

## LESSON NOTE

**School:** Lovu Sangam School

**Year:** 8

**Subject:** English Worksheet Week 6

<b>STRAND</b>	Reading and Viewing
<b>SUB STRAND</b>	- Text Types Media, everyday communication, literacy texts. - Socio-cultural Contexts and Situations
<b>CONTENT LEARNING OUTCOM</b>	- discover familiar and unfamiliar texts relevant for a particular purpose. - arrange ideas, information and events in texts that are related to different social situations, purposes and audiences.

### POEM

#### **Bush Medicine – Konai Helu Thaman**

When I was a little girl  
many women used to come  
to my grandmother to be cured  
she chewed some leaves  
wrapped in more leaves  
then used the juice to dry out  
the bothersome sores  
the women were always quiet  
and somewhat apprehensive

now the wise men say  
that there might be something  
in my grandmother's cure  
and the leaves that flavoured it  
I only hope that one day  
they too would be sure

#### **Summary / Explanation**

In this poem, the poet is recalling as how her grandmother used the plants and leaves and made herbal medicine out of it and treat people with painful sores. This poem also portrays Mother Nature's power of healing as it provides variety of plants and herbs which can be utilized to cure certain illness. The poet narrates as what she saw in her childhood as her grandmother used herb leaves to cure sores which had become incurable. The poem also relates that despite the availability of modern era medicines and health care system, some people still believe in natural healing process through the wonderful gift of nature.

#### **Theme /Message**

- Nature is source of great herbal treasure, which needs to be preserved.
- Appreciate natural resources as it is the greatest gift given to mankind.

#### **Activity**

1. Explain in your own words the cure used by the grandmother.

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2. Why do you think the women were bit quiet and worried?

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3. Who do you think the wise men are?

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4. What are the wise men saying now?

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5. What is the reason of writers hope?

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6. .Explain why the poem is called “Bush Medicine?”

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7. Write a theme that you learnt in this poem.

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8. Name the poet of the above poem.

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9. **Creative Work** – draw, colour and label what grandmother in the above poem used to do.

**ENGLISH VOCABULARY OF THE WEEK**

Healing	Treasure	medicine	Bush	flavour
process	herbal	preserved	nature	painful

## LESSON NOTE

School: Lovu Sangam School

Year: 8

Subject: English Worksheet Week 7

<b>STRAND</b>	Writing and Shaping
<b>SUB STRAND</b>	Language features and rules.
<b>CONTENT LEARNING OUTCOM</b>	Compose different text types using a variety of sentence structures, linkages and appropriate vocabulary and punctuations.

### A. Synonyms

Synonyms are words that have the same or similar meaning.

For each word, write down the word that has the same or similar meaning from the words in the table given below.

<b>construct</b>	<b>rain</b>	<b>joyful</b>	<b>difficult</b>	<b>skill</b>
<b>gather</b>	<b>lad</b>	<b>seized</b>	<b>cold</b>	<b>missing</b>

1. collect - \_\_\_\_\_

6. boy - \_\_\_\_\_

2. build - \_\_\_\_\_

7. happy - \_\_\_\_\_

3. ability - \_\_\_\_\_

8. drizzle - \_\_\_\_\_

4. chilly - \_\_\_\_\_

9. disappeared - \_\_\_\_\_

5. captured - \_\_\_\_\_

10. hard - \_\_\_\_\_

### B. Antonyms

Antonyms are words that are opposite in meaning.

For each word, write down the word that has the opposite meaning from the words in the table given below.

<b>above</b>	<b>abroad</b>	<b>absent</b>	<b>abundant</b>	<b>accept</b>
<b>active</b>	<b>admit</b>	<b>adult</b>	<b>alive</b>	<b>attack</b>

1. dead \_\_\_\_\_

2. home \_\_\_\_\_

3. deny \_\_\_\_\_

4. below \_\_\_\_\_

5. defend \_\_\_\_\_

6. passive \_\_\_\_\_

7. child \_\_\_\_\_

8. scarce \_\_\_\_\_

9. present \_\_\_\_\_

10. refuse \_\_\_\_\_

### C. Punctuations

#### ➤ Capital letters

- use at the beginning of the sentences.
- use for proper nouns, that is names of people and places.
- use for titles of books.

E.g **Mr Tim** was walking on the road when he met **Mrs Sim**. **He** waved to her. **She** greeted him in return.

- **Full-stop ( . )**
  - used at the end of the sentences and for abbreviations.
  - E.g Sally has never been to the Botanical Garden.
- **The comma ( , )**
  - used to separate words in a long list and phrases or clause in a sentence.
  - E.g At the night-market, we bought soap, a comb, and a plastic bucket.
- **The Question Mark ( ? )**
  - used when a question is asked.
  - E.g Who is this lady waiting for?
- **The Exclamation Mark ( ! )**
  - is used in ejaculations to express anger, surprise, horror etc
  - E.g “Oh!” cried the boy, “I have done my sums wrongly.”
- **Quotation Marks ( “...” )**
  - are used in direct speech.
  - E.g “Where have you been?” Peni asked his son.
- **The Apostrophe ( ’ )**
  - used in the possessive case.
  - E.g This is Vina’s bag.

### EXERCISE

**In each of the sentences below, a punctuation mark is missing. Put in the correct punctuation marks.**

1. Can you recognize the lady in this photograph
2. The men at the construction site are hard at work
3. I bought apples, oranges and pears at the fruit stall.
4. “Look out ” shouted Saini to her friend.
5. Where is your brother now
6. “Didn’t you hear me call ” Mrs Singh asked her son.
7. Who is Hassans father looking for?
8. We shall be going for ten-day camp in June
9. Get away ” the angry farmer shouted at the boys.
10. “Is this the way to the national library I asked Ravi

### ENGLISH VOCABULARY FOR THE WEEK

abundant	recognize	capture	ability	seized
construction	photograph	disappear	drizzle	passive

**1075 LOVU SANGAM SCHOOL**  
**HEALTHY LIVING YEAR 8**  
**LESSON NOTES WEEK 6**

<b>Strand</b>	H4 – Personal And Community Health
<b>Sub Strand</b>	H8.4.2 People and Food
<b>Content Learning Outcome</b>	H8.4.2.1 Evaluate reliability of labels and packaging of food products.

**PROCESSED FOODS AND IT'S NUTRITIONAL VALUES**

Processed foods usually refer to **foods that are packaged in boxes, cans or bags**. These foods need to be processed over and over again to be edible and are not found as is in nature. In addition to going through many difficult processing **steps**:

- Processed foods often contain additives.
- Artificial flavourings and other chemical ingredients.

**Ingredients on Processed Foods**

You can determine whether a food is processed by looking at the **ingredient list**. The longer the ingredient list, the more processed a food is likely to be. Processed foods are usually more likely to contain ingredients that you are not able to recognize or ingredients that you wouldn't have in your kitchen. The **more food is processed the fewer nutrients it contains**. Processing of food **dilutes** the **remaining nutrients** by adding cheap fillers such as **water, fats and sugar**.

**Whole Foods are Healthier**

Avoid processed foods and base your diet on whole food to get the most nutrition and maximize your health. Avoid foods that you wouldn't be able to produce or make yourself at home. Stick to unprocessed, natural foods, mostly found on the outside edge of the grocery store, such as vegetables, fruits, eggs, meat and other single-ingredient foods.

**Information on Food Packages**

Usually a label has to convey messages for the consumer. Here are messages that had to be conveyed:

- ❖ The manufacturer's or distributor's name and address
- ❖ The weight of the product
- ❖ Ingredients (listed according to amount, from highest to lowest)
- ❖ Number of servings per product, and serving size
- ❖ Calories
- ❖ Total fat (saturated fat, cholesterol, sodium, sugar, dietary fibre, protein, carbohydrates)
- ❖ Any artificial flavour or preservative added
- ❖ Vitamins and minerals
- ❖ Best before, date indication.

**Examples of Processed Foods**

- Tin Fish
- Corned Mutton
- Tin Tomatoes
- Baked Beans
- Tuna

## Student Activity Sheet

### A: Fill in the Blanks

dilutes	ingredient	edible	fewer	packaged
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1. You can determine whether a food is processed by looking at the \_\_\_\_\_ list.
2. Processing of food \_\_\_\_\_ the remaining nutrients by adding cheap fillers such as water.
3. Processed foods usually refer to foods that are \_\_\_\_\_ in boxes, cans or bags.
4. Foods need to be processed over and over again to be \_\_\_\_\_ and are not found as is in nature.
5. The more food is processed the \_\_\_\_\_ nutrients it contains.

### B: Short Answers

1. Name 5 processed foods that mum usually buys from town.

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2. Why are processed foods not healthy?

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3. How can you find out if a food is being processed?

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4. What are Processed Foods?

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5. Draw, colour, and label **6 processed foods** that your family buys from town.

**1075 LOVU SANGAM SCHOOL**  
**HEALTHY LIVING YEAR 8**  
**LESSON NOTES WEEK 7**

<b>Strand</b>	H4 – Personal And Community Health
<b>Sub Strand</b>	H8.4.3 – Disease Prevention
<b>Content Learning Outcome</b>	H8.4.3.1 – Promote healthy lifestyles

**NON-COMMUNICABLE DISEASES (NCD)**

Non- communicable diseases (also known as **chronic disease**) are not passed from one person to another. It is a type of **illness** that has been with a person for a long period of time and develops very slowly in the body of that person.

The **four main** types of non-communicable diseases are:

- ❖ Cardiovascular diseases(like heart attacks and stroke)
- ❖ Cancers
- ❖ Chronic respiratory diseases (such as asthma)
- ❖ Diabetes

**Who is at risk of such diseases?**

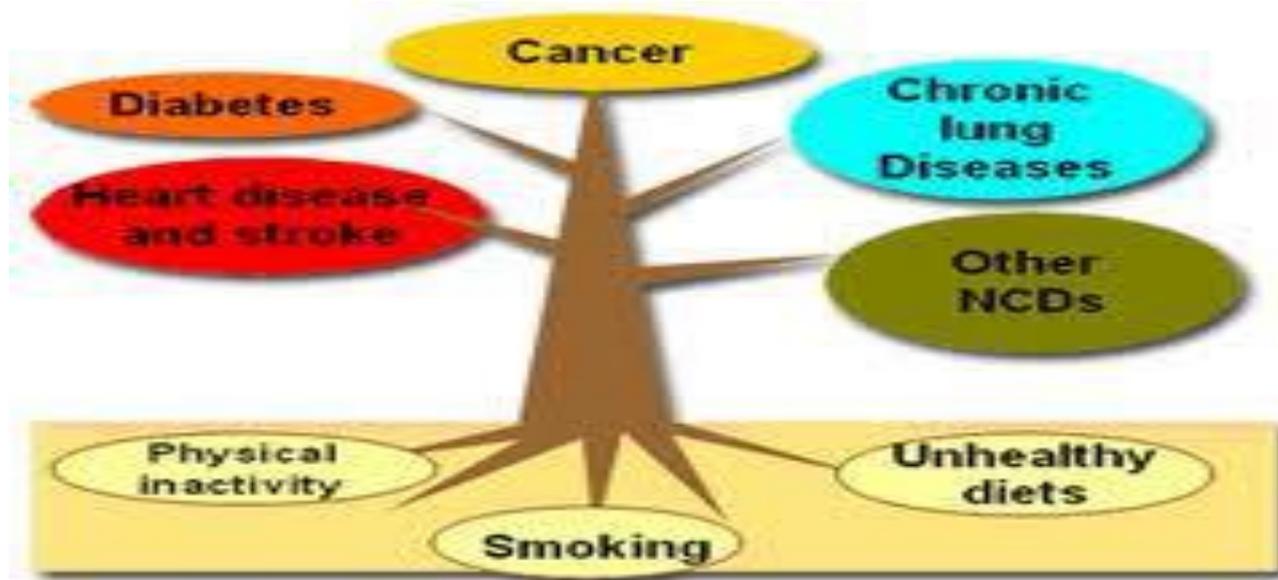
All age groups are affected by NCDs. NCDs are often associated with older age groups, but more people are dying from it before they reach 60. Children, adults and the elderly are all vulnerable to the risk factors that contribute to non-communicable diseases, whether from **unhealthy diets, physical inactivity, exposure to tobacco smoke or the effects of the harmful use of alcohol.**

**Causes of NCDs:**

- Tobacco use
- physical inactivity
- unhealthy diet
- the harmful use of alcohol increase the risk of or cause most NCDs

**Prevention of NCDs**

1. People need to be more aware of their health to prevent NCDs. Modifying unhealthy behaviour will greatly help.
2. Reducing tobacco use and intake of alcohol can lessen chronic lung diseases.
3. Being physically active can decrease the chance for having a heart attack or stroke.



## Student Activity Sheet

### **A: Definitions**

Define the following terms:

1. Cancer - \_\_\_\_\_  
\_\_\_\_\_.
2. Diabetes - \_\_\_\_\_  
\_\_\_\_\_.
3. Chronic - \_\_\_\_\_  
\_\_\_\_\_.
4. Heart Attack - \_\_\_\_\_  
\_\_\_\_\_.
5. Asthma - \_\_\_\_\_  
\_\_\_\_\_.

### **B: Short Answers**

1. What are the **4** main types of NCDs?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

3. Who are at risk of NCDs?

\_\_\_\_\_  
\_\_\_\_\_

4. What should you do to protect yourself from NCD?

\_\_\_\_\_  
\_\_\_\_\_

5. What are some causes of NCD?

\_\_\_\_\_  
\_\_\_\_\_

### **C: In 2 to 3 sentences explain what you will do in the following scenarios:**

1. **Your doctor has told you that you have cancer.**

\_\_\_\_\_  
\_\_\_\_\_

2. **You are worried that you are becoming obese.**

\_\_\_\_\_  
\_\_\_\_\_

3. **Nurse says you have high blood pressure.**

\_\_\_\_\_  
\_\_\_\_\_

4. **Nurse tells you that you have diabetes.**

\_\_\_\_\_  
\_\_\_\_\_

**1075 LOVU SANGAM SCHOOL**  
**SOCIAL SCIENCE YEAR 8**  
**LESSON NOTES WEEK 6**

<b>Strand</b>	SS4- Resources and Economic Activities
<b>Sub Strand</b>	8.4.1- Use and Management of Resources
<b>Content Learning Outcome</b>	Collect information on the influence of time on our daily lives and express good practices that we can adopt to ensure good time management.

**The Importance of Using Time Properly**

**What is time management?**

It is a set of principles, practices, skills, tools and systems that help you use your time to accomplish what you want.

**Why is time management important?**

Time management is important for your personal life and career success. It teaches you how to manage your time effectively and make the most of it.

**Managing your time**

Time is a **special resource** that you cannot store or save for later use. Everyone has the exact same amount of time each day. Time not well used cannot be retrieved.

- ❖ Most people, feel like they have too much to do and not enough time. They blame lack of time for their poor finances, stress, bad relationships, and for not exercising their body.
- ❖ Wise time management can help you find the time for what **you desire**, and for what you need to do.
- ❖ You need time to get what you want out of life. If you wait for extra time to appear, you might lose the game of life. Through **right time management, you can —create the time you need**, and not just wait for it to come. By planning your time wisely, you will have more time to do more things.
- ❖ Time management will help you set up **your priorities**.
- ❖ Time is limited to 24 hours a day, so plan your life wisely.
- ❖ Time management helps you make conscious choices, so you can spend more of your time doing things that are **important and valuable** to you.
- ❖ You can learn to find the time for the things that are important to you. Even a small amount of time once a day, or even once a week, **will take you closer to your goals**, and you will be surprised at the progress you make.
- ❖ You become more productive using improved time management skills and tools, and **can accomplish more with less effort and time**.
- ❖ Time management can **help you reduce wasted time and energy**, help you become more creative and productive, and enable you to do the right thing at the right time. This will of course lead to more balance and fulfilment in your life.
- ❖ Life today presents so many distractions, and therefore, it is very easy to lose time on unimportant activities. Ask yourself, is watching this or that TV program, reading this or that gossip or participating in a certain activity is going to add anything to your life. Is the time spent on a particular activity well spent, or is just a waste of time and energy?
- ❖ Life puts in front of everyone so many choices each day, and the question is, do you follow what appears on your way, or do you consciously choose what you want to do? Do you allow external distractions to deter you from your goal, or do you use **willpower and self-discipline to walk** toward your goal in a straight line, without wasting time and energy?
- ❖ Thinking, planning, finding out how others manage their time, and reading books and articles on time management, will develop these skills and give you good ideas.

- ❖ Among the many changes that you can make to manage your time, there is one that is important and easily available, and that is getting up early in the morning. Give up watching TV late at night and go to sleep a little earlier than usual. It will then be easier to wake up earlier.
- ❖ To get rid of the feeling that you have much to do and not enough time, try to feel and to think, as if you have all the time in the world. This kind of thinking would **enable you to focus on what you are doing, without stress and strain.**

### Student Activities

#### A: Fill in the blanks

time	productive	distractions	resource	personal
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1. Time management is important for your \_\_\_\_\_ life and career success.
2. Life today presents so many \_\_\_\_\_, and therefore, it is very easy to lose time on unimportant activities.
3. To get rid of the feeling that you have much to do and not enough \_\_\_\_\_, try to feel and to think, as if you have all the time in the world.
4. You become more \_\_\_\_\_ using improved time management skills and tools, and can accomplish more with less effort and time.
5. Time is a special \_\_\_\_\_ that you cannot store or save for later use. Everyone has the exact same amount of time each day.

#### B: Short Answers

1. Why is time management important?

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2. What is time management?

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3. List 2 ways of managing your time wisely?

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4. **Design/draw up a timetable to show how you spend your time (your whole 24 Hours).**



**1075 LOVU SANGAM SCHOOL**  
**SOCIAL SCIENCE YEAR 8**  
**LESSON NOTES WEEK 7**

<b>Strand</b>	SS4- Resources and Economic Activities
<b>Sub Strand</b>	8.4.1- Use and Management of Resources
<b>Content Learning Outcome</b>	Collect information on the influence of money on our daily lives and express good practices that we can adopt to ensure good money management.

**How to Spend Money Wisely**

No matter how little or how much money you have, spending it wisely is a good idea; it enables you to get the most for your money.

**Spending Basics**

**1. Create a budget.**

- ❖ Track your spending and income so you have an accurate picture of your financial situation. Save receipts or write down your purchases in a notebook as you make them.
- ❖ Organize your purchases by category (food, clothing, entertainment, etc.). Categories with the highest monthly amounts (or monthly amounts you consider surprisingly high) may be good targets for saving money.
- ❖ Once you've tracked your purchases for a while, create a monthly (or weekly) limit for each category.

**2. Plan your purchases/buying in advance.**

- Making spur of the moment decisions can balloon your expenditures. Write down what you need to buy while you're calm and at home.
- Make a preliminary trip before you go on your real shopping trip. Note the prices of several alternatives at one or more stores.

**3. Avoid impulse purchases.**

- If planning your purchases in advance is a good idea, buying something on the spur of the moment is a terrible one.
- Don't browse store windows or shop for fun. If you're only buying something because you find the act of shopping fun, you'll likely end up spending too much on stuff you don't need.

**4. Shop alone.**

- Children, friends who love shopping, or even just a friend whose tastes you respect can influence you to spend extra money.

**5. Pay in full and in cash.**

Credit and debit cards increase spending for two reasons: you have much more money available to spend than you normally would, and because no visible money is changing hands, it doesn't register as a "real" purchase.

**6. Don't be fooled by marketing.**

Outside influences are a huge factor affecting what we spend our money on. Be vigilant and try to be aware of all the reasons you're drawn to a product.

**7. Wait for sales and discounts.**

- If you know you'll need a particular item but doesn't need it today, wait until it ends up in the bargain bin or try to find a coupon for it. Only use a coupon or take advantage of a discount for an item you absolutely need or decided to buy before the discount occurred. The attraction of a cheaper price is an easy way to get customers to buy something they don't need.
- Buy products only useful at particular times of year during the off season. A winter coat should be cheap during summer weather.

**8. Do your research.**

Before making expensive purchases, go online or read consumer reports to find out how to get the most for the least dollar. Find the product within your budget that will last longest and meet your needs best.

**9. Take all the costs into account.**

You'll end up paying a lot more than the sticker price for many big-ticket items. Read all the fine print and add up the total amount before making your decision.

**10. Compile a weekly menu and shopping list.**

Once you have an amount budgeted for food, write down in advance the exact meals you will eat and what you need to purchase at the grocery store to make them.

**11. Minimize eating at restaurants.**

- ❖ Eating out is much more expensive than preparing your own food, and should never be done as an impulse by someone who is trying to save money.
- ❖ Pack a lunch at home instead and bring it with you to work or class.

**Student Activities**

**A: Fill in the blanks**

accurate    spur    expensive    consumer    expenditures
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1. Making spur of the moment decisions can balloon your \_\_\_\_\_.
- 2 Track your spending and income so you have an \_\_\_\_\_ picture of your financial situation.
3. If planning your purchases in advance is a good idea, buying something on the \_\_\_\_\_ of the moment is a terrible one.
4. Eating out is much more \_\_\_\_\_ than preparing your own food, and should never be done as an impulse by someone who is trying to save money.
5. Before making expensive purchases, go online or read \_\_\_\_\_ reports to find out how to get the most for the least dollar.

**B: Definitions (Find out the meanings of the following words)**

1. Budget - \_\_\_\_\_
2. Consumer - \_\_\_\_\_
3. Impulse - \_\_\_\_\_

**C: Short Answers**

1. Why is it important to spend money wisely?  
\_\_\_\_\_
2. List 2 things that you must do before going out for shopping?  
\_\_\_\_\_
3. Why is it important to make a shopping list before going to town?  
\_\_\_\_\_

# 1075 LOVU SANGAM SCHOOL

## YEAR 8

### VOSA VAKA VITI

#### WHSP 6

**Matana:** Wilivola kei na Vakadidigo

**Matana Lailai:** Na veivanua e vakayagataki kina na vosa- vosa e vakayagataki e na vakacacali.

**CLO:** Vakadikeva ka digitaka na veitukutuku tabaki me talaucaki na kedra i naki.

**TALANOA BALAVU:** Ko Aleni Kotameni

Mo wilika na i wase 25 kei na wase 26 ni Aleni Kotameni ka vola na veika e a yaco.

#### **Wase 25:**                    **Ai Tuvatuva ni Mataivalu**

**Yavu:**                    Vanua bucabuca e na i bili ni koro.

**Gauna:**                    Karobo na vanua

#### **Ira e ra Vakaitavi:**

- Aleni Kotameni, Kavetani Jone Qutu, Sa Anare Ketesi, Asilopokasi,
- Nailepica, Tamata i Valu, Turaga ni valu, Rarama ni Siga (ose)

#### **Veika e a Yaco:**

- Soqoni vata na Mataivalu ka ra liu vata kei Asilopokasi kei Qutu.
- A vosa ni vakadre ka veivakayaloqataki vei ira ko Nailepica.
- Veivakamocetaki ko Nailepica vei AK kei Sa Anare ka ni rau qai muri ni oti e rua na bogi.
- E ra la'ki sota vata na mataivalu e na siga ka tarava.
- Tuvana o Sa Anare na nona mataivalu e na bogi.
- Yavala mai na mataivalu nei Soraisi.
- To vata na mataivalu nei Nasita (25,000) vata kei Soraisi.
- Tavaladelade ni yalo/ lomabibi e na vuku ni dra e na dave.
- Siga na vanua/ Damudamu na matanisiga ka maumauwe tale mai na vanua.
- Marautaka ko Asilopokasi ni sa vakarau me vala.
- Kailavaki na yacai Soraisi/ vakaraitaki ni sa vakarau na vala.

#### **Vakavuvuli:**

- Me da dau veivakayaloqataki.
- Me da dau vulica me da dau vakarautaki keda vinaka tu ni bera ni yaco na leqa.
- Me da dau veinanumi.

#### **Wase 26:**                    **Na Vala**

**Yavu:**                    E na buturara ni valu.

**Gauna:**                    Ni mataka cake na vanua.

#### **Ira e ra Vakaitavi:**

- Aleni Kotameni, Kavetani Jone Qutu, Sa Anare Ketesi, Asilopokasi, Alivonisi
- O ira na mataivalu, Soraisi, Turaga ni valu.

Veika e a Yaco:

- Sa tekivu na i valu ka cici mai e 8,000 na tamata vodo ose nei Soraisi.
- Vakatalai yani e 5,000 na tamata vodo ose me ra sota ka ra rawati ira na meca.
- Toso mai na mataivalu nei Nasita ka sota kei na mataivalu tauri moto nei Qutu.
- Dede vakalailai sa malumu sobu na nodra kaba na mataivalu nei Soraisi.
- Toso tale mai na mataivalu vodo ose nei Soraisi ka levu sara e ra mate.
- Mavoava vakaca ko Qutu ni sota kei na mataivalu nei Nasita.
- Cici tale yani ko AK kei na nona mataivalu vodo ose ka samuti ira na i lala nei Nasita.
- E a vakabulai Qutu ko AK e na nona suaka na meca ni vakarau vakamatei koya.
- E a vuki mai na meca ka taya na toloi AK. E a malumalumu ka cibati koya ko AK.
- E ra sa tekivu me ra suka na mataivalu nei Soraisi ka ra dro.
- E tukutuku ko Alivonisi ni rau sa lako ko Nasita kei Akoni me rau la'ki vakamatei Nailepica.
- E rau sa biubiu ko AK kei Asilopokasi me rau sa lesu tale ki Milosisi.

Vakavuvuli:

- Na dei ni yalo kei na vakasama.
- Mo yalo qaqa ka dau veivukei.

Cakacaka Lavaki

Sauma na taro ka ra soli koto.

**“Sa la’ki moce na noqu turaga; ni ko lesu mai mo kauta mai na qaqa, ka lesu mai vaka-Tui- ke sega, ia me ra colati kemuni ga mai na sotia e na nodra moto..”**

1. Ko cei e vakamacala tiko oqori? \_\_\_\_\_
2. E vosa tiko vei cei? \_\_\_\_\_  
\_\_\_\_\_
3. Na cava e vakarau yaco tiko oqo? \_\_\_\_\_  
\_\_\_\_\_
4. Ko cei na taci Nailepica? \_\_\_\_\_

# 1075 LOVU SANGAM SCHOOL

## YEAR 8

### VOSA VAKA VITI

#### WHSP 7

**Matana:** Wilivola kei na Vakadidigo

**Matana Lailai:** Na Lawa ni Vosa

**CLO:** Vakayagataka vakadodonu na vakavakadigo e na wilivola. Vakadewataka na ka e wilika.

**ULUTAGA:** Na Wilivola kei na Saumi Taro.

E na nona duri tu e na vale ni uli, a ciqoma galugalu kina na kavetani ni waqa na Osenosi na i tukutuku ni leqa.

Sa ciri voli na nona waqa ni leqa na kena idini ka sa biliga vakababa tiko na kaukauwa ni cagi. E roba na babana na veiuva lelevu ka rauta ni tini na mita na kena cere.

E vakauti e na walesi na kaci ni kere veivuke e na gauna ni leqa.

Sa luvu vakaca na boto ni waqa ka vodo vakalevu na wai. E ra vakabauta na kai waqa ni ra na lutu dromu dina ga. E ra dro me ra bula ka ra guilecavi tu mai na pasidia. E ra a mani sotava vakataki ira na pasidia na leqa e na gauna ko ya.

Ia, e na bogi ko ya e ra a tu kina e so na qaqa ka ra tauri ira vata tiko na pasidia. E ra cakacakataka na kena sagai na nodra vakabulai e na waqa lailai kei na waqavuka ni veivueti.

E veivakurabuitaki na nodra duavata kei na kena solevaki na i tavi. E vakavuna me sega ni vakaleqai e dua na bula e na soko ko ya.

E ra a wasewasei na lewe ni veivuvale baleta me ra vueti e liu na tina kei na gone ka ra qai vukei e muri na turaga. E vakadeitaki ira e na bogi vakarerevaki ko ya na nodra vakabauta ga kei na masumasu. Sa rauta me ra veisotaraki tale vakamatavuvale e na veimaraautaki ka ra vakavinavinaka vua na Kalou ni ra sa bula.

**Vurevure ni i Tukutuku:** Fateful Voyage: Australian Reader's Digest

1. Na cava e talanoataki tiko e na i Talanoa oqo?
  - A. na soko vakadomobula
  - B. na soko marautaki
  - C. na soko e na maravu
  - D. na soko vakayawa
2. A duri tu e vei ko kavetani e na kena sa tukuni yani na I tukutuku ni leqa?
  - A. e dela ni waqa
  - B. e loma ni waqa
  - C. e rumu ni idini
  - D. e na vale ni uli

3. Na cava a leqa e na waqa?  
 A. na I uli  
 B. na idini  
 C. na i kelekele  
 D. na i vocevoce
4. Na cava a biliga vakababa na waqa levu ko ya?  
 A. na ua lelevu  
 B. na kui ni wai  
 C. na tau ni uca  
 D. na kaukauwa ni cagi
5. Na cava na cere ni ua ka tukuni tiko e ke?  
 A. walu na mita  
 B. ciwa na mita  
 C. tini na mita  
 D. tini ka dua na mita
6. A kilai vakacava mai vanua na leqa e yaco e waqa?  
 A. sikinala na cina  
 B. vakarewa i sulu  
 C. laurai mai vanua  
 D. kaci ni kere veivuke
7. Na tiki ni waqa cava a vakacacani ka vakavuna na vodo ni wai?  
 A. na mua i liu  
 B. na boto ni waqa  
 C. na yasa ni waqa  
 D. na dreke ni waqa
8. E ra a lako ki vei na kai waqa?  
 A. dro me ra bula  
 B. nima waqa  
 C. vesu dali  
 D. vaqaqara wai
9. E ra a vakadewataki vakacava ki vanua na pasidia?  
 A. qalo/velovelo  
 B. bilibili/boto  
 C. waqa lalai/waqavuka  
 D. waqa lalai/velovelo
10. Na cava e veivakurabuitaki e na nodra vueti taucoko na pasidia mai na waqa ko ya?  
 A. duavata kei na solevaki ni i tavi.  
 B. rere kei na yalo dadatuvu  
 C. kaukauwa ni cagi kei na tubu ni ua  
 D. nodra vodo rawa na marama kei na gone



## STUDENT ACTIVITY

1. The Cash Price for a 5 piece dining table is \$790.00 The deposit is \$120.00 with \$24.00 monthly payments for 3years.

a. Calculate the total amount paid for monthly payments?



b. How much was paid altogether?

c. How much could be saved for buying in cash?

2. Mr. Zack Peters bought a car from Sakura Car Dealer in Samabula. He bought it by paying 10% of the cash price and agrees for a monthly payment of \$450 per month for 5 years.

Calculate the total amount of money he pays for the car after 5 years.



3. Calculate which of the following shops gives better price.

**Shop K**

**4 L Cooking Oil - \$13.80**



**Shop M**

**2 L Cooking Oil - \$8.20**



**1075 LOVU SANGAM SCHOOL**  
**RE-ALIGNED CURRICULUM WEEK 6**

**SUBJECT: MATHS**

**YEAR: 8**

<b>STRAND</b>	Measurement
<b>SUB- STRAND</b>	Money
<b>CONTENT LEARNING OUTCOME</b>	Calculate and explain the concept the concept of Simple and Compound Interest

**Interest**

Interest is the cost of borrowing money, where the borrower pays a fee to the lender for the loan. The interest, typically expressed as a percentage, can be either simple or compounded.

**Simple Interest**

Simple interest is based on the principal amount of a loan or deposit and is calculated using the formula:

$$\text{SIMPLE INTEREST} = \frac{\text{PRINCIPAL} \times \text{RATE} \times \text{TIME}}{100}$$

$$\text{SI} = \frac{\text{P} \times \text{R} \times \text{T}}{100}$$

P- Amount of Loan/ Deposit  
R- Interest Rate  
T- Time in Years

$$\text{AMOUNT} = \text{PRINCIPAL} + \text{SIMPLE INTEREST}$$

$$\text{A} = \text{P} + \text{SI}$$

**EXAMPLE:**

Sairusi wanted to buy an outboard motor for his travelling and fishing trips. The cost of the outboard motor with the engine is \$25,000.00. He borrowed the money from the bank which gives an interest of 6% per annum for 5 years.

a) Calculate the **Simple Interest**

$$\text{SI} = \frac{\text{Principle} \times \text{Rate} \times \text{Time}}{100}$$

$$= \frac{25,000 \times 6 \times 5}{100}$$

$$= \underline{\underline{\$7,500.00}}$$

b) The Total amount he has to pay the bank after 5 years:

$$\begin{aligned} \text{A} &= \text{P} + \text{SI} \\ &= \$25,000.00 + \$7,500.00 \end{aligned}$$

$$= \underline{\underline{\$32,500.00}}$$

**Exercise**

1. Mr Bravo took a loan of \$1, 200.00 from Westpac Bank. The bank gives an interest of 5% per annum for 3 years.

a. Calculate the Simple Interest.

b. What would be the total amount of money Mr Bravo had to pay back to the bank?

2. City Carz dealer is selling a car for \$35, 000. Mr. and Mrs. Cama took a loan from BSP bank to buy that car. The bank gave 7% interest per annum for 5 years. Calculate the total amount of money Mr. and Mrs. Cama will have to pay back to the bank after 5 years.

## Compound Interest

Compound interest is based on the principal amount and the interest that accumulates on it in every period. It **adds interest to the principal at every possible instant. It is also known as “interest on interest”**. Simple interest is calculated only on the principal amount of a loan or deposit, so it is easier to determine than compound interest.

### EXAMPLE:

Mrs. Sorovaki wants to travel to Australia. She had to borrow \$10,000 from the bank for her travelling expenses. The bank gave her the amount of money with and a compound interest of 5% per annum for 5 years. What would be the total amount Mrs. Sorovaki pays back to the bank after 5 years?

### FIRST YEAR:

$$I = \frac{P \times R \times T}{100} = \frac{\cancel{\$10\,000} \times 5 \times 1}{\cancel{100}} = \$ 500 \qquad A = P + I$$
$$= \$10,000 + \$ 500 = \underline{\underline{\$10,500}}$$

### SECOND YEAR

$$I = \frac{P \times R \times T}{100} = \frac{\cancel{\$10\,500} \times 5 \times 1}{\cancel{100}} = \$ 525 \qquad A = P + I$$
$$= \$10,500 + \$ 525 = \underline{\underline{\$11,025}}$$

### THIRD YEAR

$$I = \frac{P \times R \times T}{100} = \frac{\cancel{\$11\,025} \times 5 \times 1}{\cancel{100} \text{ } 20} = \$ \frac{11\,025}{20} = \$551.25 \qquad A = P + I$$
$$= \$11\,025 + \$551.25 = \underline{\underline{\$11\,576.25}}$$

### FOURTH YEAR

$$I = \frac{P \times R \times T}{100} = \frac{\cancel{\$11\,576.25} \times 5 \times 1}{\cancel{100} \text{ } 20} = \$ \frac{11\,576.25}{20} = \$578.82$$
$$A = P + I$$
$$= \$11\,576.25 + \$578.82 = \underline{\underline{\$12\,155.07}}$$

### FIFTH YEAR

$$I = \frac{P \times R \times T}{100} = \frac{\cancel{\$12\,155.07} \times 5 \times 1}{\cancel{100} \text{ } 20} = \$ \frac{12\,155.07}{20} = \$607.75$$
$$A = P + I$$
$$= \$12\,155.07 + \$607.75 = \underline{\underline{\$12\,762.82}}$$

The formula for compound interest is  $A = P (1+r)^t$

Where P is the initial principal amount, r is the interest rate in decimal form, and t is the number years interest is compounded for.

So, let's try with the above example:

$$A = P (1+r)^t \qquad \text{remember, 5\% interest in decimal will be 0.05}$$
$$= \$10,000 \times (1 + 0.05)^5$$
$$= \$10,000 \times (1.05)^5$$

$$= \underline{\underline{\$12\,762.82}}$$

### **Compound Interest- Activity**

Mr. Epeli borrowed \$5,000 from the bank for his personal use. The bank gave him the amount of money with and a compound interest of 5% per annum for 5 years.

What would be the total amount Mr. Epeli pays back to the bank after 5 years?

**(Find out the answer using both ways as shown in the example above)**

STRAND	संस्कृति
SUB STRAND	सांस्कृतिक मूल्यों व व्यवहारों की समझ के द्वारा अपनी पहचान बनाए रखना ।
CONTENT LEARNING OUT COME	विभिन्न पारंपरिक - मिष्ठान/भोजन के पाक- विधि लिखना

**Notes** निचे दिए विभिन्न पारंपरिक मिष्ठान/भोजन के बारे मे पढ़ कर अपने माता/ पिता के साथ चर्चा किजिए ।

- रोठ - हनुमान जी की पूजा जब किया जाता है तब हम उन्हें रोठ चढ़ते हैं ।
- हलवा - विभिन्न अवसरों पर बनाई जाती है ।
- खीर - विभिन्न अवसरों पर बनाई जाती है और हवन यज्ञ मे अर्पण किया जाता है ।
- लप्सी पूरी - देवी जी की पूजा जब की जाती है तब हम उन्हें लप्सी-पूरी चढ़ते हैं
- इडली/ढोसा - दक्षिण भारतीय के लोग इसे खाना पसन्द करते हैं ।
- सेवई - इसलाम धर्म को मानने वाले ईद त्योहार पर सेवइयाँ बनाते हैं ।
- पायसम - ज्यादा तर शादियों मे बनाई जाती है ।
- सोंठ - ज्यादा तर माताएँ बच्चे को जन्म देने के बाद अपने स्वास्थ्य को अच्छा करने के लिए पीती हैं ।
- पंचामृत - दूद, घी, धही, चीनी और मधू से पंचामृत बन्ती है ।
- रसम - ईमली से बनाई जाती है ।

**अभ्यास कार्य**

अ - दिए गए मिष्ठान/भोजन का चित्र बना कर उस मे रंग भरिए ।

रोठ	लप्सी पूरी	इडली/ढोसा	सेवई

आ - अपने मन पसन्द मिष्ठान के बारे मे तीन वाक्य लिखए ।

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STRAND	संस्कृति
SUB STRAND	सांस्कृतिक मूल्यों व व्यवहारों की समझ के द्वारा अपनी पहचान बनाए रखना
CONTENT LEARNING OUT COME	शिष्टाचार, रिवाज़ परम्पराओं, जातीय- गणित, जातीय - विज्ञान, प्रौद्योगिकी तथा पर्यावरण -मुद्दें

## NOTES

हम हर साल खुशयाली से त्योहारों को मनाते हैं। हर त्योहार के कई महत्व हैं। इन त्योहारों से जो ज्ञान मिलता है उन को जानना और समझना हमारे लिए बहुत ज़रूरी है। इन त्योहारों के बारे में आप को अपने माता पिता के साथ चर्चा करनी है।

ये हैं हमारे कुछ त्योहार जिन के बारे में आप को चर्चा करना है।

- दीपावली
- होली
- रक्षाबन्धन
- राम नवमी
- कृष्ण जन्माष्टमी
- शिव रात्री

## अभ्यास कार्य

त्योहार	किस भगवान की पूजा की जाती है।	इस त्योहार से हम क्या सिखते हैं।
दीपावली		
होली		
रक्षाबन्धन		
राम नवमी		
कृष्ण जन्माष्टमी		
शिव रात्री		

<b>STRAND</b>	- पढ़ना एवं सर्वेक्षण करना (Reading & Viewing) Strand 2 - लिखना एवं निर्माण करना (Writing & Shaping) Strand 3
<b>SUB STRAND</b>	- सामाजिक एवं सांस्कृतिक संदर्भ और परिस्थितियाँ H 2.3 - भाषा की विशेषताएँ व नियम H 2.2 H3.2 -मूल- पाठ के प्रकार- मीडिया साधारण संप्रेषण साहित्यिक विषय H3.1
<b>CONTENT LEARNING OUTCOME</b>	- विभिन्न सामाजिक परिस्थितियों, उद्देश्यों व दर्शकों से संबद्ध पाठ में आए विचारों, जानकारी व घटनाओं की व्याख्या व चर्चा करना H8.2.3.1 - पाठ के विशेषताओं व नियमों की व्याख्या करना H.8.2.2.1 - विविध वाक्य-संरचनाओं, कड़ियों, तथा उपयुक्त शब्दावली व विरामादि चिह्नों के प्रयोग से विभिन्न विषय-प्रकार का निर्माण करना H8.3.2.1 - काल्पनिक व ज्ञानवर्धक पाठ लिखने हेतु सरल, यौगिक तथा मिश्रित वाक्यों का निर्माण करना H8.3.1.1

## क्रिया (Verb)

जिस शब्द से किसी काम का करना या होना पाया जाए उसे क्रिया कहते हैं।

जैसे : पढ़ना, खाना, पकाना, नाचना, खेलना, कूदना, हँसना, रोना आदि।

### अभ्यास :

निम्न लिखित वाक्यों में से क्रिया के नीचे रेखा खींचो:

1. राधा दौड़ती है।
2. कृष्ण माखन खाते हैं।
3. रोनील गेंद खेलता है।
4. बच्चे रेवा नदी में तैर रहे हैं।
5. तिमोदी घोड़े पर बैठा है।

## क्रिया विशेषण (Adverb)

जो शब्द क्रिया की विशेषता बताते हैं, उन्हें क्रियाविशेषण कहते हैं।

जैसे : आज, कल, जल्दी, धीरे, तेज, कभी-कभी, आगे, पीछे, बहुत आदि।

## अभ्यास :

निम्न लिखित वाक्यों में से क्रियाविशेषण के नीचे रेखा खींचो:

1. घोड़ा तेज़ दौड़ रहा है।
2. मेरे पिताजी कभी-कभी पड़ोसी के घर यंगोना पीते हैं।
3. नानी धीरे-धीरे कपड़ा धो रही है।
4. मुन्ना बिल्ली से बहुत प्यार करता है।
5. पानी अधिक उबल गया है।

## काल (Tense)

क्रिया के जिस रूप से उसके होने या करने के समय का बोध हो उसे काल कहते हैं।

काल के तीन भेद होते हैं :

1. वर्तमानकाल (Present Tense) :  
जैसे : ललिता पढ़ती है।
2. भूतकाल (Past Tense) :  
जैसे : ललिता पढ़ती थी।
3. भविष्यत्काल (Future Tense) :  
जैसे : ललिता पढ़ेगी।

## अभ्यास :

निम्न लिखित वाक्यों के बगल में सही काल लिखो

### उदाहरण :

आजकल अधिक गर्मी पड़ रही है। (वर्तमानकाल)

1. सुनीला नदी में नहा रही थी। \_\_\_\_\_
2. नायब साहब गाना गा रहे हैं। \_\_\_\_\_
3. मालती कल नान्दी जाएगी। \_\_\_\_\_
4. जून में किसान गन्ना काटेंगे। \_\_\_\_\_
5. बच्चे मैदान में गेंद खेल रहे हैं। \_\_\_\_\_

## LESSON NOTE

**SCHOOL:** Lovu Sangam School  
**SUBJECT:** Basic Science Worksheet Week 7

**YEAR:** 8

<b>STRAND</b>	Energy
<b>SUB STRAND</b>	Forces
<b>CONTENT LEARNING OUTCOME</b>	<ul style="list-style-type: none"><li>- Investigate and identify how different mediums such as oil/ water/ air affect the weight and mass of object.</li><li>- Identify the useful and the harmful effects of friction.</li></ul>

### FORCES

**Investigate and identify how different mediums such as oil, water, air affect the weight of mass of objects.**

#### **What are forces?**

- A force can be a Push or Pull.
  - Example 1 – when you push open a door you have to apply force to the door.
  - Example 2 – you will have to apply force to pull open a drawer.
- You cannot see a force but often you can see what it does.
- Forces can also change :
  - The speed of something.
  - The direction it is moving.
  - Its shape.Example an elastic band gets longer if you pull it.

#### **Measuring Forces**

- **A force meter** is used to measure force.
- The unit of force is called **Newton ( N )**.
- Force Meters contain a spring connected to a metal hook. The spring stretches when a force is applied to the hook.
- The bigger the force applied the longer the stretch and the bigger the reading.

#### **Weight, Mass and Gravity**

- Many people confuse Mass and Weight.
- Remember that Weight is a Force and is measured in Newtons.
- Mass is measured in kilograms ( kg ).

#### **Mass**

- The **Mass** of an object is the **amount of matter** or **stuff** it contains.
- Mass is measured in kilograms (kg), or grams (g).
- Example an elephant contains more matter than a mouse so it has a greater mass.
- Remember an object's mass remains the same wherever it is.

#### **Weight**

- Weight is a force caused by gravity.
- The weight of an object is the gravitational force between the object and the Earth.
- The more mass the object has the greater its weight will be.
- Weight is force so it is measured in **Newtons**.
- On the surface of the Earth an object with a **mass of 1kg** has a weight of about **10N**.

#### **Gravity**

- Gravity is a force in all objects that attracts them towards each other.
- Gravitational force increases when:
  - The Masses are bigger
  - The objects are closer
- We are pulled down towards the ground because of gravity.

- The gravitational force pulls in the direction towards the centre of the Earth.
- Gravity only becomes noticeable when there is a really massive object like a moon, planet or stars.

### **Frictional Forces**

- Is felt whenever an object moves against another object.
- These forces act in the opposite directions to the movement.
- Frictions make it harder for the things to move.
- Frictional forces are much smaller on smooth surfaces than on rough surfaces, which is why we slide on ice.

### **Helpful Friction Forces**

1. Friction between our shoes and the floor stop us from slipping.
2. Friction between tyres and the road stop cars from skidding.
3. Friction between the brakes and the wheel help bikes and cars slow down.
4. Friction between the parachute and the air resistance slows down the parachute for safe landing.

### **Parachutes**

- Air resistance is the frictional force air exerted against a moving object.
- As the object moves, air resistance slows it down.
- The large surface area of a parachute increases the amount of air resistance the sky divers encounters, allowing for a slow descent to the ground .
- Air pushes the parachute back up and creates a force opposite to the gravity slowing the skydivers.
- As the divers descends slowly to the Earth, the Push and Pull forces are almost in a balance

### **Unhelpful Frictional Force**

- If you don't lubricate your bike regularly with oil, the friction in the chain and axles increases, making your bike noisy and difficult to pedal.
- When there is a lot of friction between moving parts, energy is lost to the surrounding as heat.

### **Air resistance**

- Air resistance is caused by the frictional forces of the air against the vehicle.
- Bikes, cars and other vehicles experience **air resistance** as they move.
- The faster the vehicle moves, the bigger the air resistance becomes.
- The top speed of a vehicle is reached when the force from the cyclist or engine is balanced by air resistance.

### **Streamlining**

- Streamlining reduces the air resistance on objects.
- Bikes, cars and vehicles are also streamlined and made smooth in shape to make resistance smaller, which allows them to travel further on the same amount of fuel.
- Racing cyclists crouch down low on their bikes to reduce the air resistance on them. This helps them to cycle faster. They also wear streamlined helmets.

### **The Up-thrust Force in Liquid**

- The upward push of the liquid is called the **Up – Thrust Force**.
- There are different types of forces liquids exert on solids.
- Brine being a strong solution of salt water has more Up-Thrust than fresh water.
- Different liquids exert different amounts of up-thrust.

### **Hydrometers**

- Hydrometers are used to measure the '**pushing-up**' power or **up- thrust** of liquids.

- Hydrometers are usually made of glass.
- They are made heavier at the bottom to keep them floating upright in liquids.

### **Uses of Hydrometer**

- **Milk Inspector** – uses hydrometer to test if farmers add water to milk before sending it to factory. It can be caught because adding water to milk changes its pushing up power. Hydrometer will tell the difference between up-thrust in pure milk and diluted milk.
- **Mechanics** – use hydrometers in testing acids in the car batteries. As the battery gets old, the acids change and its pushing up powers gets less. A hydrometer can show whether the battery needs to be recharged or not.

### **LIQUIDS HAVE DENSITIES**

- To compare the weights of substances, it is important that we use equal volumes.
- When we compare the weights of equal volumes of different liquids, we are really thinking about how dense they were.
- We say that brine is denser than water because brine weighs more than an equal volume of water.
- Brine is denser than water, water is denser than oil and oil is denser than kerosene.
- The weight of equal volume order is the same as the pushing up order.
- This shows that more dense liquids can push more strongly than less dense ones.

### **PUTTING SOLIDS IN ORDER**

- Liquids can be put in order in two ways:
  - To be put according to weights of equal volume.
  - To be put in relation to their pushing up order. ( Up-Thrust Force )
- Solids can also be put in order according to their densities and this could determine why some solids sink and why others float in liquids.

### **FLOATING AND SINKING**

Have you learned to swim? Even if learning to swim was easy, you probably found it more difficult to learn how to float. Your body is denser than water, but because your lungs are full of air, you can float. Also the water is pushing you upwards.

- **Submarines**
  - Are made to swim under water but of course they need to come to the surface sometimes.
  - They have **Ballast Tanks** a special tank that controls the depth to which they can go.
  - When the submarines need to sink, the tanks are filled with water and when they need to rise to surface, the water is pumped out and air is pumped in.
- **Fish**
  - Lives in water, need to sink and rise to the surface.
  - They **do not** have **Ballast Tanks** but they have **Bags of air** called **Gas Bladder** inside them.
  - Air passes in and out of the bladder from the blood.
- **Water plants**
  - Water plants have air spaces in their stems that help them float.
  - If you have water hyacinths growing nearby, you could cut open the swollen parts of the leaves and look at the air spaces inside that make them float.
- **Ships**
  - Large ships weigh many thousand tones but they still float.
  - The air filled inside the ships make the ship less dense and floats on water.
  - A boat floats because its weight is balanced by the up-thrust from the water.



## LESSON NOTE

**SCHOOL:** Lovu Sangam School  
**SUBJECT:** Basic Science Worksheet Week 6

**YEAR:** 8

<b>STRAND</b>	Energy
<b>SUB STRAND</b>	Energy Transformation, Use and Conservation.
<b>CONTENT LEARNING OUTCOME</b>	<ul style="list-style-type: none"> <li>- Investigate ways in which energy appliances are used at home and describe safety procedures in using them.</li> <li>- Avoid practices that waste energy and harm life.</li> <li>- Assess sources of non-renewable energy that are limited and appreciate the need to utilize renewable energy sources.-</li> </ul>

**Top 10 Rules for Electric Safety:** To play it safe around your home, just remember the rules for using electricity the right way.

Illustration	Safety tips
	<p><b>1. DON'T plug a bunch of stuff or overload into one outlet or extension cord.</b>            It could damage the electrical system in your house or even cause a fire.</p>
	<p><b>2. Make sure all electric cords are tucked away, neat and tidy to avoid accidents.</b>            Pets and rats might chew on electrical cords, and people might trip and fall.</p>
	<p><b>3. DON'T ever climb the fence around an electrical substation due to high voltage and electrocution.</b>            If a ball or pet gets inside the fence, ask a grown-up to call the electric company - they'll come and get it out for you.</p>
	<p><b>4. DON'T pull an electrical cord from the wall and use phones while lightning is taking place.</b>            Pulling on a cord can damage the appliance, the plug or the outlet.</p>
	<p><b>5. DO look up and look out for power lines before you climb a tree.</b>            The electricity can go right through the tree branch - and right through you</p>
	<p><b>6. Fly your kite far away from power lines or substations.</b>            The kite and the string may conduct electricity - sending it right through you to the ground.</p>
	<p><b>7. Ask a grown-up for help and guide when you need to use something that uses electricity.</b></p>
	<p><b>8. Have a grown-up put safety caps on all unused electrical outlets.</b>            Covering outlets will also help save energy by stopping cold drafts.</p>
	<p><b>9. Remind friends and family members to watch out for power lines</b> when they're using a ladder, chainsaw or other outdoor equipment.</p>
	<p><b>10. Keep electrical stuff far away from water.</b>            Most electrical accidents around the house happen when people use electricity near water.</p>

## ENERGY TRANSFORMATION, USE AND CONSERVATION

### ENERGY TRANSFORMATION

Energy is one of the most important things humans use. We need it for heat, light and for protection. We use energy all the time, probably without even noticing it. Energy may change in form but it can't be made out of nothing and neither can it be destroyed. A power station does not create the electrical energy we use in our homes. The power station changes the chemical energy of the fuel into electrical energy. Instead, we change this energy into another form of energy, such as heat or light.

### ENERGY FROM ONE FORM TO ANOTHER

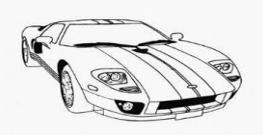
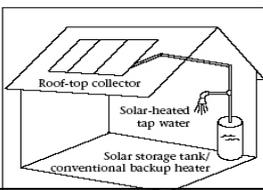
Machines use one form of energy to convert another form of energy like **heat, light, sound and movement**. Modern science is now giving us a much wider range of energy options that we can use in machines, with lower environmental impact and more efficiency. Many home appliances that we use today need energy for proper functioning. A lot of this energy can be saved with enormous environmental and financial benefits if we use them wisely.

#### **Exercise: Energy from One Form to Another**

##### **1. Fill in the blanks**

- a.) Energy can \_\_\_\_\_ into many \_\_\_\_\_.
- b.) An electric bulb converts \_\_\_\_\_ into \_\_\_\_\_ and \_\_\_\_\_.

##### **2. Answer the following questions.**

a.) 	i.) Where does the energy that moves a car come from? _____ ii.) What form of energy can you observe? _____
b.) 	i.) Where does the energy that moves a fan come from? _____ ii.) What form of energy can you observe? _____
c.) 	i.) Where does the energy in a solar water heater come from? _____ ii.) What form of energy can you observe? _____
d.) 	i.) Where does the energy to transmit pictures in television come from? _____ ii.) What form of energy can you observe? _____

##### **3. Conclusion:**

- a.) Chemical energy can be found in \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_ and \_\_\_\_\_.
- b.) Electric energy can be found in any machine that is powered by \_\_\_\_\_.

## TECHNOLOGY AND THE DEMAND FOR ENERGY

The increasing world population has brought an increasing demand for energy. The amount of

fuel needed for cooking, heating and lighting has increased. More machines in use have also meant greater fuel consumption.

In this lesson, you will look at reasons why there is an increasing demand for energy; how new technologies have helped reduce energy costs for consumers; and the advantages of using alternative sources of energy.

### **Non-Renewable Sources (Fossil Fuels)**

Coal, oil and gas are referred to as fossil fuels because they are made from dead and decayed plants and animals. This process takes place over millions of years as layers of mud and sand build up over the animal and plant matter. Time and the pressure of the weight above change it to coal, oil or gas. Fossil fuels are non-renewable sources of energy because when they are used up they cannot be replaced.

1. **Coal:** This is the world's most plentiful fossil fuel. Although less important than oil, coal still supplies almost 30% of the world's commercially traded energy. Coal is mainly burnt in power stations to make electricity and in giant furnaces to make iron and steel. It can also be converted into gas or liquid fuels. South Africa produces its gasoline, and diesel oil from coal.
2. **Oil:** The technical name for the oil that comes from under the ground is “**crude**” oil. By heating, crude oil can be separated into a number of different products, such as petrol, kerosene, diesel fuel, lubricating oils and bitumen. This process also produces substances which are used to make plastics, paints and glues.
3. **Gas:** is formed in the same way as crude oil and trapped between layers of rock. Natural gas is a colourless, odourless mixture of gases made up mainly of methane (CH<sub>4</sub>). Other gases include small amounts of ethane, propane and butane. Gas is also available in bottles as LPG (liquid petroleum gas). It is non-toxic non-corrosive, free of lead and heavier than air. LPG is produced when oil is refined.

**Note:** burning of coal, oil and gas releases carbon dioxide (CO<sub>2</sub>) and oxide of Sulphur (S) and Nitrogen (N) into the atmosphere and contributes to the greenhouse effect.

### **Renewable Sources of Energy**

1. **Solar Energy:** Ultimately most energy comes from the Sun. The food we eat and the wood which is the main fuel for over half the world's population comes from solar energy. The sun keeps the earth's temperature warm enough for life to exist. Even the fossil fuels that energize industrial society are forms of stored solar energy, concentrated over millions of years.
2. **Hydropower:** Hydropower stations have turbines which are connected by pipes below the dam, the higher the altitude difference between the dam and the turbine, the more water pressure in the dam pipes. When the pipes are opened, water rushes past the turbines which start spinning the generators. The more the water pressure the faster the turbines spin and the more electricity is produced.
3. **Wind Energy:** has been used for centuries as an energy source for sailing ships, pumping water and grinding grain. More recently, wind has become an important energy source for generating electricity, especially in remote areas. In many parts of the world it is also part of national electricity supply systems.
4. **Biomass:** Biomass is defined as any organic matter, available on a renewable basis; a

steam turbine can be as simple as cutting or chipping wood for direct combustion for conversion to energy. Forest residues, agricultural crops and waste, wood and wood waste, animal wastes and aquatic plants are all biomass. Biofuels such as ethanol are derived from these biomass feed stocks.

5. **Geothermal:** energy is the heat generated by natural processes beneath the earth's surface. These natural processes include radioactive decay, chemical reactions, friction from the movement of crystal plates and heat present from the earth's formation. Geothermal energy is recovered as steam and hot water. The steam is harnessed to run generators.

### USING ENERGY WISELY

The flow of electrons or electricity through a wire is called electric current. Electrons are very small. Watts are the units in which electric power is measured. Effective lighting in the home makes a big difference to its look, comfort and energy use. It may be possible to reduce your lighting bill by as much as 20% or more by observing some simple housekeeping rules.

**Fluorescent lights (tube lights)** and compact fluorescent lamps are three to five times more efficient than **incandescent lights (bulbs or flood lights)** and should be used in all areas where the lights are used more than a few hours per day (living areas, kitchen, and security lights).

### EXERCISE - We Need More Energy

1. **Complete** the table below, by writing examples of appliances that we use under each heading. Some examples are already given.

Cooking	Entertainment	Cooling	Transport	Lighting	Cleaning	Heating
<i>Gas stove</i>		<i>Fan</i>			<i>Vacuum cleaner</i>	

2. Classify the appliances in 1 above, according to their sources of energy.  
*Complete the table.*

Electricity	Gas	Solar	Biomass	Petrol
<i>Fan</i>	<i>Stove</i>			

3. **Renewable and Non-Renewable Energy Sources**  
*Complete the following.*

- a.) Energy which is irreplaceable is called \_\_\_\_\_.
- b.) Energy which is replaceable is called \_\_\_\_\_.
- c.) the unit of energy is \_\_\_\_\_ and the unit of power is \_\_\_\_\_.
- d.) \_\_\_\_\_ is a pollution free and renewable source of energy.
- e.) What will happen to fossil fuel resources if we keep using them?  
\_\_\_\_\_
- f.) Another name for bulb or flood light is \_\_\_\_\_. Turn off \_\_\_\_\_ when \_\_\_\_\_ using them. \_\_\_\_\_ light uses less energy