

1075 LOVU SANGAM SCHOOL

YEAR 7

ENGLISH

WORKSHEET #5

NAME: \_\_\_\_\_

**Strand:** Writing and Shaping

**Sub Strand:** Language Features and Rules

**CLO:** Examine and use structurally sound sentence in a meaningful and functional manner.

**TOPIC: GRAMMAR- ADJECTIVES.**

- An **adjective** is a word that modifies, or describes, a noun or a pronoun. They tell what kind , which ones , how many , what position or what colour.  
**Example:** **Ripe** apples fell from the tree.
- A **predicate adjective** follows a linking verb and modifies the subject of the sentence.  
**Example:** The apples are **red** and **shiny**.
- The present participle and past participle verb forms are sometimes used as adjectives and as predicate adjectives. **Example:** We heard **alarming** news. The table is **painted**.
- **A** and **an** are **indefinite articles**, adjectives that refer to one of a general group of people, places, things, or ideas. **'The'** is a definite article that identifies specific people, places, things, or ideas.
- **Proper adjectives** are formed from proper nouns. Like proper nouns, they begin with capital letters. Example: **Irish** lace **French** perfume.

**ACTIVITY**

i. Identifying Adjectives. **Underline the adjectives** in each sentence. **Underline the articles twice.**

**Rewrite proper adjectives in the space provided, adding capital letters where needed.**

1. The brown shoes may be old and worn, but they are also comfortable. \_\_\_\_\_
2. Solemn guards stand outside important foreign buildings. \_\_\_\_\_
3. When I am cold, I like nestle cocoa and cookies. \_\_\_\_\_
4. If I feel warm, I enjoy a tall glass of cool juice. \_\_\_\_\_
5. Bill plays the electric guitar, but he wants to learn Spanish classical guitar. \_\_\_\_\_
6. A sandy desert can be hot, dry, and silent. \_\_\_\_\_

**Dictionary, Library and Mass Media**

**DICTIONARY**

An **entry** is all the information about an entry word.

A **definition** is the meaning of a word. Many words have more than one definition. Each definition is numbered.

A definition is often followed by an **example** that shows how to use the word.

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

**hurl** ('herl')*v* - to throw something with great force. The boy hurled a stone at the mad boy

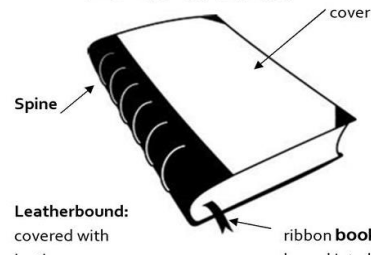
1. ('herl') after the main entry , shows  
 A. usage      B. spelling      C. tense      D. pronunciation
2. What does the letter 'v' stand for? \_\_\_\_\_

**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? \_\_\_\_\_

Study the Structures of a Book given below

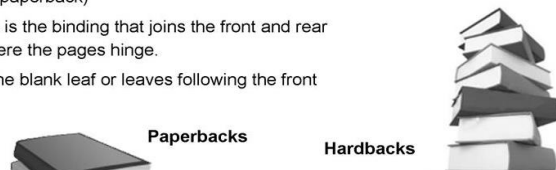
# Books



**Binding:** hardbound (hardback) or softcover (paperback)

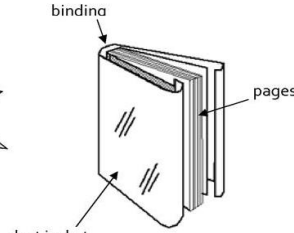
**The spine** is the binding that joins the front and rear covers where the pages hinge.

**Flyleaf:** The blank leaf or leaves following the front endpaper



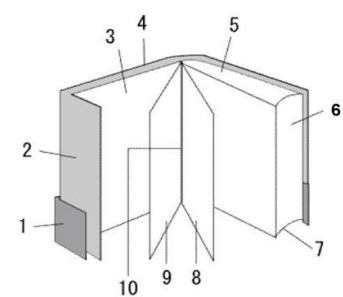
**Leatherbound:** covered with leather.

**Best Seller:** a book that sells rapidly in large numbers



**Structure of a book**

1. Belly band
2. Flap
3. Endpaper
4. Book cover
5. Top edge
6. Fore edge
7. Tail edge
8. Right page, recto
9. Left page, verso
10. Gutter



**Fiction:** a work of imagination, not true.

**Non Fiction :** real, a true account.

**MASS MEDIA**

1. Name a type of media that brings you news.  
 \_\_\_\_\_
2. Give an advantage of television over radio.  
 \_\_\_\_\_

**SUBJECT: MATHS**

**NAME: \_\_\_\_\_**

**YEAR: 7**

|                                 |   |
|---------------------------------|---|
| <b>STRAND</b>                   | NUMBER AND NUMERATION   |
| <b>SUB- STRAND</b>              | DECIMALS  |
| <b>CONTENT LEARNING OUTCOME</b> | Explain and order decimals in their place and value and calculate decimals with the mathematical operations to more than 2 decimal places |

## MULTIPLICATION AND DIVISION OF DECIMAL NUMBERS BY 100 AND 1000

### *Achievement Indicator*

❖ Multiply and divide decimals by 100 and 1000 and by another decimal number

**Multiplying and Dividing by 10, 100 and 1000**

|        |      |     |    |   |   |                |                 |                  |
|--------|------|-----|----|---|---|----------------|-----------------|------------------|
| 10 000 | 1000 | 100 | 10 | 1 | ● | $\frac{1}{10}$ | $\frac{1}{100}$ | $\frac{1}{1000}$ |
|        |      |     |    |   | ● |                |                 |                  |

**Multiplying** | **Dividing**

x 10 digit moves 1 place to the right

x 100 digit moves 2 places to the right

x 1000 digit moves 3 places to the right

÷ by 10 digit moves 1 place to the left

÷ by 100 digit moves 2 place to the left

÷ by 1000 digit moves 3 places to the left

When dividing a decimal you can place extra zeros to the decimal.  
You can place extra zeros before the whole numbers number part too.

### ACTIVITY

1. 1. **Multiply the decimals numbers by 10, 100 and 1000**

a)  $1.25 \times 10 =$  \_\_\_\_\_

b)  $9.125 \times 100 =$  \_\_\_\_\_

c)  $0.12 \times 1000 =$  \_\_\_\_\_

d)  $34.1 \div 10 =$  \_\_\_\_\_

e)  $745.67 \div 100 =$  \_\_\_\_\_

f)  $4781 \div 1000 =$  \_\_\_\_\_

# MULTIPLICATION AND DIVISION OF DECIMAL NUMBERS

Examples:

|                 | Multiplication of Decimals  | Examples  | Division of Decimals  | Examples  |
|-----------------|---|---|---|---|
| By whole number | <ul style="list-style-type: none"> <li>Multiply as whole numbers</li> <li>Place decimal point such that the result has same number of decimal places as multiplicand</li> </ul>                 | $2.35 \times 5$<br>$235 \times 5 = 1175$<br>(2 places)<br>$= 11.75$ | <ul style="list-style-type: none"> <li>Divide as whole numbers</li> <li>Place decimal point such that the result has same number of decimal places as the dividend</li> </ul>             | $2.35 \div 5$<br>$235 \div 5 = 47$<br>(2 places)<br>$= 0.47$                                  |
| By Decimal      | <ul style="list-style-type: none"> <li>Multiply as whole numbers</li> <li>Place the decimal point such that result has decimal places equal to sum of decimal places of the operands</li> </ul> | $2.51 \times 7.2$<br>$251 \times 72$<br>(3 places)<br>$= 18.072$    | <ul style="list-style-type: none"> <li>Multiply dividend and divisor by a multiple of 10 to convert divisor into whole number</li> <li>Divide the dividend by the whole number</li> </ul> | $4.75 \div 2.5$<br>Multiply by 10<br>$47.5 \div 25$<br>$47.5 \div 25$<br>(1 place)<br>$= 1.9$ |

NOTE: 1. When multiplying decimals, the number of figures after the decimal point in the answer must be the same as the total number of figures that come after the decimal points in the question.  
 2. To divide by a decimal, we change the question so that we are dividing by a whole number.

1. a)  $7 \times 0.892 =$  \_\_\_\_\_ b)  $5 \times 3.16 =$  \_\_\_\_\_ c)  $0.376 \times 13 =$  \_\_\_\_\_

d)  $2.43 \times 75 =$  \_\_\_\_\_ e)  $6.800 \times 246 =$  \_\_\_\_\_ f)  $6 \times 87.2 =$  \_\_\_\_\_

2. a)  $1.2 \times 0.892 =$  \_\_\_\_\_ b)  $3.9 \times 3.16 =$  \_\_\_\_\_ c)  $0.376 \times 0.9 =$  \_\_\_\_\_

d)  $2.43 \times 5.8 =$  \_\_\_\_\_ e)  $6.800 \times 2.46 =$  \_\_\_\_\_

3. a)  $8.35 \div 5 =$  \_\_\_\_\_ b)  $0.9 \div 3 =$  \_\_\_\_\_ c)  $3.6 \div 9 =$  \_\_\_\_\_

1075 LOVU SANGAM SCHOOL

YEAR 7

HEALTHY LIVING

WORKSHEET #5 NAME: \_\_\_\_\_

**Strand:** Building Healthy Relationships

**Sub Strand:** Resilience and Proactive behaviour

**CLO:** Explore and state skills needed to prevent harmful situations.

**Topic: Preventing Harmful Situations from Happening**

**Rape**

- **Rape** is a type of sexual assault usually perpetrated against a person without that person's consent.
- The act may be carried out by physical force, abuse of authority or against a person who is incapable of valid consent, such as one who is unconscious, incapacitated, or below the legal consent.
- The term rape is sometimes used as **sexual assault**.

**Effects of Rape**

- Victims of rape can be severely **traumatized**.
- Disruption of concentration, sleeping patterns and eating habits.
- Pregnancy
- Disease transmission.

**Scenario 3 – Trauma**

- Trauma is an emotional response someone has to extremely negative event.
- Severe trauma can interfere with an individual's ability to live a normal life
- In some cases help is needed to treat the stress and dysfunction caused by the traumatic event.

**Main sources of Trauma**

- Rape
- Domestic violence
- Natural disasters
- Severe illness or injury
- The death of a loved one
- Witnessing an act of violence

**Emotional Symptoms of Trauma**

- Denial
- Anger
- Sadness
- Emotional outbursts
- Depression

**Physical Symptoms of Trauma**

- Paleness
- Lethargy
- Fatigue
- Poor concentration

- Anxiety
- Mood swings
- Racing heartbeat

**Short term and long term effects of trauma**

- Short term and long term effect of trauma can be similar
- Long term trauma effects are more severe
  - In short term mood changes are fairly normal after a trauma, but if the shifts in mood lasts longer than few weeks then long term effect can occur.

**Scenario 4 – Stress management**

- Stress is what we feel when we think we’ve lost control of events.
    - We experience stress almost anytime we come across something unexpected or something that frustrates our goal.
    - When a threat is small our reaction is small and we often do not notice it among the many other distractions of stressful situations
    - Stress can cause / lead to severe health problems such as anxiety etc,
- Stress management techniques could be sought from the professional psychiatrist.

**ACTIVITY**

1. What is rape? List 3 effects of rape.

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2. Define ‘trauma’ and write down 2 causes of trauma.

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3. Use the words in the box to fill in the blanks.

|        |         |      |        |            |
|--------|---------|------|--------|------------|
| trauma | suicide | rape | stress | depression |
|--------|---------|------|--------|------------|

- The term \_\_\_\_\_ is sometimes used as sexual assault.
- People sometimes experience \_\_\_\_\_ when there is a death in the family.
- Stress can lead to severe health problems such as \_\_\_\_\_
- An emotional symptom of trauma is \_\_\_\_\_

- e. The act of taking your own life on purpose is known as \_\_\_\_\_
- f. \_\_\_\_\_ is what we feel when we think we've lost control of events.

**LOVU SANGAM SCHOOL**

**Year / Level: 7**

**Subject: HINDI**

**Worksheet – Home package 5**

NAME: \_\_\_\_\_

|                                 |  |
|---------------------------------|--|
| <b>Strand</b>                   | Reading and Viewing  |
| <b>Sub Strand</b>               | Socio Cultural Context and Situations  |
| <b>Content Learning Outcome</b> | Examine and explain how texts present various cultural, religious values attitudes and beliefs for a particular purpose and audience |

इस अंश को ध्यान से पढ़कर नीचे दिए गए प्रश्नों के उत्तर लिखिए ।

विनोद एक समझदार बालक था । वह अपने मामा के घर रहता था । वह सातवीं कक्षा में पढ़ता था । वह सदा मीठा बोलता था और दूसरों की सहायता करता था । वह किसी को 'जी' के बिना नहीं बुलाता था । उसकी मामी और पड़ोस की सभी स्त्रियाँ सदा उसके शिष्टाचार की प्रशंसा किया करती थीं ।

- 5 एक दिन विनोद अपने मित्रों के साथ गली में खेलने गया । वह एक अच्छा खिलाड़ी था । उसको आया देख दोनो टीमों के खिलाड़ी खुशी से शोर मचाने लगे और उसे अपनी टीम में लेने के लिए झगड़ा करने लगे । पास ही मकान में एक साधु जी रहते थे । उनकी बारह वर्ष की लड़की बहुत बीमार थी । साधुजी ने विनोद के आने से पहले लड़कों को शोर न करने के लिए कहा था । विनोद को इस बात का पता नहीं था । अब तो साधु जी बहुत बिगड़े । वे डंडा लेकर लड़कों को पीटने के लिए बाहर आए । साधु जी को क्रोध में डंडे के साथ आता देख बालक इधर-उधर होने लगे ।

- 15 विनोद तुरन्त हाथ जोड़कर साधुजी से बोला, “प्रणाम साधु जी !” साधु जी का आधा गुस्सा बालक के मधुर शब्दों से समाप्त हो गया। शेष आधा गुस्सा तब शांत हुआ जब बालक ने उन से कहा, “साधु जी, आपकी तबियत ठीक तो है। आज आप बहुत परेशान दिखाई देते हैं ।” बालक को प्रणाम का उत्तर ‘जीते रहो बेटा’ कहने के बाद वे बोले, “मेरी बेटी रानी कल से बहुत बीमार है ।”

- 20 इस पर विनोद ने उन्हें विश्वास दिलाया कि अब लड़के वहाँ शोर नहीं करेंगे और कहीं दूर जाकर खेलेंगे । वह बालकों को दूर मैदान में ले गया । वहाँ पर उन्होंने भगवान से साधु जी की बेटा की जिंदगी के लिए प्रार्थना की । इस के बाद वह खेल कर घर लौट आया । विनोद का शिष्टाचार सब बच्चों के लिए एक सीख है ।

- 25 विनोद के इस व्यवहार और बातचीत करने के ढंग को देखकर सब बच्चे बहुत खुश हुए। उन्होंने यह निर्णय किया कि आज से वे बात करने के ढंग में बदलाव लाएंगे और अच्छे आचरण और मधुर बोली बोलने का प्रयास करेंगे। प्यारे बच्चों! मीठी बोली और अच्छे आचरण में वह ताकत है जो हर एक का दिल मोह लेती है। आज से आप भी आपस में मीठी बोली बोलने का प्रयास शुरू कर दीजिए ।



1. विनोद कौन था ? वह एक ----
  - क. लालची लड़का था
  - ख. बुरा आदमी था
  - ग. अनाथ बालक था
  - घ. चतुर बालक था
  
2. वह कहाँ रहता था ? अपने ----
  - क. चाचा-चाची के घर
  - ख. मामा-मामी के घर
  - ग. दादा-दादी के घर
  - घ. मौसा-मौसी के घर
  
3. पड़ोस की स्त्रियाँ विनोद के किस गुण की प्रशंसा करती थी ?
  - क. सिलाई की
  - ख. पढ़ाई की
  - ग. लिखाई की
  - घ. अच्छे आचरण की
  
4. पंक्ति 2 में आए हुए “सहायता” शब्द का अर्थ है -----
  - क. बुराई
  - ख. खोज
  - ग. मदद
  - घ. बदनामी
  
5. विनोद अपने मित्रों के साथ गली में क्यों गया था ?
  - क. नहाने
  - ख. खेलने
  - ग. फल बेचने
  - घ. पेड़ काटने
  
6. विनोद को देखकर दूसरे बालक झगड़ा क्यों करने लगे ?
  - क. अपनी टीम में लेने के लिए
  - ख. अपनी टीम से निकालने के लिए
  - ग. अपने साथ दुकान ले जाने के लिए
  - घ. अपने साथ गाँव ले जाने के लिए
  
7. साधु जी के घर पर कौन बीमार था ?
  - क. उनकी माँ
  - ख. उनका भाई
  - ग. उनकी पुत्री
  - घ. उनका पुत्र
  
8. वे डंडा लेकर बाहर क्यों गए थे ?
  - क. लड़कों से माफी माँगने
  - ख. लड़कों की पिटाई करने
  - ग. लड़कों से झगड़ा करने
  - घ. लड़कों से कुछ पूछने

**1075 LOVU SANGAM SCHOOL**

**YEAR 7**

**SOCIAL SCIENCE**

**WORKSHEET – Home package 5**

NAME: \_\_\_\_\_

|                          |   |
|--------------------------|---|
| STRAND                   | <b>3 Place and Environment</b>  |
| SUB STRAND               | <b>Hazard, Disaster and its socio economic and environmental impact</b>   |
| CONTENT LEARNING OUTCOME | <b>Investigate how disaster affects Pacific Island countries and discuss means and ways pre season preparedness</b> |

**LESSON NOTES**

**NATURAL DISASTERS IN THE PACIFIC**

- A year-round **warm tropical climate** is one of the main aspects of the Pacific that attracts visitors from all over the world.
- However, the hot weather, humidity and its South Pacific location could also lead to dangerous and life-threatening natural disasters, including cyclones, droughts, earthquakes and tsunamis.

**Cyclones**

- A **cyclone** is a **tropical type of hurricane** and is the main and most wide-spread natural disaster in the Pacific region.
- Severe tropical storms bring about **massive rainfall and high winds**.
- Plus the **low pressure** may cause the sea to rise as much as 2 meters (6.5 feet).
- Destruction of houses, other infrastructure and gardens, loss of vegetation and flooding, land erosion, coastal inundation, destruction of coral reefs and sea grass beds, and pollution of water supplies are all effects of cyclones.

**Floods**

- Flooding in the Pacific can be a result of **cyclones**, though it can also occur during the country's rainy season between **November and April**.
- The Pacific also has **wet and dry zones**, so naturally the wet zones, which are mostly located in the southeast region of the islands, are more prone to experience heavy rain and flooding.

**Exercise**

1. Explain how the people and the environment are vulnerable to natural disasters?

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2. List how will you prepare yourself before the disaster?

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3. List how will you react during the disaster?

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4. List how will you assist/clean up your area after the disaster?

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## Droughts

- The areas that are **driest** (also called the **dry zones**) are the lower islands and **leeward** areas of the Pacific Islands.
- These areas are also most **vulnerable** to droughts.
- Besides affecting water supplies, droughts can have a **negative impact** on agriculture, which plays an important role in the Pacific economy.

## Earthquakes and Tsunamis

- The Pacific Islands are **seismically active**, which means that they are prone to experience earthquakes.
- The greatest **danger** of earthquakes, especially severe ones, is the damage and destruction of houses and other infrastructure, as well as natural structures such as trees.
- Sometimes earthquakes can also cause **tsunamis**.
- **A tsunami is a series of large waves that can be caused by a sudden motion of the ocean floor.**
- Besides an earthquake, the sudden motion can also be the result of an **underwater landslide** or a **powerful volcanic eruption**.

## EXERCISE 1

1. What are Droughts?

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2. What causes Droughts?

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3. Name three things that can happen during a Earthquake?

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4. What are some of the things you can do to protect yourself from a Tsunami?

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5. Explain how a Tsunami occurs?

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**1075 LOVU SANGAM SCHOOL**

**YEAR 7**

**VOSA VAKA VITI**

**WORKSHEET #5**

**NAME:** \_\_\_\_\_

**Matana:** Na i Vakarau Vakavanua

**Matana Lailai:** Vanua kei na Veika Bula.

**CLO:** Na veiwekanitaki ni veika bula kei na noda bula vakaitaukei.

**NAI TUTU VAKAVANUA**

- **Yavusa** - Na vanua ka ra vakoro vata kina na veiwase tamata se uma tamata ka ra sa mai cokovata oqo me ra lewe ni dua na yavusa.
- **Mataqali** – Oqo e dua na uma tamata ka ra dua tani mai vei ira na kena vo ena loma ni yavusa.
- **Tokatoka** - Oqo e dua na mata veitacini e ratou toka vata ga ena dua na tiki ni qele.
- **Vanua** - E ra na cokovata e vica na Yavusa e sa na qai dua na Vanua ka vica vata na vanua me dua na Matanitu.
- **Turaga** – Oqo na mataqali ka digitaki mai kina na turaga ni yavusa.
- **Sauturaga** - Sa i ratou oqo na i ka rua ni turaga ni Yavusa, ka ratou cola na Sau vua na Turaga. E ratou dau vakatulewa e na kena vakagunuvi e dua me sa buli me Turaga ni Yavusa se Vanua.
- **Matanivanua** - Oqo na mataqali ka gusu ni Turaga kina vanua ka gusu tale ga ni vanua ki vua na Turaga. E ra dau rabeta na medra yaqona na turaga.
- **Bati** - Turaga ni valu ka liga ni wau. O ira oqo era dau vala ena gauna ni valu ni butobuto ka ra dau taqomaka na nodra turaga kei na nodra vanua.
- **Mataisau** - Sa i ira oqo e ra dau liutaka na cakacaka me vaka na tara vale, ta waqa, cakacaka ni liga me vaka na takona, tanoa kei na veika tale e so. E ra kena dau na sivilivi. E nodra i liuliu ko Rokola.
- **Gonedau** - Oqo o ira na kai wai ka ra kena dau na soko kei na qoli. E ra dau qoliva na kedra ika na turaga. E nodra i liuliu ko Tunidau.
- **Bete** - E ra dau tu ga ena Burekalou o ira na bete ka nodra i tavi na qaravi kalou. E ra dau vakacabora na i soro se i madrali vei ira na veikalou ni Yavusa.

### **NA I TOVO VAKAVANUA ME BALETA NA TEITEI**

- **Na Oco** – Na magiti e dau vakarautaki me kedra ko ira na veivuke e na kena caka e dua na i teitei se tara vale.
- **Na Sevu** - Oqo na kakana ni yabaki ka dau kau taumada vua na Turaga me laki sevu vua.
- **Na Drawe** - Na vua ni qele me vaka na dalo, uvi, kawai se kumala ka dau cavu ga mai ka laki biu ena nona valenikuro na turaga ka da teitei tiko ena nona tiki ni qele.
- **Na Uvi Ni Vanua** - Oqo na uvi e dau lavaki vakavanua me kumuni me nona I tei na turaga.

### **NA VEIKA E DAU CAKA VEI IRA NA GONEDAU**

- **Na i Cula ni Mata ni Ika**  
Oqo na tabua ka vakacabori vei ira na goneda me baleta na ika e rawa mai.
- **Na i Vakacabe ni Ika**  
Na tabua ka caka vei ira na goneda me baleta na nodra cabe mai wai

### **NA VEIKA E DAU CAKA ME BALETA NA WAQA**

- **Na i Luva ni Valu**  
Na i yau ka dau sala tu e na tolo ni kau ka vakacabori vei ira na Liga Ni Kau.
- **Na i Vakata**  
Ni sa bale oti na kau me ta kina na waqa, e sa na laki caka na i vakata vei ira na matai me ra laki taya na waqa.
- **Na i Kere se i Tago**  
Oqo na veika e dau solia ko ira ka ra vakayagataka e dua na waqa, me i dole se vakavinavinaka ni nodra vakayagataka na waqa ko ya.

### **CAKACAKA LAVAKI**

Vakacuruma na veivosa e dodonu e na vanua e lala koto.

1. E ra dau rabeta na medra yaqona na turaga ko ira na \_\_\_\_\_
2. Na tabua e dau vakacabori vei ira na goneda me baleta na ika e rawa mai e vakatokai me \_\_\_\_\_
3. E ra kena dau na qoli ko ira na \_\_\_\_\_
4. Na mata veitacini ka ratou toka vata ga e na dua na tiki ni qele e vakatokai me i \_\_\_\_\_
5. Na i vakavinavinaka ni vakayagataki ni waqa e vakatokai me i kere se i \_\_\_\_\_
6. E ra kena dau na sivilivi na \_\_\_\_\_
7. Na kakana ni yabaki ka dau kau taumada vua na turaga e i \_\_\_\_\_
8. Na \_\_\_\_\_ e kedra ko ira na veivuke e na kena caka e dua na i teitei se tara vale.
9. E ra dau tu ga e na Burekalou ko ira na \_\_\_\_\_
10. Na i yau ka dau sala tu e na tolo ni kau ka vakacabori vei ira na Liga Ni Kau e vakatokai me i \_\_\_\_\_.

**1075 LOVU SANGAM SCHOOL**

**YEAR 7**

**BASIC SCIENCE**

**WORKSHEET – Home package 5**

NAME: \_\_\_\_\_

|                                 |                                     |
|---------------------------------|-------------------------------------|
| <b>Strand</b>                   | 3 Energy                            |
| <b>Sub Strand</b>               | 3.1 Energy Source and Transfer      |
| <b>Content Learning Outcome</b> | Identify different forms of energy. |

**Lesson Notes**

**ENERGY SOURCE AND TRANSFER S**

The energy sources are as follows:

- i. Solar [sun]
- ii. Wind
- iii. Water [hydropower]
- iv. Geothermal
- v. Biomass [organic matter]
- vi. Fossil fuels

**FORMS OF ENERGY**

Some forms of energy are as follows:

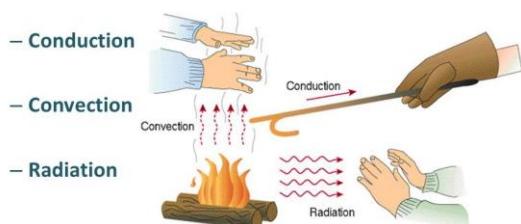
- i. Heat
- ii. Electrical
- iii. Sound
- iv. Solar

**Heat Energy**

- Heat is transferred from a region of higher temperature to one of lower temperature.
- cold object will absorb heat from its surroundings, causing its temperature to rise.
- warm object will lose heat to its surroundings causing its temperature to fall.

**How is Heat Transferred?**

There are THREE ways heat can move.

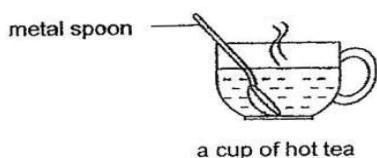


**Methods of Heat Energy Transfer**

- **Conduction** is the transfer of heat energy by
  - Between particles of objects in direct contact
- **Convection** is the transfer of heat energy by
  - the movement of fluids(gas or liquid)
  - convection currents due to hot fluid rising and cold fluid sinking
- **Radiation** is the transfer of heat energy by
  - electromagnetic waves
  - does not involve the movement of matter

**Conduction**

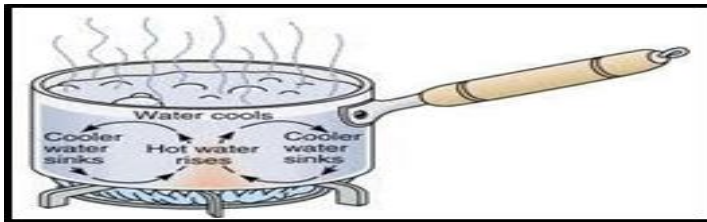
- Conduction transfers heat within a body or between two bodies that are touching.
- Energy is transferred by direct contact



- A material that allows heat to travel through it is called a **conductor**.
- A material that does not conduct heat or electricity easily is called an **insulator**.

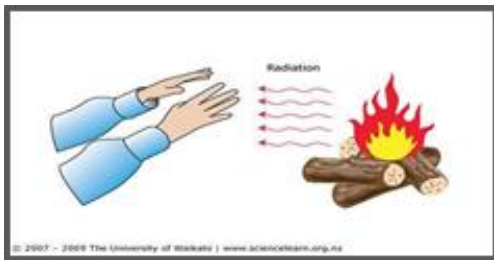
**ii. Convection**

- is the transfer of heat from one fluid to another by the movement of the fluid.
- Energy is transferred by mass motion of molecules
- Water in a tea kettle is heated by convection.
- When a fluid is heated, its density decreases.
- Water at the bottom heats up and goes up.
- Cold water moves down and the cycle continues until water starts to boil.



**iii. Radiation**

- Energy is transferred by electromagnetic radiation.
- All objects radiate energy and heat.
- Radiation coming from hotter objects is more intense than that coming from a cooler object.
- An object good at radiating heat is referred to as a **black body**.
- **Sun** and the **Earth** are excellent radiators, and as a result, both are considered black bodies.



Activity:

A. True or False

1. Energy can be transferred. \_\_\_\_\_
2. The sun is an excellent insulator. \_\_\_\_\_
3. A blackbody is an object that does not conduct heat easily. \_\_\_\_\_
4. Radiation involves transfer of heat energy by the movement of fluids. \_\_\_\_\_
5. Conduction involves direct contact between particles of objects. \_\_\_\_\_

B. Write down three ways of heat transfer.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

C. List two good conductors and two insulators of heat in the table below.

| Conductors | Insulators |
|------------|------------|
|            |            |
|            |            |