

# Year 6 Transition



Castle View  
Enterprise  
Academy



# Science

# Classroom Rules

DO NOT TALK DURING WHOLE CLASS  
EXPLANATIONS.

DO NOT SPEAK OUT OF TURN.

HAVE FULL EQUIPMENT READY.

OBSERVE UNIFORM RULES AT ALL  
TIMES.

BE AT YOUR OWN DESK AND FACE  
FORWARD.

ATTEMPT ALL THE WORK SET.

NO CHEWING.

# What We Do

COMPLETE THE STARTER ACTIVITY IN  
SILENCE.

TAKE PRIDE IN THE PRESENTATION OF OUR  
WORK.

SHOW KINDNESS AND EMPATHY TOWARDS  
OTHER PEOPLE.

ENJOY EACH OTHER'S SUCCESS.

NOT BE AFRAID TO GET SOMETHING WRONG.  
BE RESILIENT.

# Respect each other

Transition 2021



## Red Cabbage indicator experiment.

Learning Objective: How to make a red cabbage indicator to test if solutions are acid or alkaline.

# What do you know about acids?



Write down as much as you know about acids!

Can you think of examples of acids?

Are they safe or dangerous?

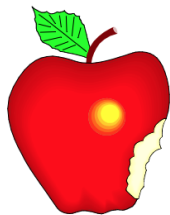
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## Acids



Some acids are very dangerous however, there are a lot of acids that you can find in your fridge and cupboards!



- apples contain malic acid



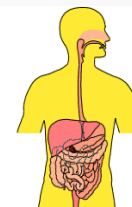
- grapes contain tartaric acid



- vinegar contains ethanoic acid



- citrus fruits like lemons, limes and oranges contain citric acid



- human stomachs contain hydrochloric acid



- tea contains tannic acid



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## Alkali's



The opposite of an acid is a alkali. You may not have heard of this however, you will have heard of examples of them!

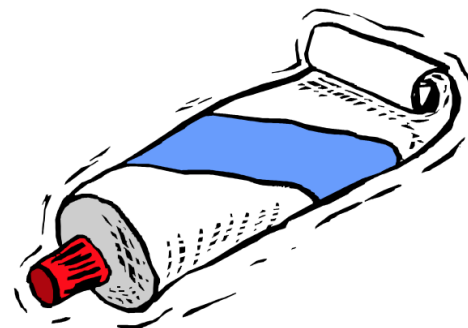
Like acids, some strong alkali's can be dangerous however, there are also a lot of everyday alkali's in your home!



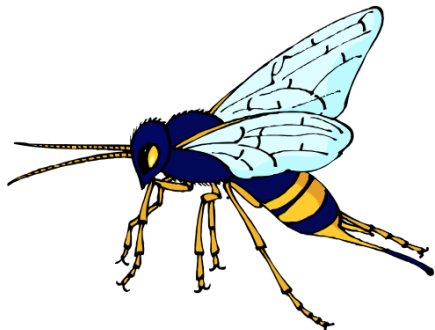
- indigestion tablets contain [alkalis](#)



- soap is an [alkali](#)



- toothpaste contains [alkalis](#)



- wasp stings are an [alkali](#)



- baking powder is an [alkali](#)



- ammonia cleaning fluid is an [alkali](#)



## How do we know about this?



How do scientists find out if a solution is acid or alkaline?

They use something called an indicator to find out!

This is what you are going to make today!

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## What you will need





## **Do not do this without the help of an adult!**



Before you start, you cannot do this without the help of an adult! You need the help from an adult to make sure that this is completed safely!





## Method



1. Have an ADULT to chop and tear the red cabbage into small pieces.



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## Method



2. Put the small pieces of cabbage into a bowl. Have an adult boil a kettle and cover the cabbage in hot water



3. Leave the cabbage to cool for 10 minutes.



## Method



4. Place the red cabbage leaves and water through a sieve or colander.





## Method



5. Collect the purple water passing through the sieve into a bowl.



It should look like this!



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## What happens next



Now, ask your parent to find the following household items!



Vinegar



Lemon Juice



Baking/bicarbonate  
soda



Liquid soap

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## What happens next



Fill a glass up to the quarter point of each solution. Make sure you know what you have put in each glass!



Vinegar    Lemon Juice    Baking/bicarbonate  
soda    Water    Liquid soap

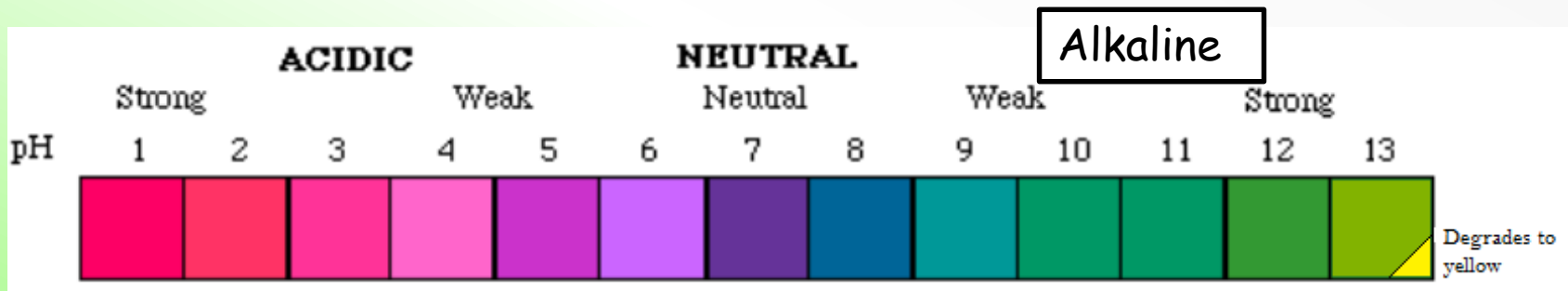
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## Before we start testing



The red cabbage indicator should change colour when mixed with a solution. If the indicator is mixed with a strong acid, it will turn red. If the solution is mixed with a strong alkali it will turn yellow/green.



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## Testing time



Now start adding the red cabbage indicator to the different solutions! Watch closely to see a colour change!



# What it should look like





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Fill out this table based on  
your results!



Household chemical	Colour when added to indicator	Acid/Alkali?
Vinegar		
Lemon Juice		
Water		
Liquid soap		
Baking soda		



# Show what you know

A student at Castle View has said these things. Do you think they will pass science?

*Pass or Fail?*

1

*An indicator is  
something  
that makes  
acids*

*Pass or Fail?*

# 1 Answer

*An indicator is  
something  
that makes  
acids*

*Fail*

*Red cabbage  
can be used to  
make an  
indicator*

*Pass or fail?*



## 2 Answer

*Red cabbage  
can be used to  
make an  
indicator*

*Pass*

3

*A neutral  
substance is  
not an acid or  
an alkali*

*Pass or fail?*

### 3 Answer

*A neutral  
substance is  
not an acid or  
an alkali*

*Pass*

*Red cabbage  
only has one  
colour change  
- it goes pink  
for acids*

*Pass or fail?*

## 4 Answer

*Red cabbage  
only has one  
colour change  
- it goes pink  
for acids*

*fail?*



*An indicator  
shows us if a  
liquid is an acid,  
neutral or alkali*

*Pass or fail?*

## 5 Answer

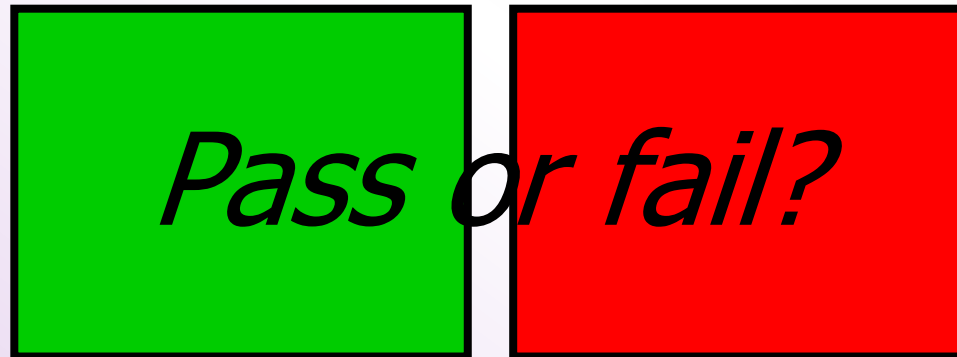
*An indicator  
shows us if a  
liquid is an acid,  
neutral or alkali*

*Pass*

# Show what you know



Do you think the student will  
pas or fail science?



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## See you in September!



The science department can't wait to welcome you all to Castle View Enterprise Academy!  
What are you looking forward to the most in science?

First look at the CVEA science department!



Mrs Mearns



Ms Connor



Mrs Green



Mr Evans



Mrs Brown



Dr Shepperson



Mrs Thomas



Mrs Batey



Mr Lawson