in pressure when moving from one depth to another.
- Coming up quickly from deep down in water to the surface.
- It is not just the pressure that is harmful but the change in pressure when moving from one depth to another.
- Coming up quickly from deep down in water to the surface can cause bubbles of air to be formed in the blood.
- Divers must move very slowly so that the pressure changes gradually.
- Pressure can cause problems to engineers too.
- When building the wall for a dam, they must think about where the pressure will be **greatest**.
- The wall is often made thicker at the bottom so that it is stronger there and will not break because of the force from all the water.

- If there is a dam or reservoir near your home, take look at its wall and see if it is of the same thickness at the top as it is at the bottom.
- Example – the wall of the Monasavu Dam is thicker at the bottom.

Activity 3

3. Answer questions in complete sentences.

a.) Why shouldn't divers move up to the surface of the water after a deep dive?

b.) Why do engineers build thick walls at the bottom of the dam?

1076 NADI SANGAM SCHOOL

YEAR 7

WEEKLY HOMESTUDY PACKAGE 12

OUR RULES, RIGHTS AND RESPONSIBILITIES CITIZENSHIP: RULES, RIGHTS AND RESPONSIBILITIES

A citizen is a member of a community, state or nation. Citizens have rights and responsibilities as family members, as students in a classroom or school and members of their communities, state and nation.Being a good citizen means

- following rules and laws
- being responsible and respectful
- helping others

AT HOME:

Rights: Children have the right to basic needs, e.g. food and shelter and clothing. They have the right to live in a safe home where they are protected and can receive love, comfort and care.

Rules: Families set their own rules for the protection and wellbeing of each member of the family.

Responsibilities: Being a responsible member means knowing and following family rules

IN YOUR COMMUNITY, STATE OR NATION

Rights: All people are given certain rights by the country's Constitutions Bill of Rights thatcannot be taken away.

Rules and Laws: Everyone has to follow rules and obey laws. Laws give fairness and protect the health and safety of people.

Responsibilities: Being informed citizen about our government and community is an important responsibility. Voting in election is one responsibility of a good citizen. Volunteering to help in the community is another example of being a good citizen.

Activity:

Draw and label some pictures to show some ways in which young people can become goodcitizens.

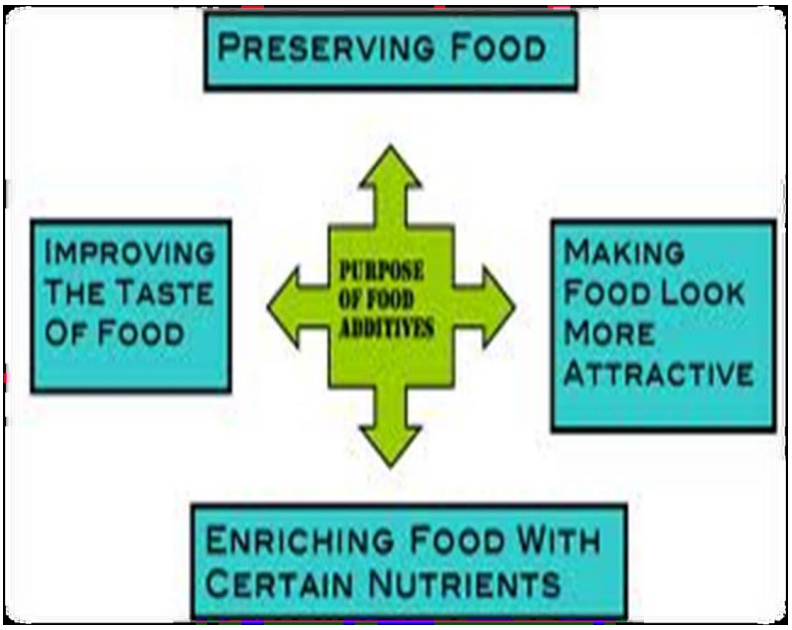
1076 NADI SANGAM SCHOOL
YEAR 7
HEALTHY LIVING
WEEKLY HOME STUDY PACKAGE 12

STRAND	**UNIT 32 FOOD PRESERVATIVES** **UNIT 33 GENETICALLY MODIFIED FOODS**
SUB STRAND	
CONTENT LEARNING OUTCOMES	➢ **State the purpose of food preservatives and some examples of it.** ➢ **State the advantages and disadvantages of genetically modified foods.**

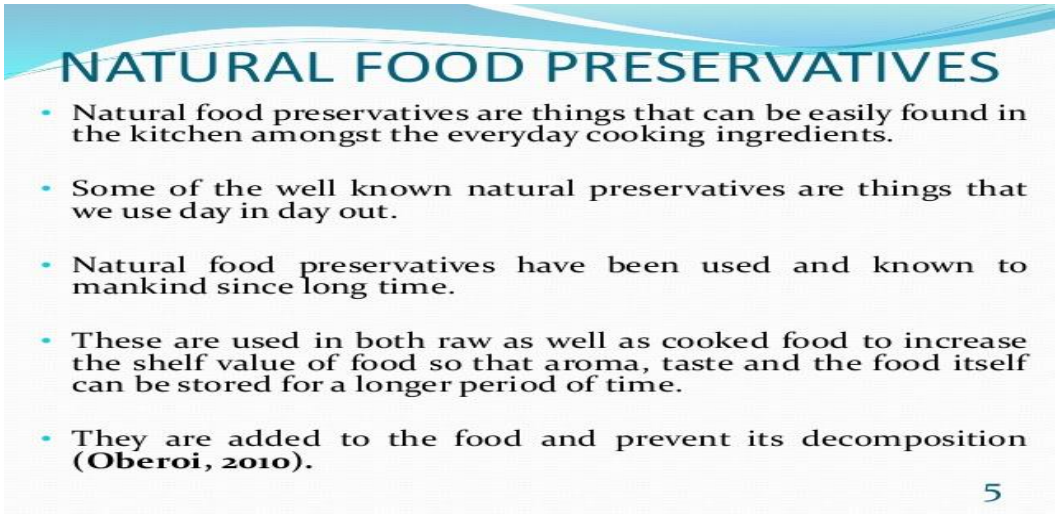
Food Preservatives

- Food preservative are used to ensure the safety of the food stuff available for consumption .

- Food preservatives are classified into 2 : **Natural and Artificial food preservative**



Natural food preservatives



Food Additives

Food additives are substances added to food to preserve flavor or enhance its taste, appearance, or other qualities

Antioxidant	Example	Function
Butylated hydroxyanisole (BHA) Butylated hydroxytoluene (BHT)	Margarine	To retard rancidity in oils
Ascorbic acid (Vitamin C)	Fruit juice	To preserve the colour of fruit juice
Alpha tocopheral (Vitamin E)		Protects body tissue from damage caused by substances called free radicals
Sodium citrate	Cooked cured meat	To stop fats from turning rancid

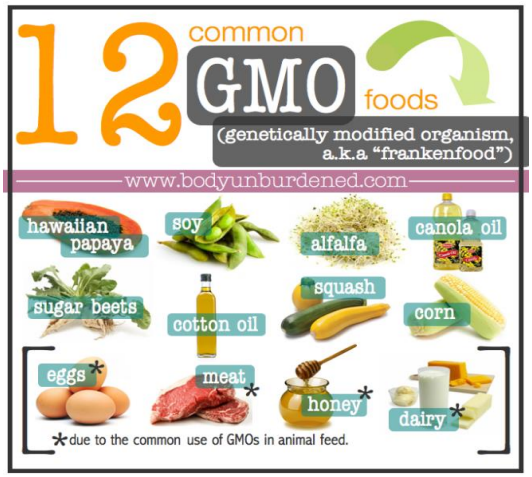
Genetically Modified Food (GMF)

Genetically modified food is where genes in plants have been changed or enhanced to make better food.

If genetically modified food is safe for our consumption then our ecosystem can be altered by introducing new species and animals could be endangered

Advantage of GMF	Disadvantage of GMF
we can create bigger crops and crops that can be higher in vitamins	Some disadvantages of using modified foods are the unknowns.

Examples of genetically modified food



1076 NADI SANGAM SCHOOL
YEAR 7 - हिन्दी HINDI
WEEKLY HOMESTUDY PACKAGE 12

तत्व	निबन्ध
उप-तत्व	पढ़ना और लिखना
विषय के अधिगम परिणाम	व्याकरण और भाषा के सभी पहलुओं के लिए प्रासंगिक वर्ष स्तर पर पढ़ाया जाना है ।

दिए गए विषय पर लगभग ८०-१०० शब्दों का निबन्ध लिखिए ।

हिन्दी भाषा का महत्व

निबन्ध के भाग:

भूमिका / प्रारंभिक परिचय (introduction)

सर्वप्रथम किसी विषय पर निबन्ध लिखते समय उसकी प्रस्तावना या भूमिका के बारे में लिख ना आवश्यक होता है । इसे हम निबन्ध का प्रारंभिक परिचय भी कहते हैं । विषय के बारे में संक्षिप्त जानकारी लिखनी होती है ।

मध्य भाग (body of the compsition)

यहाँ विषय के बारे में सब कुछ वर्णित करना होता है । विचारों को विभिन्न भाग में तोड़कर लिखना चाहिए ताकि पढ़ते समय पाठक को निरसता न लगे ।

उपसंहार (conclusion)

उपसंहार को रोचक तरीके से लिखा होना आवश्यक है । प्रस्तुत भाग में लेखक को उन बातों का संक्षिप्त सार देना चाहिए जिन्हें वह निबन्ध में पहले ही वर्णित कर चुका है ।

इन बातों को धयान में रखकर एक निबन्ध लिखिए ।

समाप्त