



Care Package

PRIMARY 4

Curriculum Information

Welcome to Grader Learning Centre!

Dear Parents,

Thank you for your interest in the AGrader Programme. This **Care Package** is specially compiled to showcase to you the AGrader curriculum for Primary 4.

There are **2 Parts** to this Care Package:

PART I: Curriculum Information	i. Subject Structure SMART Sheets Every subject's curriculum is carefully structured to allow AGrader's students to fully grasp school concepts. Have a close look at our Subject Structure SMART Sheets to fully understand how your child will benefit and improve with a structured learning plan! 😊 ii. What's So Special About AGrader's Worksheets? The Unique Learning Points of the AGrader Curriculum section will explain to you what sets the AGrader Curriculum apart from other tuition providers. 😊
PART II: Worksheets & Annotated Solutions	i. Excerpts from AGrader's Worksheets (For Students) These are snippets of our ACTUAL worksheets, specially chosen from our worksheets to showcase the unique parts of our curriculum. (Do let your child try them out! 😊) ii. Annotated Solutions (For Parents) These are the EXACT annotated solutions that ALL our teachers use to prepare for their lessons. They are carefully planned and created by our in-house Curriculum Team to help our teachers prepare as well as to ensure that every child receives accurate information. (You may use this to go through the answers with your child after he/she has tried the questions! 😊)

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WHAT IS SO SPECIAL About the AGrader Curriculum?

The AGrader Curriculum is specially written and crafted by our in-house Curriculum Team of subject experts, each with years of experience and deep understanding of the MOE syllabus.

At AGrader, we strive to continually improve and innovate our curriculum materials and methodologies to help our students improve their grades.

Below is a summary of some of the **Unique Learning Points** that put AGrader's curriculum materials ahead of others.

English



Latest Current Affairs/News
Adapted into Cloze and
Comprehension Passages

Apart from acquiring the necessary skills to tackle exam components, our English Programme also focuses on equipping our students with general knowledge.



- ✓ Improve general knowledge and awareness of current affairs.
- ✓ Be more prepared for non-narrative passages with consistent exposure to it.
- ✓ Imagine seeing the news content from just last month in your child's worksheets!

Mathematics



Well Structured Notes with
Exercises in Increasing Difficulty
to Help Students Learn in a
“Step-by-Step” Approach

A carefully structured and well thought-out curriculum helps students gain confidence through a scaffolded learning approach & consistent practice.



- ✓ Improve ability to identify similar types of questions and applying the correct heuristic method to solve it.
- ✓ Reduce careless mistakes.
- ✓ Improve speed of tackling questions.



Science



Multiple-Choice & Open-Ended Questions with Tips



Coloured Cheat-Sheets & Concept Maps to Summarise Topics



Life Application Examples Linked to Science Concepts

Learning Science is made easy with interesting study materials, a scaffolded teaching approach and consistent practices on answering techniques to score!



- ✓ Guided questions with tips help students to gain confidence faster in new topics.
- ✓ Coloured summarised study materials appeal to students and it makes revising much easier!
- ✓ Life application examples enhance students' application of science concepts to questions not commonly seen in Past-Year Papers.

Creative Writing



Skills-Based Approach



Model Compositions with "Structural Breakdown and Analysis"



Compilation of Useful Vocabulary Words & Phrases by Emotions

The key to improve in writing is to be familiar with the skills and composition structure, along with good command in English.



- ✓ "Skills-based" worksheets allow students to improve in specific areas of their writing.
- ✓ "Structure Analysis" of model compositions is actually "reverse engineering" the way other good writers write their compositions and learning the very same skills from them.
- ✓ Revision is made easier when the useful list of words to score in their writing is all compiled on a single sheet of paper!



Primary English

Oral Communication Component (15%)

Reading Aloud (1 Passage)

Stimulus-Based Conversation (1)



Weekly Spelling

Students are tested on commonly misspelt/misused words weekly to build up on their vocabulary.



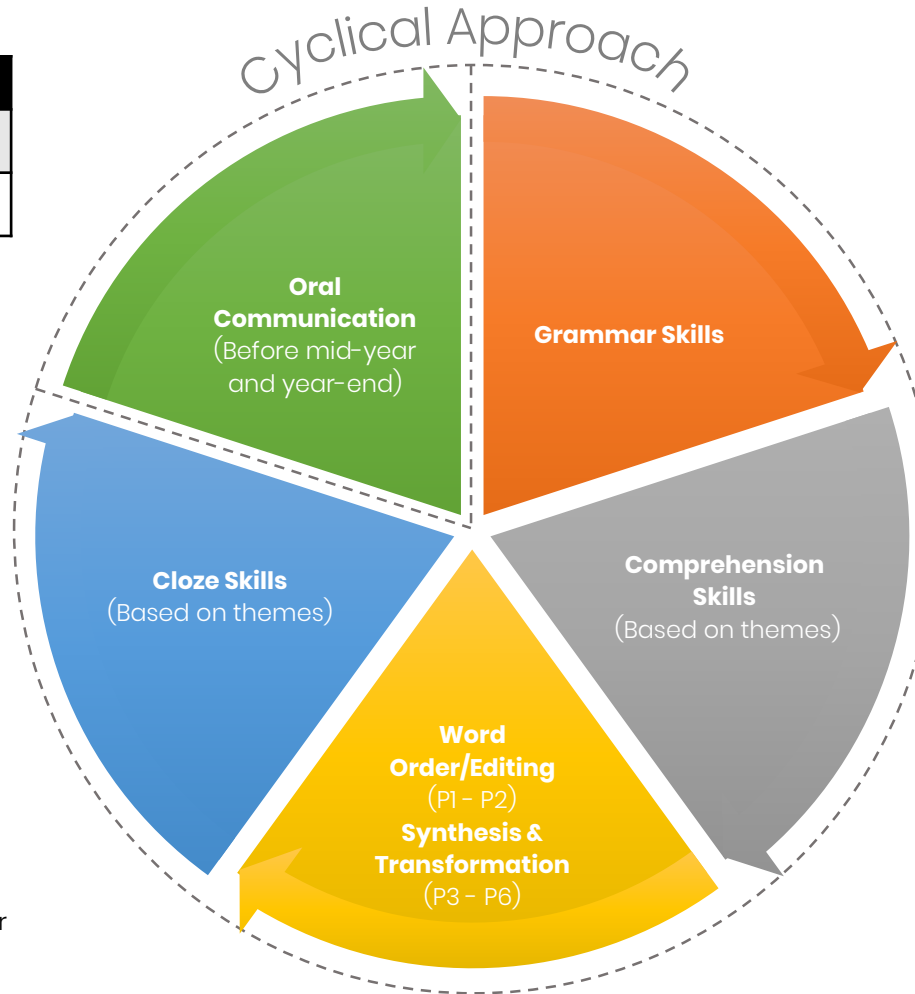
Revision Papers

Prior to the examinations, students will get to try revision papers consisting of mixed topics of what they have learnt earlier



Diagnostic Tests

Diagnostic tests are held twice a year (mid-year and end-year) to allow students to have a more complete revision of the syllabus and to practise time management.



AGrader's Primary English curriculum is delivered in a cyclical approach, which gives our students a holistic exposure to the English components tested in Paper 2, **according to the latest MOE syllabus.**

Worksheets Specially Designed According to Exam Format in Paper 2 (47.5%)

Booklet A:
MCQs in Grammar, Vocabulary, Cloze, Visual Text

Booklet B:
Open-ended in Editing, Cloze, Synthesis and Transformation, Comprehension



Primary Mathematics

AGrader's Primary Mathematics curriculum is specially designed using a step-by-step approach structure, according to the latest MOE syllabus.

Worksheets Specially Designed According to Exam Format

Section A: Multiple Choice Questions

Section B: Short-Answer Questions

Section C: Problem-Sums

Notes

Building up fundamentals on a new topic

Short Exercises

Based on concepts covered in notes

MCQ

Step-by-step approach to tackle basic questions (Section A)

Problem Sums

Problem sums that test the similar heuristic will be bundled together for the students to practise (Section C)

Topical Review

Mixture of questions from both sections to round up the topic (Section A, B and C)



Revision Papers

Prior to the examinations, students will get to try revision papers consisting of mixed topics of what they have learnt earlier



Diagnostic Tests

Diagnostic tests are held twice a year (mid-year and end-year) to allow students to have a more complete revision of the syllabus and to practise time management.



Primary Science

Notes

Detailed notes for conceptual knowledge

Experiments

Hands-on experiments to help students remember science concepts better

MCQ + Free Response (With Tips)

Scaffold students' learning with tips

MCQ + Free Response (w/o Tips)

Allow students to apply what they have learnt

Topical Review

Mixture of questions from both sections to round up the topic

AGrader's Primary Science curriculum is specially designed using a step-by-step approach structure, **according to the latest MOE syllabus.**

Worksheets Specially Designed According to Exam Format

Section A: Multiple Choice Questions

Section B: Free Response Questions



Revision Papers

Prior to the examinations, students will get to try revision papers consisting of mixed topics of what they have learnt earlier

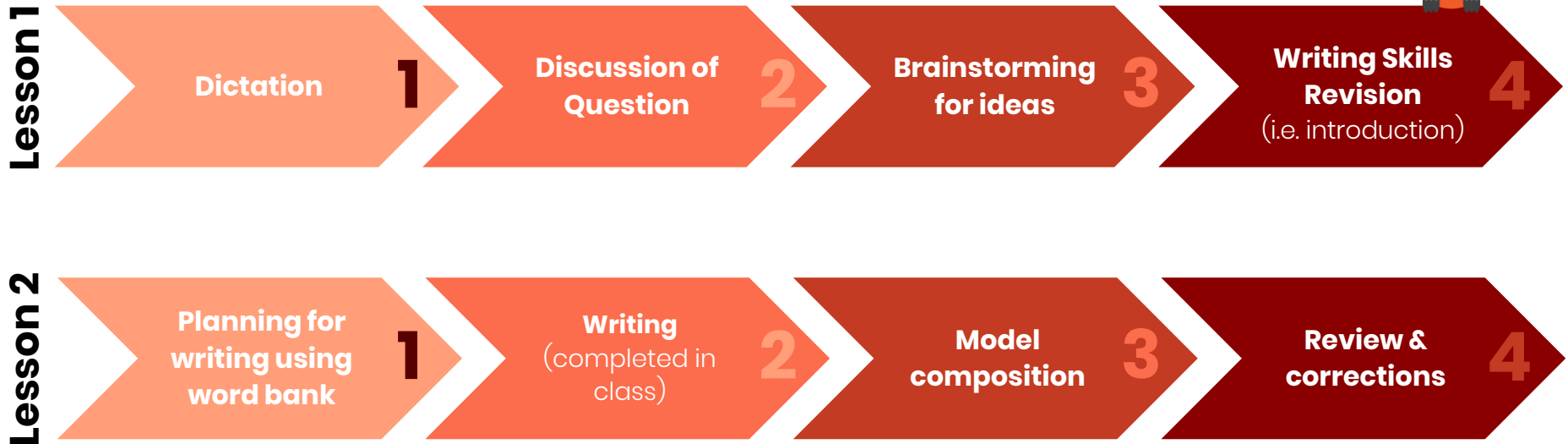


Diagnostic Tests

Diagnostic tests are held twice a year (mid-year and end-year) to allow students to have a more complete revision of the syllabus and to practise time management.



Primary Creative Writing



Diagnostic Tests

Diagnostic tests are held twice a year (mid-year and end-year) to allow students to have a more complete revision of the syllabus and to practise time management.

AGrader's Primary Creative Writing curriculum is specially designed using a thematic approach, allowing students to be exposed to a variety of themes in writing

Specially Designed for Paper 1 (27.5%)

Situational Writing (15 Marks)

Continuous Writing (40 Marks)



Care Package

PRIMARY 4

Worksheets & Annotated Solutions

(For Students)

(For Parents)

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P4 English

Grammar Skills

Synthesis and Transformation

Name: _____

Date: _____


Homework:	Corrections:
Page Number(s)	Page Number(s)
	<i>Please correct and return</i>
Remarks:	



Relative Pronouns in Synthesis & Transformation

What or who they refer to	Relative pronouns	Examples
Refer to people	who	This is the girl who sits beside me in class.
	whom	This is the girl whom I sit beside in class. (Note: The sentence follows the format: Person/people + whom + person/people)
	whose	Sarah, whose sister is a prefect, sits beside me in class.
Refer to things	which	The book which is about outer space belongs to my brother.
	that	The book that is about outer space belongs to my brother.
Refer to places	where	This is the place where our music lessons are held.



Who	Examples
<ul style="list-style-type: none"> - Used to link two sentences - To give additional information about a person or people mentioned earlier - When used as a relative pronoun, <i>who</i> always comes after the person or people it refers to - Use a verb after 'who' 	<p>1) Bill Gates is one of the richest men in the world. He gives a lot of money to charity.</p> <p>Bill Gates, <u>who</u> is one of the richest men in the world, gives a lot of money to charity.</p> <p>2) Tom likes soccer. He is my best friend.</p> <p>Tom, <u>who</u> is my best friend, likes soccer.</p> <p><i>Note: Sometimes, we put commas within the combined sentences. However, we put commas only when we are giving additional information that is not essential to our understanding of the <u>person or the people being described</u>.</i></p> <p><i>If we remove the clause between the commas, the remaining words should form a full sentence. E.g. Tom, <u>who</u> is my best friend, likes soccer. → Tom likes soccer.</i></p> <p><i>This is applicable to all other pronouns such as whom, which, whose and where.</i></p> <p><i>Remember to insert a pair of commas or none at all. <u>Do not use only one comma.</u></i></p> 

Exercise 1

For each question, rewrite the given sentence(s) using the words provided. Your answer must be in one sentence. The meaning of your sentence must be the same as the given one(s).

1. Rayne pays little attention in class. He is easily distracted.

Rayne, **who** is easily distracted, _____



2. Kathy is different from her sister. Kathy is kind.

_____ who

3. I like Mr Evans. He is my Biology teacher.

_____ who

4. Oliver is going to visit his niece. His niece keeps a lot of ornamental fish in Malaysia.

_____ who

5. John bought the tomato soup. He is my classmate.

_____ who



Whose	Examples
<ul style="list-style-type: none"> - To show possession - Whose can be used to refer to people or things. - Whose is always put after the person or people it refers to. - Look out for the noun which carries the apostrophe 's' 	<p>1) The man is extremely outgoing. His wife is a famous actress.</p> <p>The man <u>whose</u> wife is a famous actress is extremely outgoing.</p> <p>2) I bought the cat. The tail of the cat is very long.</p> <p>I bought the cat <u>whose</u> tail is very long.</p>

Exercise 2

For each question, rewrite the given sentence(s) using the words provided. Your answer must be in one sentence. The meaning of your sentence must be the same as the given one(s).

1. The woman runs a hair salon. The woman's daughter is a nurse.

_____ whose **daughter** is a _____

2. Timothy was very sad. His belongings had been destroyed in the fire.

_____ whose _____

3. The lady is a popular actress and has a dog. It came in first in a dog show.

_____ whose _____



4. I love listening to the song. The singer of the song is a Brazilian.

_____ whose

Which	Examples
<ul style="list-style-type: none">- When which is used to refer to non-humans, which always comes after the animals or things it refers to.- Additional information about the animals or things comes after which.	<p>1) The building will be preserved. The building is at least seventy years old.</p> <p>The building, which is at least seventy years old, will be preserved.</p> <p>2) I love the cat. It drinks a lot of milk.</p> <p>I love the cat which drinks a lot of milk.</p>

Exercise 3

For each question, rewrite the given sentence(s) using the words provided. Your answer must be in one sentence. The meaning of your sentence must be the same as the given one(s).

1. The letter was written by the mayor. It was found in the storeroom of the library.

_____ which was found _____

2. My wallet was stolen. I bought it in China.

_____ which





P4 Mathematics

Topic: Fractions

Name: _____

Date: _____

Homework:	Corrections:
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Remarks:	



Fraction of a Set

Fractions such as $\frac{2}{3}$ can also be represented as 2 out of 3 equal parts.

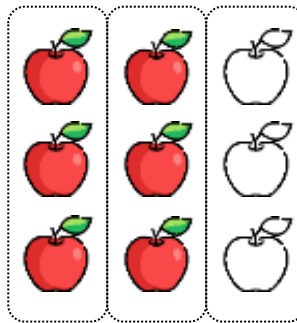
- **2 out of 3 apples are red.**

$\frac{2}{3}$ of the apples are red.



- **2 out of 3 groups are red.**

$\frac{2}{3}$ of the apples are red.



$\frac{2}{3}$ of a set means 2 out of 3 of the equal groups.

From the diagram above, 6 out of 9 apples are red.

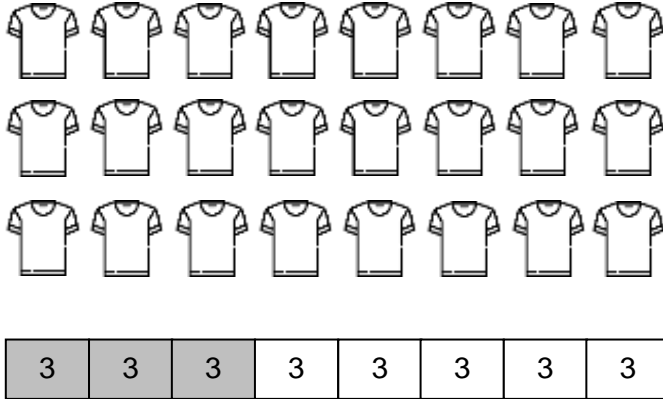


$$\frac{6}{9} = \frac{2}{3}$$

Example 1

Jess bought 24 shirts. She gave away $\frac{3}{8}$ of the shirts.
How many shirts did she give away?

Solution:



Put the shirts into 8 equal groups.

Each group represents $\frac{1}{8}$ of the shirts.

$$8 \text{ units} = 24$$

$$\begin{aligned} 1 \text{ unit} &= 24 \div 8 \\ &= 3 \end{aligned}$$

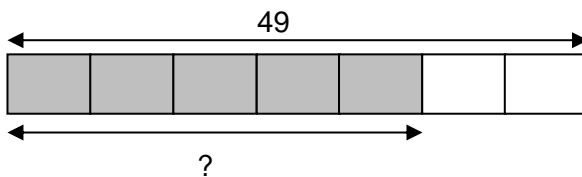
$$\begin{aligned} 3 \text{ units} &= 3 \times 3 \\ &= 9 \end{aligned}$$

Jess gave away **9** shirts.

Example 2

Find the value of $\frac{5}{7}$ of 49.

Solution:



$$7 \text{ units} = 49$$

$$\begin{aligned} 1 \text{ unit} &= 49 \div 7 \\ &= 7 \end{aligned}$$

$$\begin{aligned} 5 \text{ units} &= 5 \times 7 \\ &= 35 \end{aligned}$$

So, $\frac{5}{7}$ of 49 is **35**.





Exercise

- 1) There were 36 cupcakes in a box at first. $\frac{1}{3}$ of them were chocolate cupcakes. The rest were strawberry cupcakes. Mother ate 3 of the strawberry cupcakes. How many strawberry cupcakes were left?

Ans: _____

Concept 2: Part-whole Concept

Example

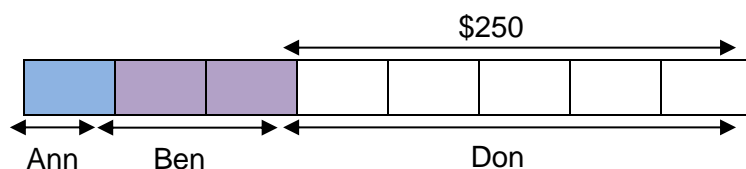
A sum of money was shared among Ann, Ben and Don.

Ann received $\frac{1}{8}$ of the money. Ben received $\frac{1}{4}$ of the money.

Don received the remaining \$250. How much was the sum of money?

Solution:

$$\frac{1}{4} = \frac{2}{8} \text{ (Ben)}$$



$$5 \text{ units} = 250$$

$$\begin{aligned} 1 \text{ unit} &= 250 \div 5 \\ &= 50 \end{aligned}$$

$$\begin{aligned} 8 \text{ units} &= 50 \times 8 \\ &= 400 \end{aligned}$$

The sum of money was **\$400**.

Alternatively, we can look for the fraction of money that Don received.

$$\begin{aligned} \frac{1}{8} + \frac{1}{4} &= \frac{1+2}{8} \\ &= \frac{3}{8} \end{aligned}$$

$$1 - \frac{3}{8} = \frac{5}{8} \text{ (Don)}$$



- 1) Miss Poh had some money. She spent $\frac{1}{4}$ of it on a purse and $\frac{1}{8}$ of it on a shawl. She had \$120 left. How much money did she have at first?

Ans: _____

- 2) There were 336 people at a carnival.

$\frac{1}{3}$ of the people were men, $\frac{1}{4}$ of them were women and the rest were children.

- (a) What fraction of the people at the carnival were children?
(b) If each child ticket cost \$12, how much money was collected from the sale of the child tickets?

Ans: (a) _____

(b) _____

Marked on: _____





P4 Science

Topic: Heat and Temperature

Name: _____

Date: _____

Homework:	Corrections:
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ACQUIRE

Learning objectives- you should be able to:

- ✓ List some common sources of heat.
- ✓ State that the temperature of an object is a measurement of its degree of hotness or coldness.
- ✓ Differentiate between heat and temperature:
 - heat is a form of energy
 - temperature is a measurement of the degree of hotness or coldness of an object
- ✓ Show an understanding that heat flows from a hotter to a colder object until both reach the same temperature.
- ✓ Relate the change in temperature of an object to the gain or loss of heat by the object.

What is Heat Energy?

- Heat is a **form of energy**.
- It **makes things hot** and **changes the temperature** of things.
- We **cannot see heat** but we can **feel it**.
- Heat can cause **changes** in the **state of matter**.
e.g. Ice to water

Sources of Heat

- Anything that gives off heat is a source of heat.
- The **Sun** is our **main source of heat**. It provides the Earth with warmth so that life can survive. The Sun's energy is called **solar energy**.
- Man makes use of Sun's heat to dry wet clothes and to preserve food.



- Heat can also be produced by:

(a) **R**_____ **two things together (from friction)**

Heat is produced when two things are rubbed together due to friction.

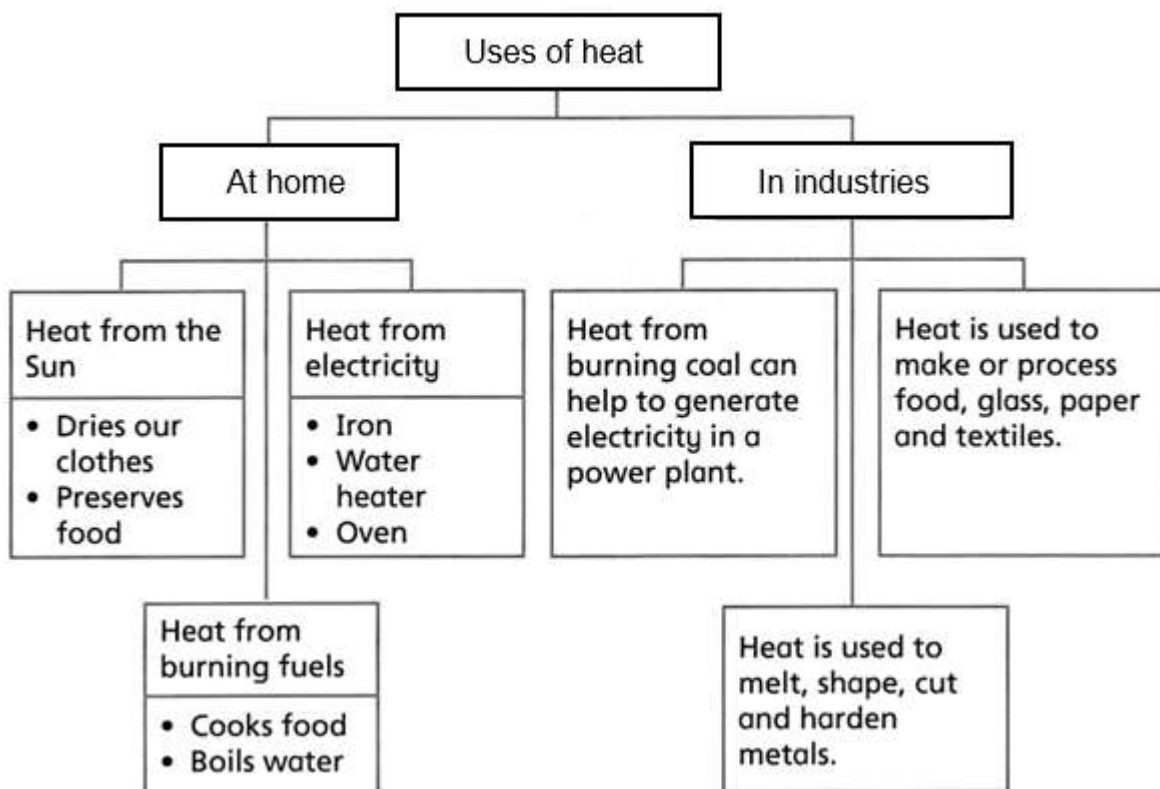
(b) **B**_____ **fuels** such as wood, charcoal, kerosene and gas.

They burn to give off heat and light.

(c) **E**_____

A metal wire gets hot when electricity passes through it. Man has learnt to use electricity to produce heat in electrical appliances such as ovens, irons, hair dryers, kettles and rice cookers.

- Most light sources are also heat sources. For example, candle flames, lamps, light bulbs, etc.
- We use heat in many ways, both at home and in the industries as shown:





UNDERSTAND

Learning objectives:

- ✓ To show the heat transfer between hands and water.

Process Skills:

- ✓ Observing and inferring

Procedure:

- Fill up a basin with cold water, one with warm water and one with tap water.
- Place right hand in warm water and left hand in cold water.
- After 10 seconds, place both hands in tap water. Observe the feeling.



Apparatus:

- 3 basins
- Towel (in case of spillage)

Outcome:

The right hand should feel cold while the left hand should feel warm.

Explanation:

If the skin comes in contact with warm water first, it will **g**_____ from the warm water and becomes warmer. When it is being transferred to the tap water, the warm hand **l**_____ to the tap water thus felt colder. If the skin comes in contact with cold water first, it will **l**_____ to the cold water and becomes colder. When it is being transferred to the tap water, the cold hand **g**_____ from the tap water thus felt warmer.

Conclusion:



For the following questions, choose the correct option and write its number in the bracket.

1. In a restaurant, Mr Soh ordered a cup of cold water while Mrs Soh ordered a cup of warm water.



What happened to the water if Mr and Mrs Soh both left their water untouched on the table for 20min?

(1)	Gained heat	Lost heat	Temperature
Cold water		✓	Decreased
Warm water		✓	Decreased

(2)	Gained heat	Lost heat	Temperature
Cold water	✓		Increased
Warm water	✓		Increased

(3)	Gained heat	Lost heat	Temperature
Cold water	✓		Increased
Warm water		✓	Decreased

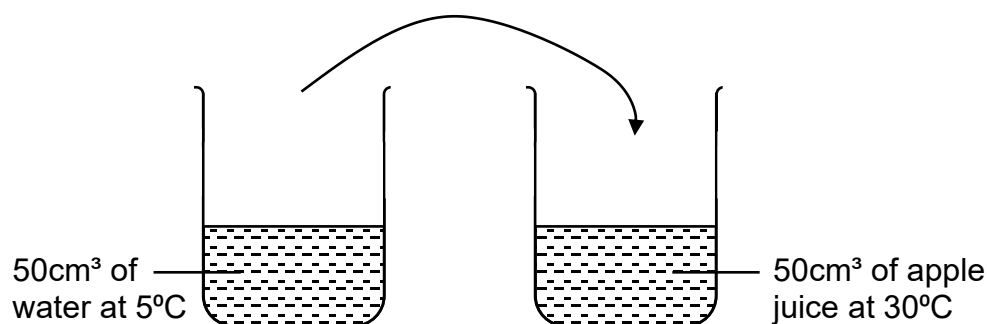
(4)	Gained heat	Lost heat	Temperature
Cold water		✓	Decreased
Warm water	✓		Increased

Concept:

Heat flows from a region of higher temperature to a region of lower temperature.

()

2. The diagram below shows two beakers, each containing 50cm^3 of different liquids at different temperatures.

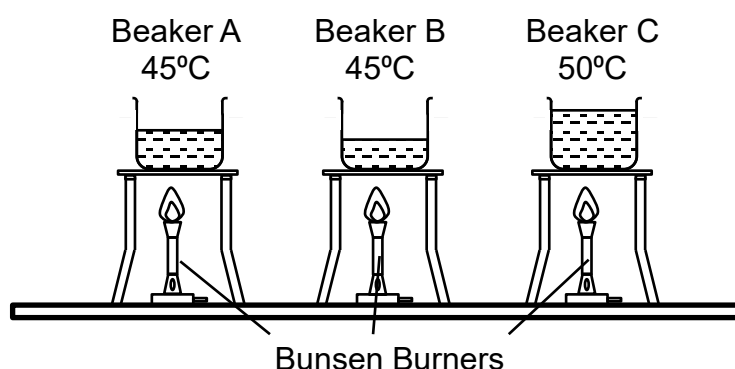


Which of the following statements about the final temperature of both liquids is correct after water is added to apple juice completely.

- (1) The final temperature will decrease and then increase.
- (2) Both liquids have the final temperature of 35°C .
- (3) The final temperature will decrease to 5°C and then to the temperature of the surroundings.
- (4) The final temperature will decrease to a temperature higher than 5°C but lower than 30°C .

()

3. Three glass beakers of similar sizes are filled with different amounts of water heated to different temperatures.



Arrange the beakers in order, starting with the one with the most heat.

- (1) A, C, B
- (2) C, A, B
- (3) B, A, C
- (4) C, B, A

()

Concept:

The water gained heat from the apple juice and apple juice lost heat to the water.

Concept:

The amount of heat energy depends on the amount of water and the temperature of water.



4. Mother left two glasses of boiling water on the table as shown below.



- (a) Assuming that no heat was lost to the cups or to the surroundings, what was the temperature of the liquid in each glass? [1]

Glass X: _____

Glass Y: _____

- (b) In which glass did the liquid contain more heat energy? [1]

- (c) Explain your answer in (b). [2]

- (d) State one variable that must be kept the same in order to conduct a fair test. [1]

a) Concept:

Pure water boils at a fixed temperature.

b) Concept:

Amount of heat energy depends on the volume of water and temperature of water.

c) Keywords:

Greater volume;
more heat energy

d) Hint:

Specific words must be used (e.g. size of containers)





Analysing common process-skill questions

<u>Common questions</u>	<u>How to tackle the question</u>
Conclude from experiment Question	It answers the aim of the experiment, by stating a positive relationship or may require an inference from the results.
Controlled variable Question	Variables are kept constant so that they do not influence the effect of the independent variable on the dependent variable
Questions with “ why ”, “ explain ” and “ give a reason ” without results Questions	Part 1: state what you observe. Part 2: apply conceptual knowledge. Eg: A stone is a solid (observe) and solid has definite volume (conceptual knowledge)



P4 Creative Writing

Theme: A Shopping Trip

Name: _____

Date: _____

Homework:	Corrections:
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A Shopping Trip

Write a story based on the situation in the picture below. Your story should be **at least 120 words** long.

Your composition should be based on one or more of these pictures.



You may make use of the following points in your story:

- Why did the main character go shopping?
- What happened during the shopping trip? Was there anything unusual?

You may also include other relevant points.

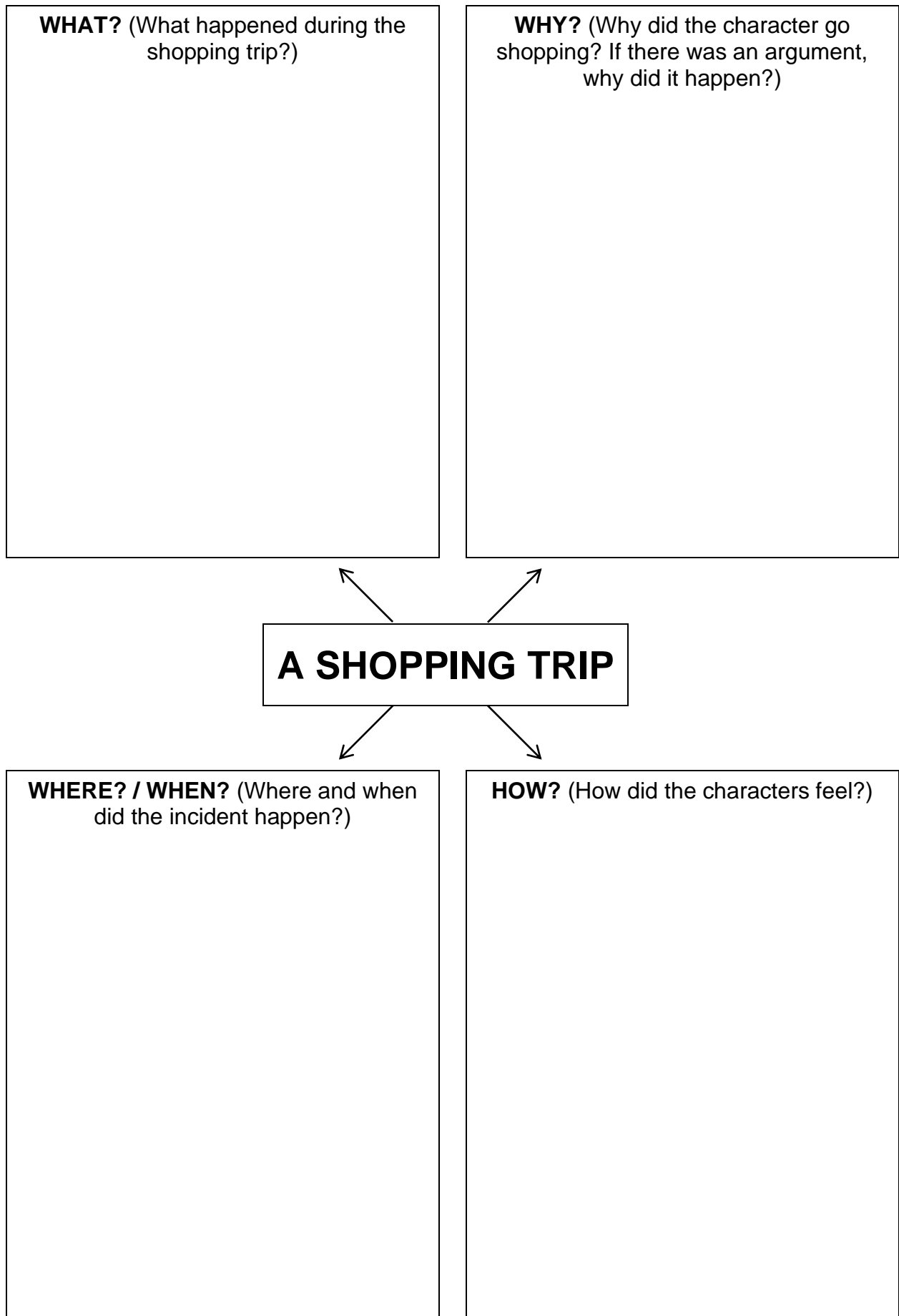


Brainstorming: 5W1H

WHO?

	WHO was involved?	
Name / Role in the Story		
Character Traits		





Vocabulary

Word/Phrase	Meaning
fancied	_____ or _____ something
garment	a piece of _____
generous	_____ than usual or what is needed
hordes	_____ groups of people
luring	_____
opportunity	_____
ripping	making a _____ in something
rummaging	_____ untidily
seams	a line where two pieces of fabric are _____
thronged	flocked or be present in _____ numbers

Model Composition

Fill in the blanks in the following passage with the correct words.

<p>The Great Singapore Sale was here again. Retail outlets across the country took the (1) _____ to advertise special offers to attract customers. City Department Store was no exception. The store had organised a big sale, (2) _____ customers with (3) _____ discounts on consumer electronics, household items and apparel.</p> <p>Bargain hunters (4) _____ City Department Store, eager to grab the best buys. Among the</p>	<p>Introduction: The story begins with a description of the place where the conflict takes place.</p> <p>Rising Action:</p>
--	---



sea of shoppers in the store was Mrs Jenny, **clad** in a branded leather jacket and pants despite the hot weather. Being **fashion-conscious** and on a budget, Mrs Jenny was hoping to take advantage of the reduced prices to update her wardrobe. At the ladies' wear department, there was a huge pile of quality pieces going at seventy percent discount. Mrs Jenny squeezed and pushed through the crowd and joined in the (5) _____ of other ladies eagerly (6) _____ through the assortment of clothes.

Mrs Jenny spotted a dark blue blazer that she (7) _____. She pulled the blazer by the sleeve from the pile of clothing. However, some forceful tugging from the other side made her **stop in her tracks** and she **uttered a growl of annoyance** when she saw the lady beside her gripping the other sleeve of the same (8) _____.

"This belongs to me!" Mrs Jenny demanded, but the lady insisted that she was the one who had taken it first. With neither of the women willing to give in, a **fierce tug of war ensued**. Both sides pulled with so much force that the (9) _____ attaching the sleeves to the blazer started (10) _____. Finally, one of the sleeves came off entirely. Both ladies **gasped in astonishment** and

Characterisation –
From the paragraph, how would you describe Mrs Jenny?

Climax:

This paragraph is a description of how the conflict started.

"uttered a growl of annoyance" –

Show not tell - this shows that Mrs Jenny was irritated.

Meaningful dialogue to show Mrs Jenny's demanding character.

Falling Action:

The blazer was torn while the argument ensued.

"gasped in astonishment" –



immediately dropped the garment, pretending that nothing had happened. Fortunately for them, the people around them had been too engrossed in shopping to notice their childish quarrel.

Now that neither of them could have the blazer, they walked away hurriedly before the sales assistant could discover that they had damaged the garment. They did not dare linger a moment longer – not even to inspect the other goods on sale. “Great Singapore Sales, not so great anymore,” grumbled Mrs Jenny as she decided to head home for the day.

They were shocked as their actions has caused the blazer to be torn.

Conclusion:

Both parties walked away from the scene now that none of them wished to have the torn blazer.



Word Bank

Phrases to describe a busy/crowded place (using the 5 senses)

- the cold air swept across my face, leaving a refreshing sensation
- teeming with shoppers ceaselessly thronging the passages between the shops
- bustling with activity
- people in colourful attire, bright lights from the stores, balloons hanging from the ceiling and shiny tinsel all added to the Christmas atmosphere
- music blaring from the stores
- non-stop chatter of crowds was deafening
- parents with small children tagging along / pushing strollers with young babies who had fallen asleep peacefully inside
- place was packed like sardines and there was hardly any space to move

Phrases related to a quarrel

- steam was practically coming out of her ears
- tempers flared and voices blared
- vehement argument
- balled his hands into tight, seething fists
- uttered a growl of annoyance
- red with fury
- in a fit of anger





P4 English

Grammar Skills

Synthesis and Transformation

Name: _____

Date: _____

Homework:	Corrections:
Page Number(s)	Page Number(s)
	<i>Please correct and return</i>
Remarks:	

Relative Pronouns in Synthesis & Transformation

What or who they refer to	Relative pronouns	Examples
Refer to people	who	This is the girl who sits beside me in class.
	whom	This is the girl whom I sit beside in class. (Note: The sentence follows the format: Person/people + whom + person/people)
	whose	Sarah, whose sister is a prefect, sits beside me in class.
Refer to things	which	The book which is about outer space belongs to my brother.
	that	The book that is about outer space belongs to my brother.
Refer to places	where	This is the place where our music lessons are held.

Who	Examples
<ul style="list-style-type: none"> - Used to link two sentences - To give additional information about a person or people mentioned earlier - When used as a relative pronoun, who always comes after the person or people it refers to - Use a verb after 'who' 	<p>1) Bill Gates is one of the richest men in the world. He gives a lot of money to charity.</p> <p>Bill Gates, who is one of the richest men in the world, gives a lot of money to charity.</p> <p>2) Tom likes soccer. He is my best friend.</p> <p>Tom, who is my best friend, likes soccer.</p> <p><i>Note: Sometimes, we put commas within the combined sentences. However, we put commas only when we are giving additional information that is not essential to our understanding of the person or the people being described.</i></p> <p><i>If we remove the clause between the commas, the remaining words should form a full sentence. E.g. Tom, who is my best friend, likes soccer. → Tom likes soccer.</i></p> <p><i>This is applicable to all other pronouns such as whom, which, whose and where.</i></p> <p><i>Remember to insert a pair of commas or none at all. <u>Do not use only one comma.</u></i></p>



Exercise 1

For each question, rewrite the given sentence(s) using the words provided. Your answer must be in one sentence. The meaning of your sentence must be the same as the given one(s).

1. Rayne pays little attention in class. He is easily distracted.

Note: Use a verb after 'who'

Rayne, **who** is easily distracted, pays little attention in class.

2. Kathy is different from her sister. Kathy is kind.

Kathy, _____ who

is kind, is different from her sister.

3. I like Mr Evans. He is my Biology teacher.

I like Mr Evans _____ who

is my Biology teacher.

4. Oliver is going to visit his niece. His niece keeps a lot of ornamental fish in Malaysia.

Oliver is going to visit his niece _____ who

keeps a lot of ornamental fish in Malaysia.

5. John bought the tomato soup. He is my classmate.

John, _____ who

is my classmate, bought the tomato soup.

Whose	Examples
<ul style="list-style-type: none"> - To show possession - Whose can be used to refer to people or things. - Whose is always put after the person or people it refers to. - Look out for the noun which carries the apostrophe 's' 	<p>1) The man is extremely outgoing. His wife is a famous actress.</p> <p>The man whose wife is a famous actress is extremely outgoing.</p> <p>2) I bought the cat. The tail of the cat is very long.</p> <p>I bought the cat whose tail is very long.</p>

Exercise 2

For each question, rewrite the given sentence(s) using the words provided. Your answer must be in one sentence. The meaning of your sentence must be the same as the given one(s).

1. The woman runs a hair salon. The woman's daughter is a nurse.

belongs to

The woman, whose daughter is a nurse, runs a hair salon.

2. Timothy was very sad. His belongings had been destroyed in the fire.

Timothy, whose belongings had been destroyed in the fire, was very sad.

3. The lady is a popular actress and has a dog. It came in first in a dog show.

The lady, whose dog came in first in a dog show, is a popular actress.

4. I love listening to the song. The singer of the song is a Brazilian.

I love listening to the song whose singer is a Brazilian.

Which	Examples
<ul style="list-style-type: none"> - When which is used to refer to non-humans, which always comes after the animals or things it refers to. - Additional information about the animals or things comes after which. 	<p>1) The building will be preserved. The building is at least seventy years old.</p> <p>The building, which is at least seventy years old, will be preserved.</p> <p>2) I love the cat. It drinks a lot of milk.</p> <p>I love the cat which drinks a lot of milk.</p>

Exercise 3

For each question, rewrite the given sentence(s) using the words provided. Your answer must be in one sentence. The meaning of your sentence must be the same as the given one(s).

1. The letter was written by the mayor. It was found in the storeroom of the library.

The letter, which was found in the storeroom of the library, was written by the mayor.

Additional information about the object after 'which'

2. My wallet was stolen. I bought it in China.

My wallet, which I bought in China, was stolen.



P4 Mathematics

Topic: Fractions

Name: _____

Date: _____

Homework:	Corrections:
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Please correct and return	

Fraction of a Set

Fractions such as $\frac{2}{3}$ can also be represented as 2 out of 3 equal parts.

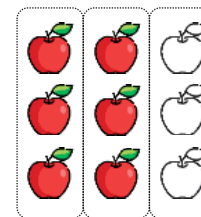
- 2 out of 3 apples are red.

$\frac{2}{3}$ of the apples are red.



- 2 out of 3 groups are red.

$\frac{2}{3}$ of the apples are red.



$\frac{2}{3}$ of a set means 2 out of 3 of the equal groups.

From the diagram above, 6 out of 9 apples are red.

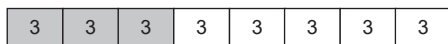


$$\frac{6}{9} = \frac{2}{3}$$

Example 1

Jess bought 24 shirts. She gave away $\frac{3}{8}$ of the shirts.
How many shirts did she give away?

Solution:



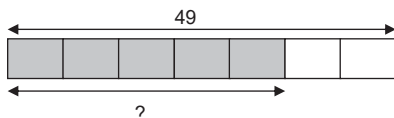
$$\begin{aligned} 8 \text{ units} &= 24 \\ 1 \text{ unit} &= 24 \div 8 \\ &= 3 \\ 3 \text{ units} &= 3 \times 3 \\ &= 9 \end{aligned}$$

Jess gave away **9** shirts.

Example 2

Find the value of $\frac{5}{7}$ of 49.

Solution:



$$\begin{aligned} 7 \text{ units} &= 49 \\ 1 \text{ unit} &= 49 \div 7 \\ &= 7 \\ 5 \text{ units} &= 7 \times 5 \\ &= 35 \end{aligned}$$

So, $\frac{5}{7}$ of 49 is **35**.



Put the shirts into 8 equal groups.

Each group represents $\frac{1}{8}$ of the shirts.



Exercise

There were 36 cupcakes in a box at first. $\frac{1}{3}$ of them were chocolate cupcakes.
The rest were strawberry cupcakes. Mother ate 3 of the strawberry cupcakes.
How many strawberry cupcakes were left?

$$3 \text{ units} = 36$$

$$\begin{aligned} 1 \text{ unit} &= 36 \div 3 \\ &= 12 \rightarrow \text{Chocolate} \end{aligned}$$

$$\begin{aligned} \text{Strawberry (At first)} &\rightarrow 36 - 12 \\ &= 24 \end{aligned}$$

$$\begin{aligned} \text{Left} &\rightarrow 24 - 3 \\ &= 21 \end{aligned}$$

Ans: **21**

Concept 2: Part-whole Concept

Example

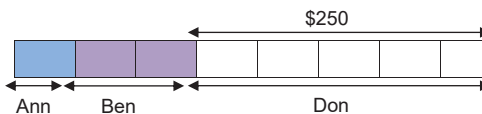
A sum of money was shared among Ann, Ben and Don.

Ann received $\frac{1}{8}$ of the money. Ben received $\frac{1}{4}$ of the money.

Don received the remaining \$250. How much was the sum of money?

Solution:

$$\frac{1}{4} = \frac{2}{8} \text{ (Ben)}$$



$$\begin{aligned} 5 \text{ units} &= 250 \\ 1 \text{ unit} &= 250 \div 5 \\ &= 50 \\ 8 \text{ units} &= 50 \times 8 \\ &= 400 \end{aligned}$$

Alternatively, we can look for the fraction of money that Don received.

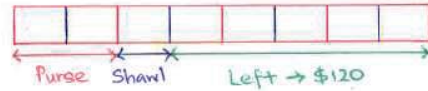
$$\begin{aligned} \frac{1}{8} + \frac{1}{4} &= \frac{1+2}{8} \\ &= \frac{3}{8} \end{aligned}$$

$$1 - \frac{3}{8} = \frac{5}{8} \text{ (Don)}$$



The sum of money was **\$400**.

- 4) Miss Poh had some money. She spent $\frac{1}{4}$ of it on a purse and $\frac{1}{8}$ of it on a shawl. She had \$120 left. How much money did she have at first?



$$5 \text{ units} = \$120$$

$$1 \text{ unit} = \$120 \div 5 \\ = \$24$$

$$8 \text{ units} = \$24 \times 8 \\ = \$192 //$$

Ans: \$192

- 7) There were 336 people at a carnival.

$\frac{1}{3}$ of the people were men, $\frac{1}{4}$ of them were women and the rest were children.

(a) What fraction of the people at the carnival were children?

(b) If each child ticket cost \$12, how much money was collected from the sale of the child tickets?

$$\text{Men and Women} \rightarrow \frac{1}{3} + \frac{1}{4} \\ = \frac{7}{12}$$

$$(a) \text{ Children} \rightarrow 1 - \frac{7}{12} \\ = \frac{5}{12} //$$

$$12 \text{ units} = 336$$

$$1 \text{ unit} = 336 \div 12 \\ = 28$$

$$5 \text{ units} = 28 \times 5 \\ = 140$$

(b) Money (child tickets) $\rightarrow 140 \times \$12$ Ans: (a) \$1680
 = \$1680 // (b) \$1680



P4 Science

Topic: Heat and Temperature

Name: _____

Date: _____

Homework:	Corrections:
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ACQUIRE

Learning objectives- you should be able to:

- ✓ List some common sources of heat. → Sun, fire, candle flame etc
- ✓ State that the temperature of an object is a measurement of its degree of hotness or coldness. → accurate
- ✓ Differentiate between heat and temperature:
 - heat is a form of energy
 - temperature is a measurement of the degree of hotness or coldness of an object
- ✓ Show an understanding that heat flows from a hotter to a colder object until both reach the same temperature. → decrease in temperature
- ✓ Relate the change in temperature of an object to the gain or loss of heat by the object. → Increase in temperature

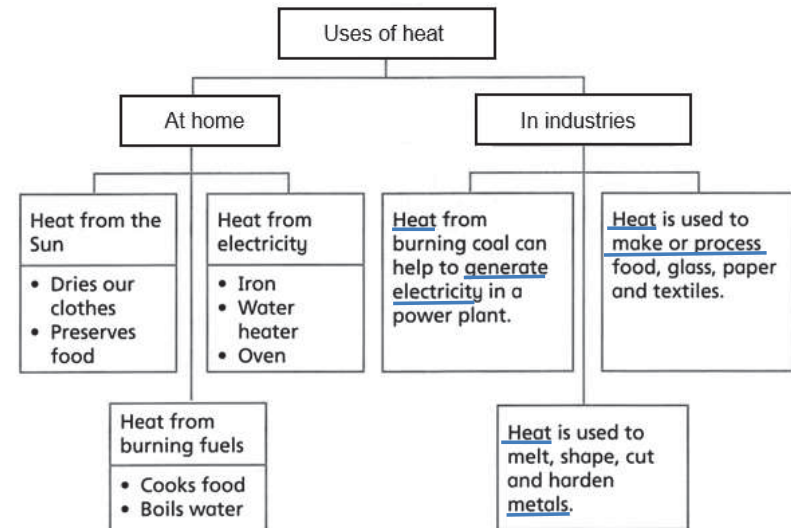
What is Heat Energy?

- Heat is a form of energy.
- It makes things hot and changes the temperature of things. → gain heat → increase
→ lose heat → decrease
- We cannot see heat but we can feel it.
- Heat can cause changes in the state of matter.
e.g. Ice to water → necessary for evaporation / condensation

Sources of Heat

- Anything that gives off heat is a source of heat.
- The Sun is our main source of heat. It provides the Earth with warmth so that life can survive. The Sun's energy is called solar energy. → of light as well
- Man makes use of Sun's heat to dry wet clothes and to preserve food. → evaporation

- Heat can also be produced by:
 - (a) Rubbing two things together (from friction) → 2 surfaces in contact
Heat is produced when two things are rubbed together due to friction.
 - (b) Burning fuels such as wood, charcoal, kerosene and gas.
They burn to give off heat and light.
 - (c) Electricity
A metal wire gets hot when electricity passes through it. Man has learnt to use electricity to produce heat in electrical appliances such as ovens, irons, hair dryers, kettles and rice cookers.
- Most light sources are also heat sources. For example, candle flames, lamps, light bulbs, etc.
- We use heat in many ways, both at home and in the industries as shown:





UNDERSTAND

Learning objectives:

- ✓ To show the heat transfer between hands and water.

Process Skills:

- ✓ Observing and inferring

Procedure:

- Fill up a basin with cold water, one with warm water and one with tap water.
- Place right hand in warm water and left hand in cold water.
- After 10 seconds, place both hands in tap water. Observe the feeling.



Apparatus:

- 3 basins
- Towel (in case of spillage)

Outcome:

The right hand should feel cold while the left hand should feel warm.

Explanation:

If the skin comes in contact with warm water first, it will gain heat from the warm water and becomes warmer. When it is being transferred to the tap water, the warm hand lose heat to the tap water thus felt colder. If the skin comes in contact with cold water first, it will lose heat to the cold water and becomes colder. When it is being transferred to the tap water, the cold hand gain heat from the tap water thus felt warmer.

Conclusion:

Heat travels from a hotter to a colder region.

For the following questions, choose the correct option and write its number in the bracket.

1. In a restaurant, Mr Soh ordered a cup of cold water while Mrs Soh ordered a cup of warm water.



Mr Soh's water:
50ml of water at 10 °C

Mrs Soh's water:
50ml of water at 60 °C

What happened to the water if Mr and Mrs Soh both left their water untouched on the table for 20min?

no additional heat

(1)	Gained heat	Lost heat	Temperature
Cold water		✓ X	Decreased X
Warm water		✓ ✓	Decreased ✓

(2)	Gained heat	Lost heat	Temperature
Cold water	✓ ✓		Increased ✓
Warm water	✓ X		Increased X

(3)	Gained heat	Lost heat	Temperature
Cold water	✓ ✓		Increased ✓
Warm water		✓ ✓	Decreased ✓

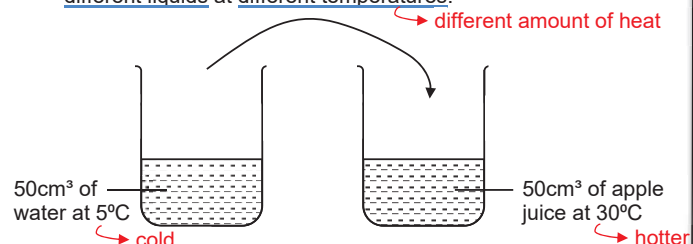
(4)	Gained heat	Lost heat	Temperature
Cold water		✓ X	Decreased X
Warm water	✓ X		Increased X

Concept:

Heat flows from a region of higher temperature to a region of lower temperature.

(3)

2. The diagram below shows two beakers, each containing 50cm^3 of different liquids at different temperatures.



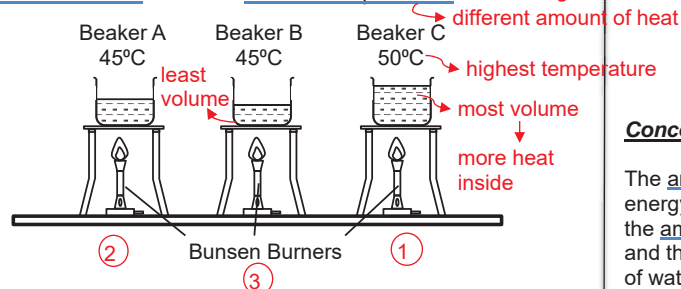
Which of the following statements about the final temperature of both liquids is correct after water is added to apple juice completely.

heat travels from hotter region to colder region

- (1) The final temperature will decrease and then increase. F X
- (2) Both liquids have the final temperature of 35°C . F X
- (3) The final temperature will decrease to 5°C and then to the temperature of the surroundings. F X
- (4) The final temperature will decrease to a temperature higher than 5°C but lower than 30°C . T ✓

heat will be transferred until it reaches a balance (4)

3. Three glass beakers of similar sizes are filled with different amounts of water heated to different temperatures.



Arrange the beakers in order, starting with the one with the most heat.

highest temperature
most volume of water

- (1) A, C, B
- (2) C, A, B
- (3) B, A, C
- (4) C, B, A

(2)

Concept:

The water gained heat from the apple juice and apple juice while the apple juice lost heat to the water.

temperature should not be added up

Concept:

The amount of heat energy depends on the amount of water and the temperature of water.

4. Mother left two glasses of boiling water on the table as shown below.



- (a) Assuming that no heat was lost to the cups or to the surroundings, what was the temperature of the liquid in each glass? [1]

no decrease in temperature

boiling point of water

Glass X: 100°C [0.5m]

Glass Y: 100°C [0.5m]

- (b) In which glass did the liquid contain more volume more heat energy? [1]

Glass Y. [1m]

- (c) Explain your answer in (b). [2]

volume → heat energy

Glass Y had a greater volume of liquid [1m] thus

needed more heat energy to heat it to the same

temperature as the liquid in glass X. [1m]

- (d) State one variable that must be kept the same in order to conduct a fair test. [1]

not changed or measured variables

The thickness of the glass. [1m]

a) Concept:

Pure water boils at a fixed temperature.

b) Concept:

Amount of heat energy depends on the volume of water and temperature of water.

c) Keywords:

Greater volume;
more heat energy

d) Hint:

Specific words must be used (e.g. size of containers)



Analysing common process-skill questions

<u>Common questions</u>	<u>How to tackle the question</u>
Conclude from experiment Question	It answers the aim of the experiment, by stating a positive relationship or may require an inference from the results.
Controlled variable Question	Variables are kept constant so that they do not influence the effect of the independent variable on the dependent variable
Questions with “ why ”, “ explain ” and “ give a reason ” without results Questions	Part 1: state what you observe. Part 2: apply conceptual knowledge. Eg: A stone is a solid (observe) and solid has definite volume (conceptual knowledge)



P4 Creative Writing

Theme: A Shopping Trip

Name: _____

Date: _____

Homework: Page Number(s)	Corrections: Page Number(s)
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Remarks:	

A Shopping Trip

Write a story based on the situation in the picture below. Your story should be at least 120 words long.

Your composition should be based on one or more of these pictures.



You may make use of the following points in your story:

- Why did the main character go shopping?
- What happened during the shopping trip? Was there anything unusual?

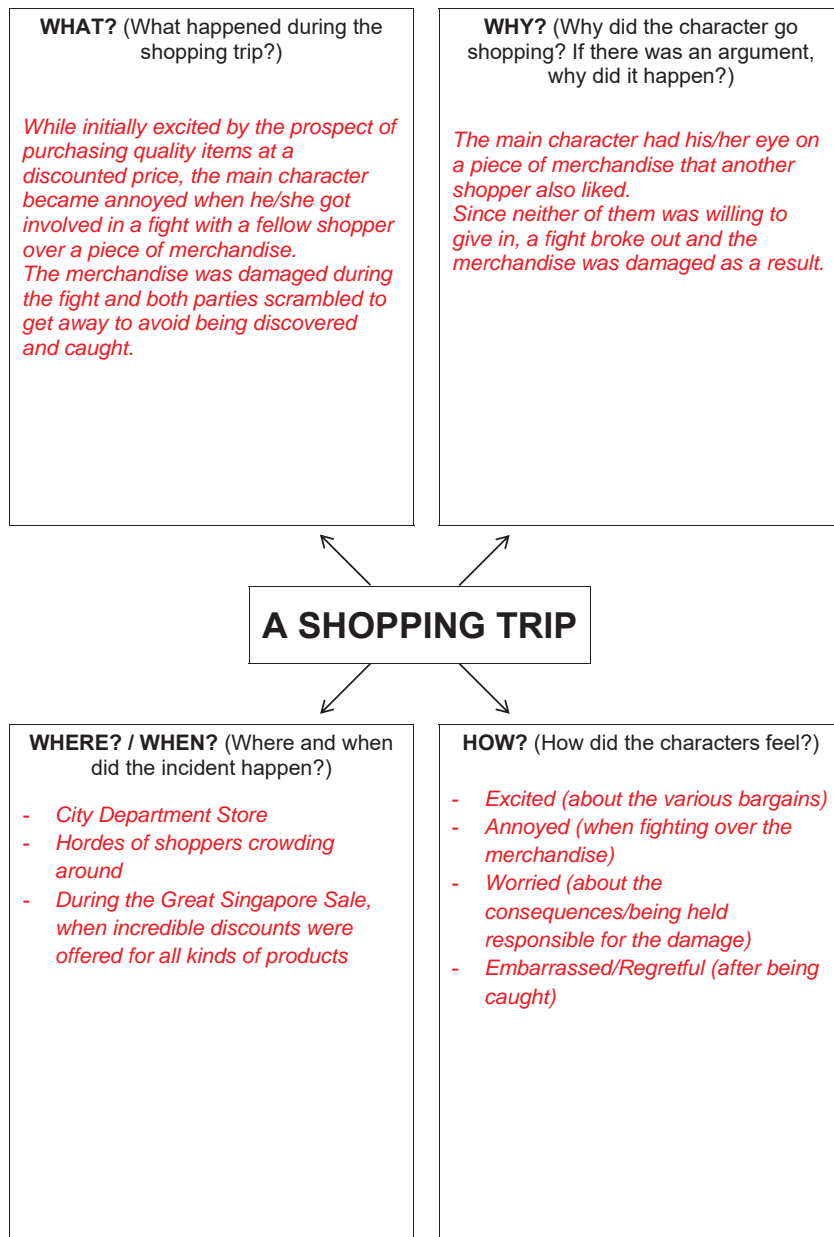
You may also include other relevant points.

Brainstorming: 5W1H

WHO?

WHO was involved?		
Name / Role in the Story		
Character Traits	<ul style="list-style-type: none"> - Quarrelsome - Fashion-conscious - Determined to get his/her hands on the item 	<ul style="list-style-type: none"> - Impatient - Avid shopper - Always on the lookout for good deals





Suggested: 20min (Pg 9-10)

Vocabulary

Word/Phrase	Meaning
fancied	<u>wanted</u> or <u>liked</u> something
garment	a piece of <u>clothing</u>
generous	<u>larger</u> than usual or what is needed
hordes	<u>large</u> groups of people
luring	<u>attracting</u>
opportunity	<u>chance</u>
ripping	making a <u>tear</u> in something
rummaging	<u>searching</u> untidily
seams	a line where two pieces of fabric are <u>sewn together</u>
thronged	flocked or be present in <u>great</u> numbers

Model Composition

Fill in the blanks in the following passage with the correct words.

<p>The Great Singapore Sale was here again. Retail outlets across the country took the (1) <u>opportunity</u> to advertise special offers to attract customers. City Department Store was no exception. The store had organised a big sale, (2) <u>luring</u> customers with (3) <u>generous</u> discounts on consumer electronics, household items and apparel.</p> <p>Bargain hunters (4) <u>thronged</u> City Department Store, eager to grab the best buys. Among the</p>	<p>Introduction: The story begins with a description of the place where the conflict takes place.</p> <p>Rising Action:</p>
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<p>sea of shoppers in the store was Mrs Jenny, clad in a branded leather jacket and pants despite the hot weather. Being fashion-conscious and on a budget, Mrs Jenny was hoping to take advantage of the reduced prices to update her wardrobe. At the ladies' wear department, there was a huge pile of quality pieces going at seventy percent discount. Mrs Jenny squeezed and pushed through the crowd and joined in the (5) <u>hordes</u> of other ladies eagerly (6) <u>rummaging</u> through the assortment of clothes.</p> <p>Mrs Jenny spotted a dark blue blazer that she (7) <u>fancied</u>. She pulled the blazer by the sleeve from the pile of clothing. However, some forceful tugging from the other side made her stop in her tracks and she uttered a growl of annoyance when she saw the lady beside her gripping the other sleeve of the same (8) <u>garment</u>.</p> <p>"This belongs to me!" Mrs Jenny demanded, but the lady insisted that she was the one who had taken it first. With neither of the women willing to give in, a fierce tug of war ensued. Both sides pulled with so much force that the (9) <u>seams</u> attaching the sleeves to the blazer started (10) <u>ripping</u>. Finally, one of the sleeves came off entirely. Both ladies gasped in astonishment and</p>	<p>Characterisation – From the paragraph, how would you describe Mrs Jenny?</p> <p>- <u>Vain</u></p> <p>- <u>Overly concerned about her appearance</u></p> <p>Climax: This paragraph is a description of how the conflict started.</p> <p>"uttered a growl of annoyance" – Show not tell - this shows that Mrs Jenny was irritated.</p> <p>Meaningful dialogue to show Mrs Jenny's demanding character.</p> <p>Falling Action: The blazer was torn while the argument ensued.</p> <p>"gasped in astonishment" –</p>
--	---

<p>immediately dropped the garment, pretending that nothing had happened. Fortunately for them, the people around them had been too engrossed in shopping to notice their childish quarrel.</p> <p>Now that neither of them could have the blazer, they walked away hurriedly before the sales assistant could discover that they had damaged the garment. They did not dare linger a moment longer – not even to inspect the other goods on sale. "Great Singapore Sales, not so great anymore," grumbled Mrs Jenny as she decided to head home for the day.</p>	<p>They were shocked as their actions has caused the blazer to be torn.</p> <p>Conclusion: Both parties walked away from the scene now that none of them wished to have the torn blazer.</p>
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Word Bank

Phrases to describe a busy/crowded place (using the 5 senses)

- the cold air swept across my face, leaving a refreshing sensation
- teeming with shoppers ceaselessly thronging the passages between the shops
- bustling with activity
- people in colourful attire, bright lights from the stores, balloons hanging from the ceiling and shiny tinsel all added to the Christmas atmosphere
- music blaring from the stores
- non-stop chatter of crowds was deafening
- parents with small children tagging along / pushing strollers with young babies who had fallen asleep peacefully inside
- place was packed like sardines and there was hardly any space to move

Phrases related to a quarrel

- steam was practically coming out of her ears
- tempers flared and voices blared
- vehement argument
- balled his hands into tight, seething fists
- uttered a growl of annoyance
- red with fury
- in a fit of anger

