

 Home Learning Pack week 10 -
Learn Something New Week





|  | Thursday | Friday |
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Monday Activities


Easy Rocky Road recipe

Live Microsoft Teams Cooking Class

Monday $13^{\text {th }}$ September

- Week 10

Get your ingredients ready!
$\square 200 \mathrm{~g}$ milk chocolate (dark or white works just as well)

1/3 cup Allen's Ripe Raspberries candy (or other lollies egg. snakes, jelly babies)

3/4 cup, packed marshmallows
$\square$ | packet of clinkers
Optional:
$\square$ small shortbread cookies
$\square 1 / 4$ cup of peanuts
$\square 1 / 3$ cup rice bubbles


## Monday - Science Literacy

## Science \& Technology Literacy Term 3 Week 10

 Forces \& Energy Part 1
# Definition Discove 

Find the definition of these terms:
Energy -

Chemical -

Mechanical-

Electrical -

## What is Energy?

- The simplest definition of energy is "the ability to do work". Energy is how things change and move. It's everywhere around us and takes all sorts of forms. It takes energy to cook food, to drive to school, and to jump in the air.
- It is different from power, which represents the rate at which energy is used.


Google Drive Link
https://drive.google.com/file/d/1aiwBRs2BejRBw5ab9eLufsLIHRwUEuDJ/view ?usp=sharing

## Types of Energy

Energy can take a number of different forms. Here are some examples:

- Chemical energy - stored within bonds between molecules. Sources include natural gas, gasoline, coal and batteries. Even the food we eat is considered chemical energy.
- Electrical energy - comes from tiny charged particles called electrons. A lightning bolt is one form of electrical energy. The electricity in our homes is made by humans.
- Kinetic energy - anything that moves is using this kind of energy. Examples include running, cycling, climbing - even swiping your finger across your smartphone! Wind turbines capture the kinetic energy in wind and transform it into mechanical energy.


## Types of Energy

- Gravitational energy - associated with a gravitational field, like the one that surrounds the Earth. If you've ever fallen down, you've experienced the power of gravitational energy. Gravitational energy is the reason why riding your bike downhill is faster than riding your bike uphill.
- Mechanical energy - stored in objects by tension. When the tension is released, motion occurs. A compressed spring contains mechanical energy as does a stretched rubber band.
- Nuclear energy - stored inside tiny atoms that are invisible, but make up the elements of the entire universe. Nuclear energy is released when atoms join together (fusion) or split (fission). The fusion reaction in the sun provides warmth and light, while the fission reaction at a nuclear power plant creates enough energy to power large cities.


## Types of Energy

- Solar (radiant) energy - energy that comes from the movement of light.
- Sound energy - produced when an object is made to vibrate producing a sound. Your voice and musical instruments use sound energy.
- Thermal (heat) energy - created from moving molecules. The energy that comes from a fire is thermal energy.
Potential energy - is energy that is stored. One example of this is a spring that is pressed

Types of Energy
 all the way down. Another example is a book sitting high on a shelf.

## Types of Energy

Question: Why do you think it is important to know about lots of different forms of energy?

Question: Choose One type of energy, research this form of energy \& in your own words write an introductory paragraph explaining this energy type.

## Maths Week 10 Fractions \& Decimals ~Adding Mixed Numerals~

## earning Intention

- To be able to model and represent strategies, including using diagrams, to add mixed numerals with the same denominator

Success Criteria

- I can add two or more mixed numerals together and also represent this as a new mixed numeral and diagram.


## Problem of the Day

$>$ Have a go at this problem:

The pizza place has three tables.


The biggest one seats three times as many people as the smallest one.
The middle sized table seats twice as many people as the smallest one.
On Tuesday night three-quarters of the seats were taken.
Then twelve more people arrived.
Unfortunately there were only enough seats for half of them.
How many people can sit at the smallest table?

## Revision

$>$ We can easily add fractions that have the same denominators by keeping the denominator the same in the answer and add across the numerator.
$>$ If we want to add a whole number to a fraction is simply combining both the whole numbers and fractions together. Just like in this example, where we have one whole apple and another half an apple... altogether we have one and $a$ half apples.

Adding fractions to whole numbers is a simple process.

$$
=1+1+\frac{1}{2}=1 \frac{1}{2}
$$

## Adding Mixed Numerals

If we want to add two or more mixed numerals we need to remember the same rules as all other fraction addition... 1) Making sure the denominators are the same, 2) adding only across the numerator and leave the denominator as it is.
We had a movie marathon on the weekend. On Saturday, we watched movies for $7 \frac{1}{4}$ hours and on Sunday we watched for $5 \frac{1}{4}$ hours. How many hours did we spend watching movies in total?

$$
7 \frac{1}{4}+5 \frac{1}{4}=
$$

First we add the whole numbers: $7+5=12$. Then we add the fractions: $\frac{1}{4}+\frac{1}{4}=\frac{1}{2}$ Then we add the two answers together: $12+\frac{1}{2}=12 \frac{1}{2}$ We use the same process to subtract fractions.

## Adding Mixed Numerals

>For this example we can also work it out by using diagrams. Let us have a look how.
We had a movie marathon on the weekend. On Saturday, we watched movies for $7 \frac{1}{4}$ hours and on Sunday we watched for $5 \frac{1}{4}$ hours. How many hours did we spend watching movies in total?

$$
7 \frac{1}{4}+5 \frac{1}{4}=
$$



## Your Turn To Add Mixed Numerals

$>$ Please complete these questions. Make sure you show your working.
a.
$8 \frac{7}{11}+3 \frac{2}{11}=$
b.
C.
$10 \frac{1}{3}+7 \frac{1}{3}=$
d.

$$
4 \frac{2}{3}+2 \frac{1}{3}=
$$

e.
$4 \frac{1}{4}+7 \frac{2}{4}=$
f.

$$
8 \frac{3}{5}+9 \frac{4}{5}=
$$

## Reflection

DI can add two or more mixed numerals together and also represent this as a new mixed numeral and diagram.

What is one new thing you learnt today in Mathematics?

# It's Prodigy Time <br> Remember to log into your class Prodigy account and enjoy up to 30mins of Prodigy Time! 



## STEM -Friction Experiment What is Friction?

- Friction is a force between two surfaces that are sliding, or trying to slide, across each other. For example, when you try to push a book along the floor, friction makes this difficult.
- Friction always works in the direction opposite to the direction in which the object is moving, or trying to move. Friction always slows a moving object down.

Link 1 - Google Drive



> https://drive.google.com/file/d/1MA0BqU6O3NG1miL A LR2NYEqDq0pqWbq/view?usp=sharing

Link 2 - YouTube

https://www.youtube.com/watch?v=qNOVONXV3Kw

## The Force of Friction Experiment

- Today we are going to complete an experiment about friction using toy cars, a ramp, a ruler and 3 different surfaces. (If you don't have a toy car, anything that rolls or has wheels will work as well).

Australian Curriculum Science Sample assessment | Student booklet<br>The force of friction



## The Force of Friction Experiment



Students conduct a fair test to establish how friction affects the distance travelled by a toy car.

## You will:

- make predictions
- discuss how to make an investigation fair
- conduct an investigation
- record results
- identify patterns in your results
- draw a conclusion
- apply your science knowledge to a real-life situation.


## Materials and equipment

Things you will need to conduct your investigation:

- a toy car
- a ramp from which to launch the toy car
- books (to raise the ramp)
- 3 different surfaces, e.g. concrete, carpet, linoleum, tiles, bench top
- a one-metre measuring tape or ruler

Method


Section 1. Investigating friction
Friction is a force. If something is moving, friction opposes it. Friction is a force that exists whenever two things rub against each other.
You will conduct an investigation about how friction affects the distance a toy car travels.
In your investigation you will roll a toy car down a ramp and on to different surfaces. You will measure how far the car travels along the different suffaces.

## Question

What you are trying to find out by doing the investigation?
How does friction affect the distance a toy car will travel?
Prediction
What you think is going to happen in the investigation:
I think the toy car will travel the greatest distance on the surface.

I think this because ..

Materials and equipment
Things you will need to conduct your investigation:

- a toy car
- a ramp from which to launch the toy car
- books (to raise the ramp)
- 3 different surfaces, e.g. concrete, carpet, linoleum, tiles, bench top
- a one-metre measuring tape or ruler

Keeping the investigation fair
Getting the best results you can:
It is important to make sure that this investigation is a fair test.
Have a class discussion with your teacher and class members to complete the table below.

| One thing that we will <br> change each trial | What we will measure | Things that we will keep <br> the same each trial |
| :--- | :--- | :--- |
|  |  |  |

## Results

A record of the data you collect during the investigation

1. Describe the appearance of each surface, e.g. rough, smooth, bumpy.
2. Record the distance the toy car travelled for each trial and each surface.

Table 1: Results data

|  | Surface | Appearance | Distance travelled (cm) |  |  |
| :--- | :--- | :--- | :--- | :--- | :---: |
|  |  |  | Test 2 | Test 3 |  |
| Surface 1: |  |  |  |  |  |
| Surface 2: |  |  |  |  |  |
| Surface 3: |  |  |  |  |  |

3. Repeating an experiment more than once helps you to be sure that the data you collect is as accurate as possible. No experiment method is perfect so by repeating it a number of times you can recognise any results that may be inaccurate and don't fit the pattern of the other you can recognise any

In this experiment you repeated the method for each surface three times, but when drawing a column graph from the data you collected you will use only one of the measurements for each surface.
We will assume that the most accurate measurement is the value that sits in the middle of the three measurements you took for each surface.
Complete the table below, using the middle value for each surface from your table of results.
Table 2: Results summary

| Surface | Distance travelled $(\mathrm{cm})$ |
| :--- | :--- |
| Surface 1: |  |
| Surface 2: |  |
| Surface 3: |  |

# The Force of Friction Experiment The Results 

4. Use the values from Table 2 in Question 3 to draw a column graph showing the distance the toy car travelled for each of the three surfaces.


## Surface

## Discussion

Describe and explain your results using evidence from the investigation and your science knowledge.
5. Over which surface did the toy car travel the greatest distance?

Was friction high or low between this surface and the wheels of the toy car?
Use the evidence from the results table and the column graph and your observation of the surface to explain how you know this.
6. Over which surface did the toy car to travel the smallest distance?
$\qquad$
$\qquad$

## Conclusion

What did you find out?
7. Was the investigation question answered? (circle one) Yes / No
8. Was your prediction correct? (circle one)

Yes / No
9. How does friction affect the distance a toy car will travel?

Tuesday
Activities

## Tuesday - Writing

## Procedure Writing

Today you will be writing a procedure for how to make rocky road.
Check list:

- Title
- Ingredients list
- Materials/Utensils used
- Step by step instructions in order
- Command verbs to explain each step

- Time/sequence connectives


## WHAT IS A PROCEDURE?

## Procedures

## What are procedures and why do we write them?

Procedures tell us how to do or make something through a sequence of steps. Procedures are written in two different forms. Both of these forms use the command form of the verb. However, one is numbered, while the other uses time words to sequence the steps to be performed.
For example: Cut the paper in half or Firstly, cut the paper in half.

## Types and Structures

## What are the different forms?

As mentioned earlier, there are two forms of procedures:

1. How to make, for example: recipes, art and craft project.
2. How to follow, for example: instructions, rules of a sport or game.

## What structure is needed in a procedure?

A procedure is written in a way that is easily organised and set out. This makes it a lot easier for the reader to follow the instructions and to complete a recipe, project, or game successfully. A procedure needs:

1. an end goal
2. materials/equipment/ingredients
3. steps/method/rules/instructions

Main language features

## What are the main language features?

1. Language of imperatives (command verbs)

For example: Cut the paper in half.
2. Language to indicate time/sequence words

These are also known as time connectives, for example: Einally, cut the cake and serve. 3. Language of description to indicate place, time and manner

- Adverbs and adverbial phrases of place, for example: Stop at the corner of the street.
- Adverbs and adverbial phrases of time, for example: Leave the clothes to soak overnight.
- Adverbs and adverbial phrases of manner, for example: Carefully, tear up the paper.
- Adverbial phrases to describe nouns, for example: Pour the batter into the large, microwavable plastic bowl.


## Example

## Flavoured Yoghurt



## Ingredients

- Plain yoghurt
- Honey
- Vanilla essence
- Muesli or oats
- Banana
- Strawberries
- Blueberries


## Equipment

- Large mixing bowl
- Spoons
- Chopping board
- Knife
- Small bowls for serving


## Method

1. Place the plain yoghurt into the large mixing bowl.
2. Add a few drops of vanilla essence and stir this into the yoghurt.
3. Using the chopping board, carefully cut up the banana into thin slices.
4. Place the banana slices into mixing bowl with the plain yoghurt.
5. Add in a few spoons of muesli or oats.
6. Spoon over some honey.
7. Gently fold all the ingredients in the large mixing bowl.
8. Without spilling it, pour some of the flavoured yoghurt into the small bowls for serving.
9. To garnish, turn a strawberry upside down.
10. At this point, cut through the middle of the strawberry, but be careful not to cut all the way through.
11. Gently slide the strawberry onto the edge of the bowl, being careful not to push it too hard, as it could split.
12. Finish off with a sprinkle of blueberries and a drizzle of honey over the top.


## Tuesday - Writing

Write your procedure here

## Title:

## Ingredients/materials

## Utensils/Materials

## Tuesday - Grammar

Apostrophes

Apostrophes are these little punctuation marks: $\qquad$
They look a bit like speech marks or quotation marks, or a floating comma. But when do we use them?

Apostrophes are used for two things: Showing when someone owns something (Sam's bike = the bike belongs to Sam), and to show there are letters missing in a contraction (do not = don't. The apostrophe shows the 'o' in 'not' is missing). Today we will be focussing on these contractions:

Shorten each of these words into their contracted (short) form, including an apostrophe in the correct place:

- Do not $=$
- Will not =
- Cannot =
- He is =
- She is =
- They are =
- They will =
- He will =
- She will =
- You are $=$
- Are not =
- Could not =
- Does not =
- Had not =
- Have not =
- Here is =
- I have =
- I am =
- It is =
- Must not $=$
- That is =
- There is =
- They have =


## Tuesday - Grammar

Now, rewrite the following sentences with the correct contraction. (Remember your capital letters and full stops!)

Do not enter that house.

They are always late.

I could not believe it.

I will not eat green eggs and ham.

I must not get lost.

They have all the chocolate.

There are not enough lollies.

It is too late.

I have not had enough sleep.

## Maths Week 10 Fractions \& Decimals ~Subtraction Fractions from Whole Numbers~

## Learning Intention

- To be able to use diagrams, and mental and written strategies, to subtract a unit fraction from any whole number including 1


## Success Criteria

- I use a variety of strategies to show my understanding of how to subtract a fraction from a whole number.


## Problem of the Day

Please have a go at this problem.
$>$ On the pirate ship there are 24 pirate swords. Each pirate has 2 swords. If half the pirates lost a sword in battle and a quarter of the pirates each gained a new sword, how many swords would there now be on the pirate ship? If a third of the swords were then lost how many would there be left?

## Subtracting a Fraction from a Whole.

$>$ This process can be made easier by first thinking that the number is a single whole and the fraction is part of this that we are taking away... just like taking a slice of cake away from a full cake.

How do we subtract fractions from a whole? We rename the wholes to make it simpler.
Look at the problem $1-\frac{1}{3}$.
How many $\frac{1}{3}$ are in 1 whole? There are $\frac{3}{3}$ in a whole.
Now the problem is easier: $\frac{3}{3}-\frac{1}{3}=\frac{2}{3}$


## Subtracting a Fraction from a Single Whole.

$>$ Try these activities of renaming the whole number as fractions and then using the diagrams to help vou.
a $1-\frac{2}{5}=$ $\square$
=
c $1-\frac{1}{4}=$ $\square$
$=$

$=$


## Subtracting a Fraction from Larger Whole Number.

>Sometimes though we can't rely on being able to draw diagrams because the numbers or fractions are too large. We then have to use mental or written strategies.
$>$ Try to visualise in your head what the question is asking and what it might look like. It can also help to contextualise the question so instead of just " $23-7 / 8$ " We might think of it as " $A$ pizza shop had 123 pizzas and in the first 5 minutes they sold 7 out of 8 slices from a pizza, they now have 2218 remaining." Instead of drawing out 23 circles and dividing each into $8 \ldots$... this method saves a lot of time.

## Subtracting a Fraction from Larger Whole Number.

$>$ Try these questions for yourself in both a mental (in your head) and written (algorithm) way.

1. $15-\frac{12}{15}=$
2. $11-\frac{15}{16}=$ $\qquad$
3. 

$13-\frac{3}{4}=$ $\qquad$
$\qquad$
$10-\frac{3}{7}=$
7.

6. $18-\frac{11}{25}=$
8. $16-\frac{9}{10}=$
4. $10-\frac{10}{11}=$ $\qquad$
$\qquad$
$\qquad$

## Subtracting a Fraction from Larger Whole Number.

$>$ Try these word problems now. Remember to do them in your head and also write the equation out.
a) At Rosie's house there were 3 packets of biscuits. She ate $1 / 4$ of a packet, her brother ate $1 / 4$ of a packet and her dad ate $1 / 2$ of a packet. How many packets were left?
b) Morris went for a 5 km walk. For the first $1 / 2 \mathrm{~km}$ he ran, for the second $1 / 2 \mathrm{~km}$ he jogged and for the third $1 / 2 \mathrm{~km}$ he ran again. How far did Morris still have to go?

## Reflection

$\square$ use a variety of strategies to show my understanding of how to subtract a fraction from a whole number.
$\square$ What is one new thing you learnt today in Mathematics?

# It's Prodigy Time <br> Remember to log into your class Prodigy account and enjoy up to 30 mins of Prodigy Time! 



Assessment:
Complete the activities to demonstrate your understanding of what has been covered this term.


## The Big licture - looking at levels of understanding

List the names of as many Asian countries as you can.


Make a Venn diagram of your lifestyle and someone in one of the Asian countries you learnt about.


If you had to swap lives for a day what would be the one big difference for both of you?
$\qquad$
$\qquad$

What would be the most challenging thing about this experience?

What would be the most positive thing about this experience?

## Tuesday - Geography

Former American Vice President Hubert H Humphrey once said:
"Asia is rich in people, rich in culture, and rich in resources. It is also rich in trouble". Explain what you think he meant by this.

Wednesday Activities
$\square$


|  |  |  |
| :---: | :---: | :---: |
|  | YOU CAN ZENTANGLE IN A PICTURE OR <br> CREATE YOUR OWN PICTURE TO ZENTANGLE, <br> TODAY YOU ARE GOING TO USE THE PICTURE OF A MONKEY ON THE FOLLOWING PAGE COR YOU CAN PRINT OFF YOUR OWN PICTURE THAT INTEREST YOU AND FILL ALL THE GAPS WITH ZENTANGLE PATTERNS. EACH INDNIDUAL SPACE WILL NEED A NEW PATTERN, YOU CAN SEARCH UP ZENTNAGLE ON GOOGLE AND IT WILL GNE YOU LOTS OF DEAS OF PATTERNS YOU CAN USE, YOU CAN USE SIMPLE PATTERNS LIKE DOTS AND STRIPES OR MORE COMPLEX PATTERNS, IT'S UP TO rou. <br> YOU CAN ALSO KEEP YOUR PATTERNS BLACK AND WHITE OR YOU CAN USE COLOUR. AGAIN, IT IS UP 70 YOU. ONCE YOU HAVE FIN/SHED UPLOAD A PHOTO OF YOUR FINISHED PRODUCT. <br> REMEMBER TH/S COULD BE AN ACTVITY THAT YOU DO THROUGHOUT THE HOLDAYY, I KNOW WHEN I DO TH/S, IT CALMS ME AND I FEEL VERY 'ZEN' AFTER /T. |  |
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## Science \& Technology Literacy Term 3 Week 10 Forces \& Energy Part 2

## Definition Discovery

Find the definition of these terms:
Transformation - $\qquad$

Conservation - $\qquad$
$\qquad$
Physics - $\qquad$
$\qquad$
Kinetic -

## Transforming Energy

- The Law of Conservation of energy is that energy can be transformed from one form to another, but can be neither created or destroyed.
- In physics, the conservation of energy is that energy can not be created or destroyed, it can only be changed from one form to another, such as when electrical energy is changed into heat energy. Formally, it says that the total amount of energy in an isolated system remains constant, although it may change forms, e.g. friction turns kinetic

Energy transformations
 energy into thermal energy.

- Transformation of energy examples - Video

| Google Drive Link <br> https://drive.google.com/file/d/1ojd9rPWgST taDFe <br> jDoJhhSDca-3Vap1/view?usp=sharing | YouTube Link |
| :--- | :--- |
|  |  |

- Watch the video then provide 3 examples of energy transformations.


## Transforming Energy - Essential Energy

Read and work through the remaining slides from the resource from Essential Energy.

## What is energy?

(1) Energy is the capacity or power to do work, such as the capacity to move an object (of a given mass) by the application of force.
(2) Energy cannot be created or destroyed but it can be transformed and transferred.
(3) To make energy, you need an energy resource or fuel.

Example 1 - The energy resource that gives our body energy is food.
Example 2 - The energy resource that gives plants energy is the sun.


## What is energy?

## Class activity

List the uses of each energy resource.

7101.1

## Atoms and electrons

Electricity is a form of power that is produced by the movement of electrons. When the electron flow is constant, it produces an electric current. What is an atom?
An atom is the primary basis of all matter. It has a nucleus consisting of protons and neutrons surrounded by orbiting electrons.

Electrons are particles that orbit the nucleus of an atom.
It has a negative charge.
How do we measure electricity?
Amps - Measurement used for electron flow, or electric current.
Volts - Measurement used for the pressure which electricity flow
Watts - Measurement of the amount of electrical energy a device uses per second.
Kilowatts - Larger measurement of the amount of electrical energy a device uses per second. One kilowatt is equal to 1,000 watts.

## Transforming Energy - Essential Energy



## Transforming energy

When you travel by car or bus, $\qquad$ is required to make the transport . The energy for a car or a bus comes from $\qquad$ and a
$\qquad$ $-$
The petrol stores $\qquad$ energy and the battery stores $\qquad$ energy.

When something stores energy, it is said to have $\qquad$ energy. When the potential energy is used to make movement it is said to have $\qquad$ energy. When we $\qquad$ the car, the engine changes this chemical energy and electrical energy into different $\qquad$ of energy.

When the engine starts we can hear it. This is $\qquad$ energy. When we drive about, the car is moving. This is energy. When we switch on the headlamps, we can see light. This is energy. After the car has been running for a while the bonnet becomes
$\qquad$

| energy | Heat |
| :--- | ---: |
| warm | kinetic |
| mechanical | go |
| start | electrical |
| hot | potential |
| chemical | light |
| types | battery |
| petrol | sound |

$\qquad$ . This is heat energy. energy is always produced when things work. Just like when you run about, you get $\qquad$ -

## Transforming Energy - Essential Energy

## Keywords

## Match the keywords to their definitions

Potential energy

Force

Mechanical energy

Electrical energy

Chemical energy

Nuclear energy

Energy released by a chemical reaction

Energy released by a nuclear reaction

The flow of an electrical charge through a conductor

Stored energy

The ability of an object to do work

A push or a pull on an object

## Transforming energy

Find-a-word
Electricity is the name commonly used for anything that relates to electrical energy.

Use this word wall to identify other forms of energy.

Word list
Heat
Light Sound Movement Mechanical Chemical Nuclear Gravitational

## Wednesday - Maths

## Maths Week 10

# Fractions \& Decimals ~Multiplying Decimals~ 

## Learning Intention

- To develop mental and written strategies for multiplying decimals.


## Success Criteria

- I can use mental strategies to multiply simple decimals by single-digit numbers.
- I can multiply decimals of up to three decimal places by whole numbers of up to two digits


## Problem of the Day

Please have a go at this problem.
>Jennie the old sheep dog is lazing around in the paddock near the house. She counts the number of animals in the paddock. There are 11 of them, goats and ducks. Then she counts the legs. She sees 28 legs. How many ducks are there?


## Revision Multiplying Decimals by 10s, 100s

## $\ell, 100 n c$

$>$ When we multiply or divide by a power of 10 we are simply moving the decimal point to the right for multiplication \& left for division by the number of zeros in the term for example we would move the decimal point 2 places if we were multiplying by 100 because it has two zeros.

Look what happens to 45.216 when we apply these rules:

$$
45.216 \times 10=452.16 \quad 45.216 \times 100=4521.6 \quad 45.216 \times 1000=45216
$$

## Complete this table.

| $\times \mathbf{1 0}$ | $\times 100$ | $\times 1000$ |  |
| :---: | :---: | :---: | :---: |
| 0.5 |  | 50 |  |
| 0.25 | 2.5 |  |  |
| 0.37 |  |  | 370 |
| 1.2 |  |  |  |
|  |  |  |  |

## Simple Mental Multiplication of Decimals

>If you know your times tables you can do mental multiplication of decimals. This is because all you need to do is add the decimal point into your answer once you know it.
$>$ E.g. I know that $12 \times 4=48 \quad$ Therefore $1.2 \times 4=4.8$ also $0.12 \times 4=0.48$
$>$ I simply put the decimal point into the place of the number of decimal places there are in the question. Try these out for yourself.
a) $15 \times 5=$ $\qquad$ so $1.5 \times 5=$ $\qquad$ b) $11 \times 9=$ so $1.1 \times 9=$ $\qquad$
c) $101 \times 7=$ $\qquad$ so $10.1 \times 7=$ $\qquad$ d) $20 \times 12=$ $\qquad$ so $20 \times 1.2=$ $\qquad$
$\qquad$

## Multiplying Decimals

## >As with anything we do with decimal fractions we need to remember to line up the decimal place. We also need to remember how many decimal places there are in the whole question.

How do we multiply decimal fractions using a written strategy?
First we estimate: $5 \times 3=15$. Our answer will be around 15 .
$3 \times 5$ tenths is 15 tenths. We rename this as 1 unit and 5 tenths.
We write the 5 in the tenths column and move the unit to the units column.
$3 \times 4$ is 12 . We also add the 1 .
$3 \times 4.5=13.5$
${ }^{1} 4$. 5


We check the answer against our estimate. Do they fit?

## Written Decimal Multiplication

Try these questions for yourself.
a
$\times$
$\qquad$
d
b
$\times$
4
$\qquad$

6 . 28
$\times$
4
$\times$

## Written Decimal Multiplication

$>$ Try these questions for yourself.
Use the templates to set up and solve these money problems:
a Yasmin buys 3 cartons of choc milk. Each carton costs $\$ 2.45$. How much money does she spend?
c Omar wants to buy 3 games for his computer. Each game is $\$ 14.95$. He has saved \$45. Does he have enough money?

$\square$ L

b Lisa buys 4 magazines. Each magazine costs $\$ 4.95$. How much does she spend on magazines in total?


## Reflection

$\square$ I can use mental strategies to multiply simple decimals by single-digit numbers.
$\square$ I can multiply decimals of up to three decimal places by whole numbers of up to two digits

What is one new thing you learnt today in Mathematics?
$\qquad$
$\qquad$
$\qquad$

## It's Prodigy Time

Remember to log into your class Prodigy account and enjoy up to 30mins of Prodigy Time!

## Wednesday - PD/H

## Week IO - Mindfulness

Gratitude is noticing the good things in your life and saying thank you for those things. Saying thank you can help you be in a better mood and settle the Hubbub around you. Let's listen to how having gratitude makes you more connected to the world. Choose one thing each day to think about and show gratitude for.

Watch the Mind Yeti video 'Hello Gratitude': https://www.youtube.com/watch?v=96QgrM_2YS8\&list=PLiaUKiwbiHMQDQL CXoPaMMYotIdKIUQCw\&index=10

Think: What were some of the special things, big and small, that made you happy this week? How did your mood change as you thought of these things you were grateful for?

Activity:
I. Draw what makes you happy. These can be things that made you happy this week or things that you love that bring you joy every time you see them or play with them.
2. Tell all about your drawing. Share about each one of the special things that make you happy and can show gratitude for each day.

Thuresday
Activities

## Thursday- Learn something new

Today we are going to learn a new dance.
Clink on the link on Seesaw to watch the video and follow on to learn the movements.
Once you have learnt the movements, post a video or some photos of you learning and practicing the dance.

You could even perform the dance for someone in your household.

## Thursday - Grammar

## Homophones: then/than

There are two ways to spell the homophone 'ther.

Then has multiple meanings:

1. "after"; I will go to school, then go shopping.
2. a place in time; I was in Sydney then.
3. a consequence; If you do the wrong thing, then you will see the principal.

## Than:

Is used for comparison: I would rather ride my bike than watch tv.

It is important to know when to use the right homophone. Select the correct one in each sentence below:

Art is harder then/than science.
If a tornado hits the power plant, then/than it will explode.
If you don't eat breakfast, then/than you can't focus in class.
Dinosaurs are scarier then/than monsters.
My sister likes Disney movies more then/than horror movies.
Woody used to be Andy's favourite toy, then/than it was Buzz.
First Oxford had maths with Mr Edgar, then/than they went to Ms Meyer's class.

If you don't study then/than you won't get good marks.
Back then/than dinosaurs ruled the earth.
If we go to the beach then/than we can go for a swim.
If I didn't drink so many milkshakes then/than I wouldn't feel sick.
If you listen to your teachers then/than they wouldn't have to yell.
Some people like chips more then/than chocolates.
It's warmer in winter then/than summer.
Some people like cats more then/than dogs.

# Maths Week 10 Fractions \& Decimals ~Dividing Decimals~ 

## Learning Intention

- To develop the skills to divide a decimal fraction by a whole number.


## Success Criteria

- I can divide decimals by a onedigit whole number where the result is a terminating decimal


## Problem of the Day

Please have a go at this problem.
>Mr Greenwill looked out on his Otago farm and saw rabbits everywhere. "I reckon there are about 1280 rabbits in that paddock. They've been doubling in number each year for the last seven years", he said.
>How many rabbits were in the paddock seven years ago?


## Revision Dividing Decimals by 10s, 100s \& 1000 c

When we multiply or divide by a power of 10 we are simply moving the decimal point to the right for multiplication \& left for division by the number of zeros in the term for example we would move the decimal point 2 places if we were dividing by 100 because it has two zeros.

Look what happens to 45 when we apply these rules:

$$
45 \div 10=4.5 \quad 45 \div 100=0.45 \quad 45 \div 1000=0.045
$$

Complete this table.

| $\div 10$ | $\div 100$ | $\div 1000$ |
| :---: | :---: | :---: |
| 5 | 0.25 |  |
|  |  |  |
|  |  | 0.0485 |
|  |  |  |
|  |  |  |

## Revision Written Division

$>$ These are some reminders about our written division strategies.

In short division, we use our knowledge of multiplication to help us. We can split 936 into $900+30+6$.

| 3 | 1 | 2 |  |
| ---: | :--- | :--- | :--- |
| 3 | 9 | 3 | 6 | 900 divided by 3 is 300 , so we put a 3 in the hundreds place. 30 divided by 3 is 10 , so we put a 1 in the tens place. 6 divided by 3 is 2 , so we put a 2 in the units place.

```
Sometimes it's easier to split the numbers differently. We can also split 936 into \(900+36\).
900 divided by 3 is 300 so we put a 3 in the
hundreds place
36 divided by 3 is 12 . We put the 1 in the tens place and the 2 in the units place.
\(936 \div 3=312\)
```

Follow this link to watch a detailed video on how to complete long division.
YouTube - https://youtu.be/HY-8ydAbiik
Khan Academy

## Dividing Decimals

$>$ As with anything we do with decimal fractions we need to remember to line up the decimal place. We also need to remember how many decimal places there are in the whole question.
Following this we complete the question the same way we would any long division problem. Follow this link to wath a detailed video on how to complete decimal division. YouTube -

Look at 64.4 divided by 5 . We start with the largest place value.
6 tens divided by 5 is 1 ten with a remainder of 1 ten.
We rename this as 10 units and carry it over to the units column.
14 units divided by 5 is 2 with 4 units left over.
We rename this as 40 tenths and carry it. We now have 44 tenths. 44 tenths divided by 5 is 8 with a remander of 4 . We rename this as
$5 \longdiv { 1 } \begin{array} { r } { 1 } \\ { 6 { } ^ { 1 } 4 . } \\ { \hline } \end{array} \quad 8 { } ^ { 4 } 4 ^ { 4 } 0$ 40 hundredths. 40 hundredths divided by 5 is 8 .
64.4 divided by 5 is 12.88

## Written Decimal Division

$>$ Try these questions for yourself.
a
$8 \longdiv { 8 \quad 5 \cdot 6 }$
d
$5 \longdiv { 6 3 . 5 }$
b

e

f
6


## Written Decimal Division

$>$ Try these questions for yourself. You need to read the instructions carefully.
Sharing money is a time when we divide decimal fractions. Add the bills then divide them evenly among 4 people. Don't listen to the guy who said he only ate the rice - he's a cheapskate.


## Reflection

$\square$ I understand how to complete written division strategies.
$\square$ I can divide decimals by a one-digit whole number where the result is a terminating decimal.
$\square$ What is one new thing you learnt today in Mathematics?

## mancinamin

Artist Name: Colin Wightman
Language: Goomeroi (Kamilaroi)
Born: Toomelah 23/I2/65
Area: Northern NSW
Mediums: Acrylic paint on canvas/linen
Artist Biography: Colin is a quiet achiever that is passionate about his art.
Born and raised in the Aboriginal Mission at Toomelah, which is about 15 km from Goondiwindi on the Qld/NSW border.
He tells of an idyllic childhood when he was taught to fish, hunt, track, and find bush tucker and source water. Colin learned stories passed on from the Elders. He learned from his Grandmother drawing in the sand looking at her style and learning the Dreamings but interpreting it in his own way.

Colin says his artwork depicts the plants and animals associated with his people's culture and other things he sees around him. He likes to use different colours and patterns. He said if he goes to another town or place he likes to have a bit of a look around and paint the things he sees in the landscape.


You may have seen Colin Wightman's 'Koala Boy' statue as a part of the Hello Koala's display in the Australian Botanic Garden in Mt Annan in April 2021.

'Rain' by the late Colin Wightman 120cmx|20cm Currently for sale at the Sprit of Australia Gallery for \$1500
nemonemonim



Colin Wightman


Let's look at analogous colours in colour theory. Analogous colours are 3 colours that are next to each other on the colour wheel.


Circle the different analogous colour groups that Colin Wightman has used in his artworks shown in this booklet.


Step I: Draw your dolphin outline using this video tutorial.

https://argo.page. link/3wTkz

Step 2: Watch the video to draw lines, swirls and circles on your dolphin and your background. Colour using analogous colours.

https://argo.page. link/YpDer

Step 3: Share your artwork with your teachers on Seesaw.

## TODAY is the day to learn something. NTMT


https:// qrgo.page.link/Mfrbu

If you don't have any square paper, make your own! $\rightarrow$


Friday Activities

Read through the grid of different activities on the following page and pick at least one to complete. You can even think of your own activity or new skill to learn and practise.

Circle your chosen activity, or activities, and share photos or a video of you working on and practicing your chosen activity.

## Friday - Writing

## WEEK IO: Captain's Log

Answer the following questions:
I. What was your favourite themed week this term for online learning? We had Olympics, Book Week, Father's Day, Spring and learn something new themes.
2. What did you find most challenging about learning from home this term?
3. What activities did you enjoy the most this term? Why were these activities your favourite?
4. If you could choose a weekly theme for next term's online learning or Wacky Wednesday dress up, what would you suggest?

# Maths Week 10 Fractions \& Decimals ~Word Problem Calculations~ 

## Learning intention

- To develop the skills to understand and solve word problems involving fractions and decimals.


## Success Criteria

- I can solve word problems that involve addition and subtraction of fractions with the same denominator.
- I can solve word problems involving the multiplication and division of decimals, including those involving money.


## Problem of the Day

Please have a go at this problem.
$>$ Gill is playing with her name and with numbers. She lets all her consonants equal 1.3 and all her vowels equal 0.5 . So the value of Gill's name is $1.3+0.5+1.3+1.3=4.4$
$>$ What is the value of your name?

Change the rules so that the value of your name is 4.253

## Word Problems - Addition \& Subtraction of Fractions

## >Use the information to solve the following addition \& subtraction fraction problems.

$>$ At the kitchen of a popular restaurant, the assistant chefs are preparing the ingredients for a busy Friday night.

1. There were $3 \frac{1}{2}$ of bags of flour in the kitchen. $4 \frac{1}{2}$ bags of flour were delivered. How many bags of flour are there in total?
2. 9 cartons of milk were delivered to the kitchen, but an assistant spilled $2 \frac{5}{8}$ cartons of milk. Together with the $4 \frac{1}{8}$ cartons of milk that were in the fridge, how many cartons of milk are there in total?
3. There were $5 \frac{3}{4}$ crates of eggs but $\frac{1}{4}$ of a crate of eggs was broken. 3 assistants then checked the rest of the eggs and found that $2 \frac{1}{4}$ crates of the eggs were rotten. How many crates of good eggs were left?
4. There is $\frac{9}{10}$ of a kilogram of ground beef and $\frac{7}{10}$ of a kilogram of ground pork in the freezer and an assistant is defrosting $2 \frac{3}{10}$ kilograms of ground beef. How much ground beef is there in total?

## Word Problems - Multiplication \& Division of Decimals

Use the information to solve the following multiplication \& division decimal problems.
$\rightarrow$ You and your friends are going to the movies and it's your shout. Look at the price list below to answer the questions on the following slides. Show your working:


1. How much will it cost you for 4 "Under $13^{\prime \prime}$ tickets?
2. Two of your friends each want a large drink and
a medium popcorn. What will that cost you?
3. You and your other friend want a choc top and a large drink each. What will that cost?
4. Halfway through the movie, you are all dying of thirst and you go out and buy 4 bottles of water. You pay for them with a $\$ 20$ note. How much change do you receive?
5. Use the refreshment price list to design and calculate the cost of a snack that would help get you through this Maths lesson.

## Reflection

$\square$ I can solve word problems that involve addition and subtraction of fractions with the same denominator.
$\square$ I can solve word problems involving the multiplication and division of decimals, including those involving money.
$\square$ What is one new thing you learnt today in Mathematics?

## It's Prodigy Time <br> Remember to log into your class Prodigy account and enjoy up to 30mins of Prodigy Time!



## Non-screen Activities

# Non-screen activities you can do at home 

## What can you do when there's no school and you're

 stuck at home? Here are 25 fun ideas to choose from.$2^{\text {manax }}$ 2 communtry hero. Think of someone that helps you in some way and write a short letter to thank them.

> 1 How many different words can you make from the letters in this sentence, below? Grab a pencll and paper and witte a llst!

$4 \begin{aligned} & \text { Can you create } \\ & \text { your own secret }\end{aligned}$ code? You could use letters, numbers, plctures or something etse! Can you get someone else to try and crack tit?

## 6 Hold a photo

sesslon. Use a camera or a moblle phone to take some snaps. What will you photograph? Your pets or toys perhaps?

Do something kind for someone. Can you pay them a compliment, make them something or hetp them with a


16Keep moving! Make up a dance routine to your tavourite song.
 recycle materials such as yoghurt pots, tollet rolls and boxes and see what you can create with them.

## 7 Bulld a reading den. Find

 somewhere cosy. snuggle up and read your favourite book!

## 12 Can you create a story bag?

 Find a bag and cotlect items to go in It that relate to a well known story. If you can't find an item, you could draw a picture to Include.
## 17 write a play script. Can you act it out to other people?



22 tome map of your local area and highught Interesting


Pobble.com - More writing. More progress.

24 Draw a view. Look out of your window and draw what you see.


Start a nature diary. Look out of the window each day and keep note of what you see. Blirds, nowers, changes in the weather, what else?


13 List making! Write a list of things that make you happy. things you're grateful for or things you are good at.

## 9 Make a list of all the electrical

 Items in each room of your home. Can you come up with any ideas to use less electricity?
## 14 Design and make an

 obstacle course at home or in the garden. How fast can you complete it?

## 10 Design and make a

 homemade board game and play it with your famlly.

## 15 Can you Invent something new?

 Perhaps a gadget or something to help people? Draw a picture orwitte a
description.

## 20 Get sketching! Find a

 photograph or plcture of a person, place or object and sketch it.

## 23 write a

 postcard to your teacher. Can you tell them what you like most about thelr class?25 Get reading! What would you most like to learn about? Can you find out more about it in books? Can you find a new hobby?

