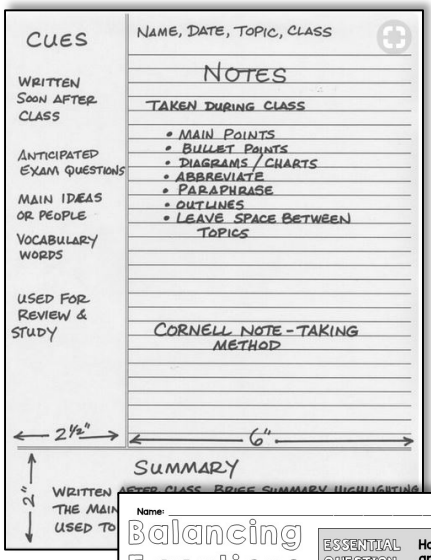
BALANCING EQUATIONS

Cornell Doodle Notes TEACHER NOTES

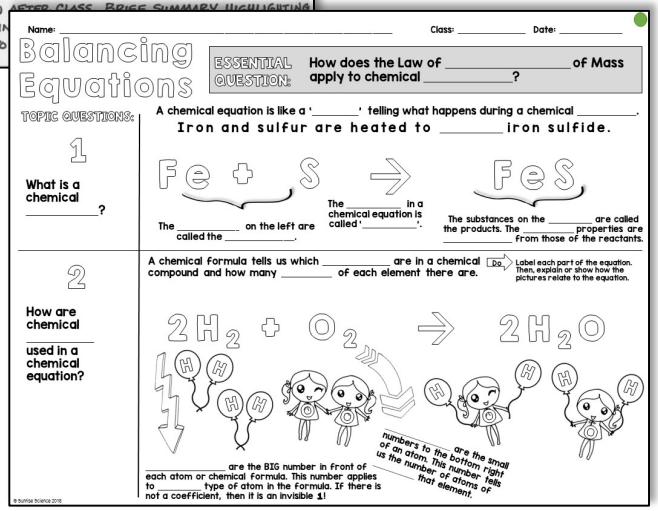
These scaffolded Cornell Doodle Notes combine two effective note-taking strategies and can be used to introduce the concept of balancing chemical equations. These notes are meant to be an introduction to the process and they do not cover polyatomic ions. NGSS MS-PS1-5 (Develop and use a model to describe how the total number of atoms does not change in a chemical reaction and thus mass is conserved) and HS-PS1-7 (Use mathematical representations to support the claim that atoms, and therefore mass, are conserved during a chemical reaction). These notes also highlight the crosscutting concepts of patterns, and energy and matter.

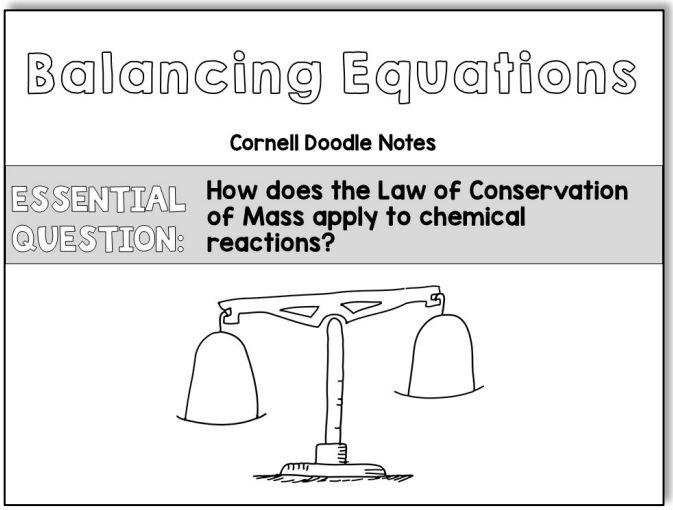
Cornell Notes are a note-taking strategy in which topic questions are written in a narrow left-hand column and definitions, explanations, and diagrams are filled in in the right-hand column. At the bottom of Cornell Notes, there is typically a section included for reflection on the lesson's main points. See the example to the right.



Doodle Notes (or Sketch Notes) are another note-taking strategy for which pictures and graphics activate the visual pathways of the brain, which helps with retention of information when compared to standard note-taking. Your visual learners will really benefit from seeing and coloring in the pictures aside the main points of the notes!

Doodle Notes is a registered trademark used with permission. See DoodleNotes.org for more details.





I created a Powerpoint that goes with these notes. The Powerpoint walks the students through the lesson from the Essential Question and through all of the Topic Questions. There is a "Sum It Up" section at the end of the notes, for which students practice applying the concepts. This section includes a short 'Quick Watch' TedEd video on the Law of Conservation of Mass.

SEE THE PRINTING TIPS ON NEXT PAGE

On the following pages, you will find 4 versions of the Cornell Doodle Notes:

KEY The KEY : pages 4-7 : All notes and "answers" are included on this version

Green Circle : pages 8-11 : Use this version for your lower-level students who need more support, take more time, or who are learning English as a second language...they will have to fill in missing words

Blue Square : pages 12-15: Use this version for your mainstream students...they will have to write the topic questions and fill in some words throughout

Black Diamond : pages 16-19 : Use this version for your high-level students who work more quickly or who like to write in their own handwriting...they will have to fill in all of the topic questions and more of the text throughout the notes

Note: the "Sum It Up" section is the same for all student versions.

On the next page are the directions for accessing the Powerpoint for this product via Google Drive (Google Slides). This is obviously option depending on how you choose to use this in your classroom.

Here are some ways that I suggest using this resource:

1) Whole-Group lesson with differentiation : decide which students should receive which level of the notes. Hand out the notes to the students. Use the Powerpoint as a presentation and talk aloud through the lesson while the students take notes. Allow them to color/doodle further during and at the end of the lesson.

2) Differentiated Small-Group lesson : separate your students into groups by learning level. Give each student group sets of the appropriate notes for their level. Make sure each group has a device to view the presentation. Post the Powerpoint or Google Slides to your Google Classroom or other online learning platform, or email the Powerpoint version to one 'student leader' in each group. The students would view the Powerpoint/Slides together on one device and fill in the notes. Encourage them to add color/further notes.

3) Individual Note-Taking or Flipped Classroom : Post the Powerpoint or Google Slides presentation to your Google Classroom or other online learning platform. Hand out the appropriate-level notes to each student. Students can work at their own pace to view the presentation and complete their notes. Encourage them to add color/further notes.

Thank you very much for your purchase! If this product has met your needs, please consider leaving feedback at TeachersPayTeachers.com or feel free to email me at SunriseScienceTPT@gmail.com with any questions or concerns!

You may also be interested in my other Cornell Doodle Notes products! Click on the picture to the right!

BALANCING EQUATIONS

PRINTING TIPS!

It depends how you'd like your students to use these notes. They can be printed one-sided and folded up into an interactive notebook, or you can print them double-sided and have students keep them in binders/folders.

If you print them double-sided, this is what I suggest doing:

- In the print settings on Adobe/Reader, keep the "Auto Orientation" button selected
- Click "FLIP ON LONG EDGE"
- Type in the page numbers that you'd like to print and the number of copies

Printing the notes this way will avoid your students having to rotate their paper when they go to the next side. Instead, they will flip and the left and right columns will be in the same place!

EXAMPLE COLORED NOTES

GOOGLE DRIVE DIRECTIONS

Below are some instructions for how to download this product and share it with your students via Google Drive. Just a note- although this is a digital resource, please know that it is for personal classroom use for only you and your students to share via email, Google Drive, or Google Classroom. Please do not upload this resource online where it can be accessed by the general public.

CLICK ON THIS LINK TO ACCESS YOUR PURCHASE IN GOOGLE!:

https://tinyurl.com/y9nceb8e

When you click the link above, you'll be taken to a screen that says "Copy Document". Click the blue button that says "Make a Copy". This will transfer the file to your own Google Drive account.

Preferably, share this resource with your students through your Google Classroom, OR once all of your students have their own Google Drive account (drive.google.com), share the above link with them and have them make their own copy of the assignments into their own Google Drive.

Name: _____ Class: _____ Date: KEY

Balancing Equations

ESSENTIAL QUESTION: How does the Law of Conservation of Mass apply to chemical reactions?

TOPIC QUESTIONS:

1

What is a chemical equation?

A chemical equation is like a 'story' telling what happens during a chemical reaction.

Iron and sulfur are heated to yield iron sulfide.

IRON + SULFUR → IRON SULFIDE

$Fe + S \rightarrow FeS$

The substances on the left are called the reactants.

The arrow in a chemical equation is called 'YIELD'.

The substances on the right are called the products. The product's properties are different from those of the reactants.

2

How are chemical formulas used in a chemical equation?

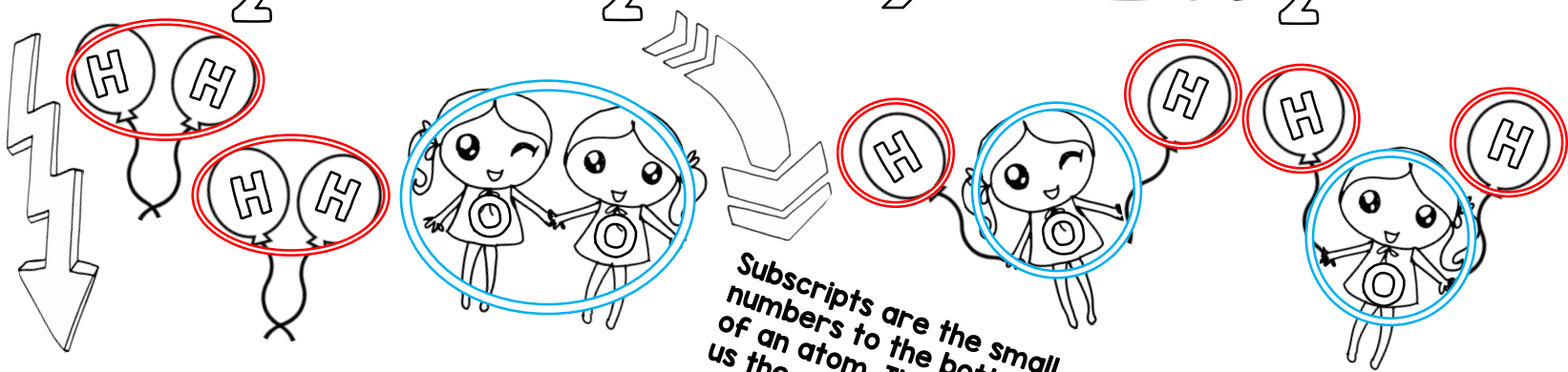
A chemical formula tells us which elements are in a chemical compound and how many atoms of each element there are.

Do Label each part of the equation. Then, explain or show how the pictures relate to the equation.

REACTANTS:

HYDROGEN GAS + OXYGEN GAS YIELDS PRODUCT: WATER

$2H_2 + O_2 \rightarrow 2H_2O$



Coefficients are the BIG number in front of each atom or chemical formula. This number applies to EVERY type of atom in the formula. If there is not a coefficient, then it is an invisible **1**!

Subscripts are the small numbers to the bottom right of an atom. This number tells us the number of atoms of only that element.

The two H_2 molecules split and the O_2 molecule split. They recombined to form two molecules of H_2O, hence, $2H_2O$ as the product.

TOPIC QUESTIONS:

KEY

3

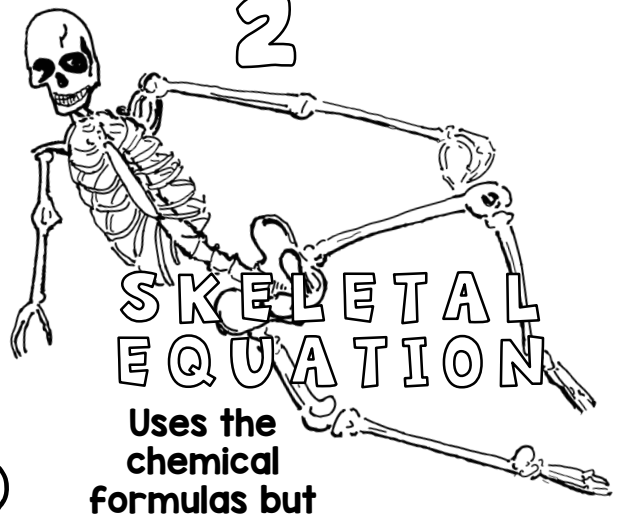
What are the ways that a chemical equation can be written?

1 WORD EQUATION

Uses only words and no formulas.

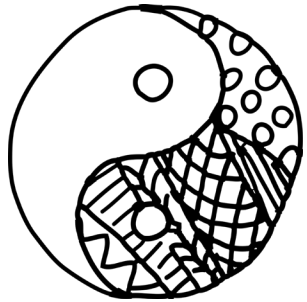
WORDS

2 SKELETAL EQUATION



Uses the chemical formulas but no coefficients.

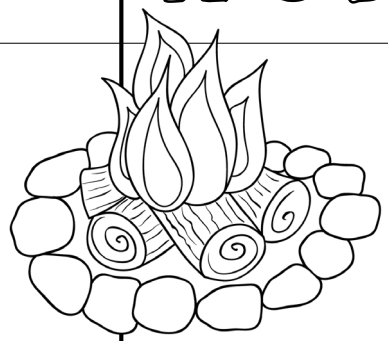
3 BALANCED EQUATION



Uses coefficients to show the correct ratio of reactants and products.

4

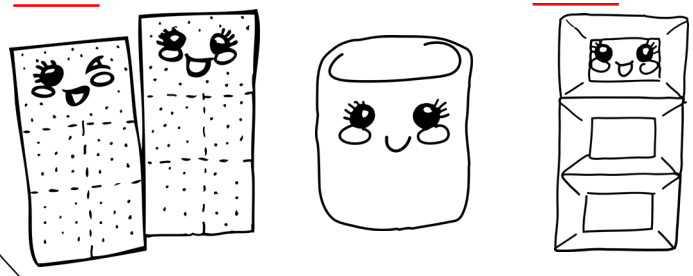
What is a balanced equation?



A balanced equation has the same number of each type of 'thing' on both sides. Let's use an analogy! - S'mores! Graham crackers (Gc), marshmallow (Mm), and chocolate squares (Cs) combine to yield a s'more.

To make a complete s'more, you'll need 2 graham crackers, 1 marshmallow, and 3 chocolate squares:

$$2Gc + Mm + 3Cs \rightarrow Gc_2MmCs_3$$

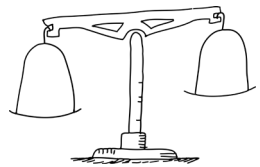


Do Underline each coefficient and circle each subscript.

Do Count the number of *each type of ingredient on each side of the equation.*

Reactants	'Ingredient'	Products
2	graham crackers	2
1	marshmallow	1
3	chocolate squares	3

Is the equation balanced? YES



How would your equation change if you needed to make 4 s'mores? You can ONLY change coefficients!

$$8Gc + 4Mm + 12Cs \rightarrow 4Gc_2MmCs_3$$

Double check: is your new equation balanced? YES

KEY

TOPIC QUESTIONS:

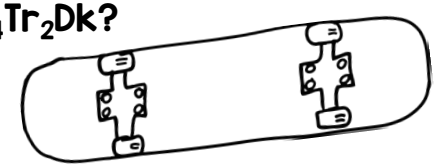
4

What is a balanced equation? (continued)

YOU TRY!

To make a skateboard you need 4 wheels (Wh), 2 trucks (Tr), and 1 deck (Dk). Can you write the 'equation' for making a skateboard if the chemical formula for the final product, the skateboard, is Wh_4Tr_2Dk?

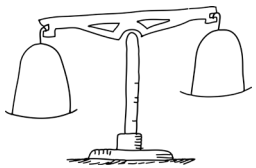
$$4Wh + 2Tr + Dk \rightarrow Wh_4Tr_2Dk$$



Count the number of each type of part on each side of the equation.

Reactants	'Part'	Products
4	wheels	4
2	trucks	2
1	deck	1

Is the equation balanced? YES

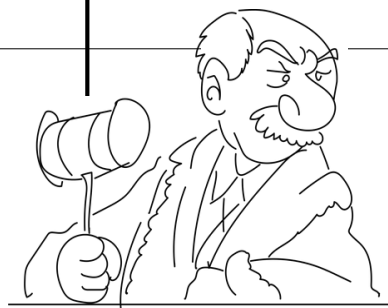


How would your equation change if you needed to make 3 skateboards? You can ONLY change coefficients!

$$12Wh + 6Tr + 3Dk \rightarrow 3Wh_4Tr_2Dk$$

5

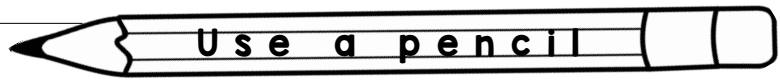
What steps do you need to follow when balancing a chemical equation?



Chemical reactions abide by the LAW OF CONSERVATION OF MASS.

This Law states that matter is neither created nor destroyed in a chemical reaction. In other words, all atoms that were present in the beginning are also present afterwards–their arrangement is just different.

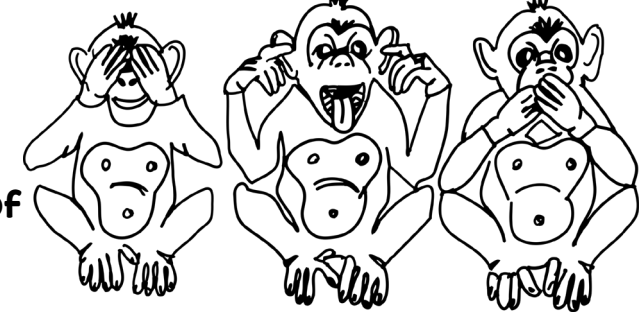
To balance a chemical equation:



1. Start with the Skeletal Equation
2. Set up a "RAP" table

Reactants	Atom	Products

3. Count the number of each type of atom on each side of the equation
4. Insert whole coefficients *in front of* chemical formulas in the equation until both sides of the RAP table are equal
5. IMPORTANT! You can never, ever, ever change a subscript of a chemical formula!
6. HAVE NO FEAR Try starting with the leftmost element and work your way to the last. It's all trial and error!



TOPIC QUESTIONS:

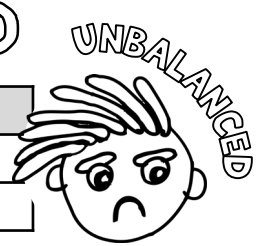
5

What steps do you need to follow when balancing a chemical equation? (continued)

KEY

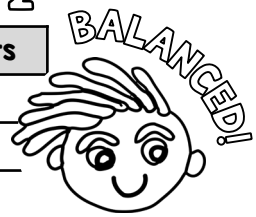
Example: Sodium reacts with oxygen to yield sodium oxide.

$$Na + O_2 \rightarrow Na_2O$$



Reactants	Atom	Products
1	Na	2
2	O	1

$$4Na + O_2 \rightarrow 2Na_2O$$

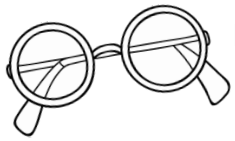


Reactants	Atom	Products
4	Na	4
2	O	2

Trial and error: If we multiply the Na by 2, then the sodium will be balanced, but the oxygens still won't. If we multiply the Na_2O by 2, then the oxygens will balance (2) but the sodium won't.

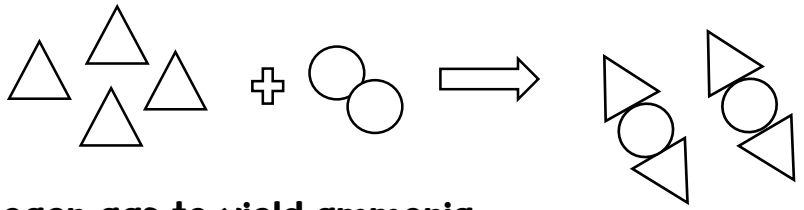
~~$2Na + O_2 \rightarrow Na_2O$~~ ~~$Na + O_2 \rightarrow 2Na_2O$~~

BUT since we'll then have 4 Na atoms on the right, we can multiply the Na on the left by 4 and balance both the oxygen and the sodium.



Notice that we did not change subscripts. We only added coefficients!

Do Draw a picture to represent this balanced equation using shapes.



YOU TRY! **Nitrogen gas reacts with hydrogen gas to yield ammonia.**

$$N_2 + H_2 \rightarrow NH_3$$

Reactants	Atom	Products
2	N	1
2	H	3

$$N_2 + 3H_2 \rightarrow 2NH_3$$

Reactants	Atom	Products
2	N	2
6	H	6

SUM IT UP!

1. Use the "word bank" to create the skeletal chemical equation being described by the word equation.

MnO_2	H_2O	HCl	$MnCl_2$	Cl_2

Hydrochloric acid combines with manganese oxide to yield manganese chloride plus water plus chlorine gas.

$HCl + MnO_2 \rightarrow MnCl_2 + H_2O + Cl_2$

2. What can you NEVER EVER do to balance a chemical equation? You can never change subscripts!

3. Balance the following equation:

$NaCl + F_2 \rightarrow NaF + Cl_2$

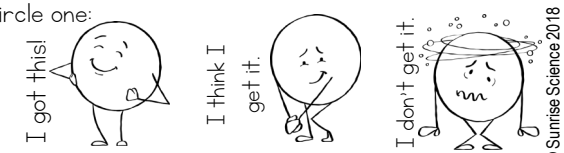
Reactants	Atom	Products
1	Na	1
1	Cl	2
2	F	1

$2\ NaCl + F_2 \rightarrow 2\ NaF + Cl_2$

QUICK WATCH: **TedEd The Law of Conservation of Mass https://tinyurl.com/hyk9grd**

$2 SUMMARY: **Write a summary of the video clip. You have $2 and each word costs 10 cents.**

How are you feeling about the concept of balancing chemical equations? Circle one:



Name: _____ Class: _____ Date: _____

Balancing Equations

ESSENTIAL QUESTION: How does the Law of _____ of Mass apply to chemical _____?

TOPIC QUESTIONS:

1

What is a chemical _____?

A chemical equation is like a '_____' telling what happens during a chemical _____.

Iron and sulfur are heated to _____ iron sulfide.

$$Fe + S \rightarrow FeS$$

The _____ on the left are called the _____.

The _____ in a chemical equation is called '_____'.

The substances on the _____ are called the products. The _____ properties are _____ from those of the reactants.

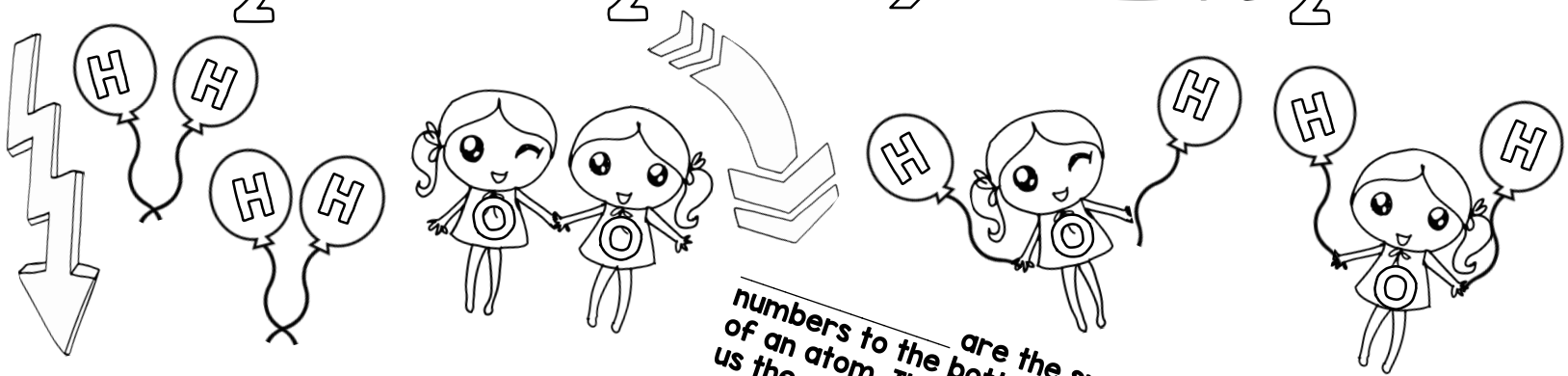
2

How are chemical _____ used in a chemical equation?

A chemical formula tells us which _____ are in a chemical compound and how many _____ of each element there are.

Do Label each part of the equation. Then, explain or show how the pictures relate to the equation.

$$2H_2 + O_2 \rightarrow 2H_2O$$



_____ are the BIG number in front of each atom or chemical formula. This number applies to _____ type of atom in the formula. If there is not a coefficient, then it is an invisible **1**!

_____ are the small numbers to the bottom right of an atom. This number tells us the number of atoms of _____ that element.

TOPIC QUESTIONS:

3

What are the ways that a chemical equation can be _____?

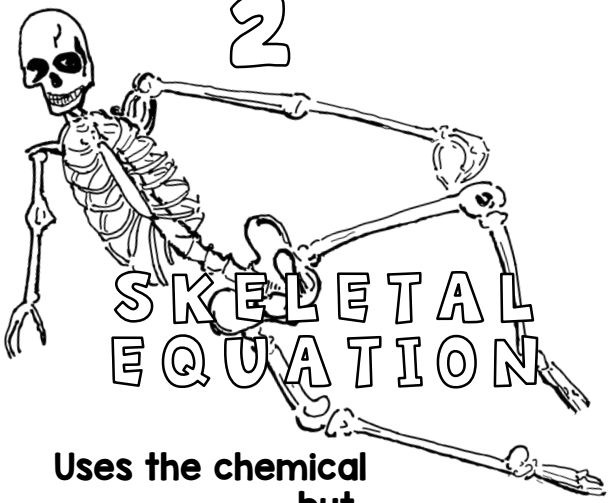
1

_____ EQUATION

Uses _____ words and no formulas.

WORDS

2

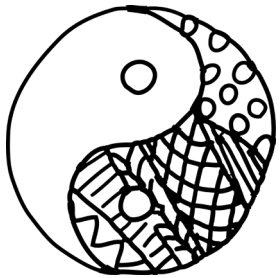


SKELETAL EQUATION

Uses the chemical _____ but _____ coefficients.

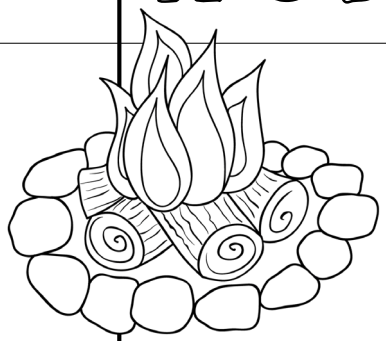
3

_____ EQUATION



Uses _____ to show the correct _____ of reactants and products.

4

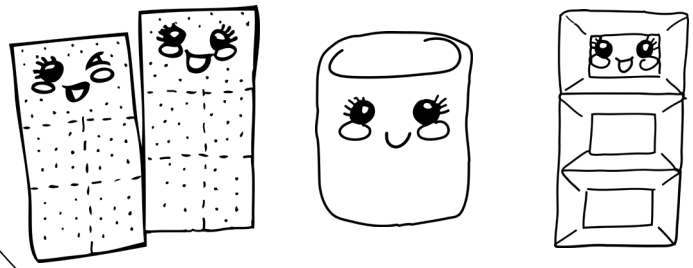


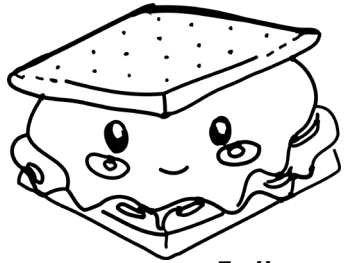
What is a _____ equation?

A balanced equation has the _____ number of each type of 'thing' on both _____. Let's use an analogy! - S'mores! Graham crackers (_____), marshmallow (_____), and chocolate squares (_____) combine to _____ a s'more.

To make a complete s'more, you'll need ___ graham crackers, ___ marshmallow, and ___ chocolate squares:

$$2Gc + Mm + 3Cs \rightarrow Gc_2MmCs_3$$



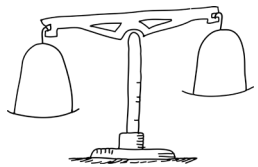


Do Underline each coefficient and circle each subscript.

Do Count the number of *each type of ingredient on each side of the equation.*

Reactants	'Ingredient'	Products

Is the equation balanced?



How would your equation change if you needed to make 4 s'mores? You can ONLY change coefficients!

$$Gc + Mm + Cs \rightarrow Gc_2MmCs_3$$

Double check: is your new equation balanced?

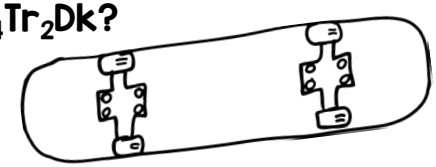
TOPIC QUESTIONS:

4

What is a balanced equation? (continued)

YOU TRY!

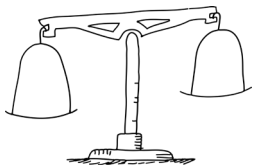
To make a skateboard you need 4 wheels (Wh), 2 trucks (Tr), and 1 deck (Dk). Can you write the 'equation' for making a skateboard if the chemical formula for the final product, the skateboard, is Wh_4Tr_2Dk?



Count the number of *each type of part on each side of the equation.*

Reactants	'Part'	Products

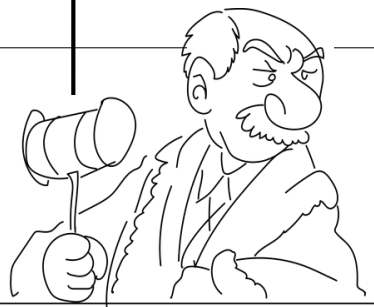
Is the equation balanced?



How would your equation change if you needed to make 3 skateboards? You can ONLY change coefficients!

5

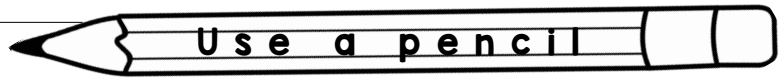
What _____ do you need to follow when _____ a chemical equation?



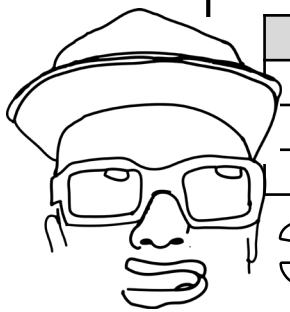
Chemical reactions abide by the LAW OF _____ OF MASS.

This Law states that matter is neither _____ nor _____ in a chemical reaction. In other words, all _____ that were present in the beginning are also _____ afterwards-their _____ is just different.

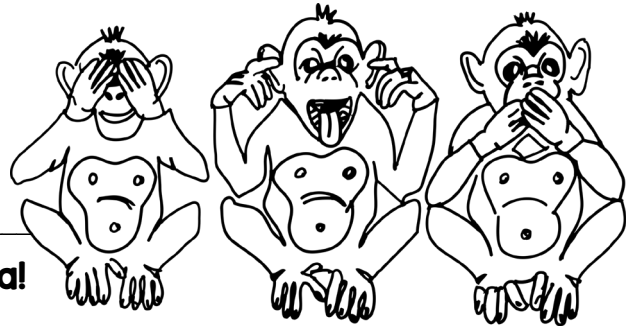
To balance a chemical equation:



1. **Start with the _____ Equation**
2. **Set up a "_____" table**



3. **Count the _____ of each _____ of atom on each _____ of the equation**
4. **Insert _____ coefficients *in front of* chemical formulas in the equation until both sides of the RAP table are _____**
5. **IMPORTANT! You can never, ever, ever change a _____ of a chemical formula!**



6. **Try starting with the _____ element and work your way to the last. It's all _____ and _____!**

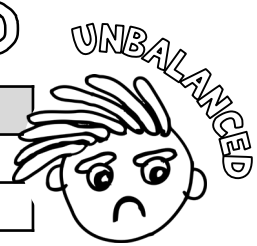
TOPIC QUESTIONS:

5

What steps do you need to follow when balancing a chemical equation? (continued)

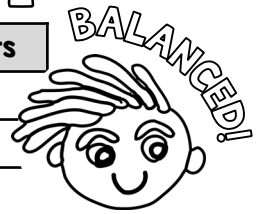
Example: Sodium reacts with oxygen to yield sodium oxide.

$Na + O_2 \rightarrow Na_2O$



Reactants	Atom	Products
	Na	
	O	

$4Na + O_2 \rightarrow 2Na_2O$

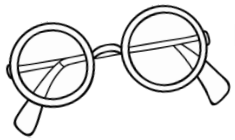


Reactants	Atom	Products
	Na	
	O	

Trial and error: If we multiply the Na by ____, then the sodium will be balanced, but the oxygens still won't. If we multiply the Na_2O by ____, then the oxygens will balance (2) but the sodium won't.

~~$2Na + O_2 \rightarrow Na_2O$~~ ~~$Na + O_2 \rightarrow 2Na_2O$~~

BUT since we'll then have _____ Na atoms on the _____, (2 Na_2O) we can multiply the Na on the left by 4 and balance both the oxygen and the sodium.



Notice that we did not change subscripts. We only added coefficients!

Do Draw a picture to represent this balanced equation using shapes.

YOU TRY! **Nitrogen gas reacts with hydrogen gas to yield ammonia.**

$N_2 + H_2 \rightarrow NH_3$

Reactants	Atom	Products
	N	
	H	

$N_2 + H_2 \rightarrow NH_3$

Reactants	Atom	Products
	N	
	H	

SUM IT UP!

1. Use the "word bank" to create the skeletal chemical equation being described by the word equation.

MnO_2	H_2O	HCl	$MnCl_2$	Cl_2

Hydrochloric acid combines with manganese oxide to yield manganese chloride plus water plus chlorine gas.

2. What can you NEVER EVER do to balance a chemical equation?

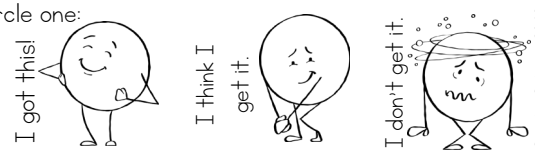
3. Balance the following equation:

$NaCl + F_2 \rightarrow NaF + Cl_2$

QUICK WATCH: **TedEd The Law of Conservation of Mass https://tinyurl.com/hyk9grd**

$2 SUMMARY: **Write a summary of the video clip. You have $2 and each word costs 10 cents.**

How are you feeling about the concept of balancing chemical equations? Circle one:



Name: _____ Class: _____ Date: _____

Balancing Equations

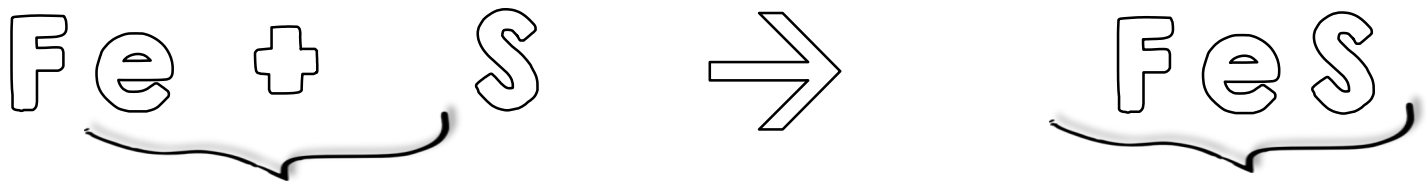
ESSENTIAL QUESTION:

TOPIC QUESTIONS:

1

A chemical equation is like a '_____' telling what happens during a chemical _____.

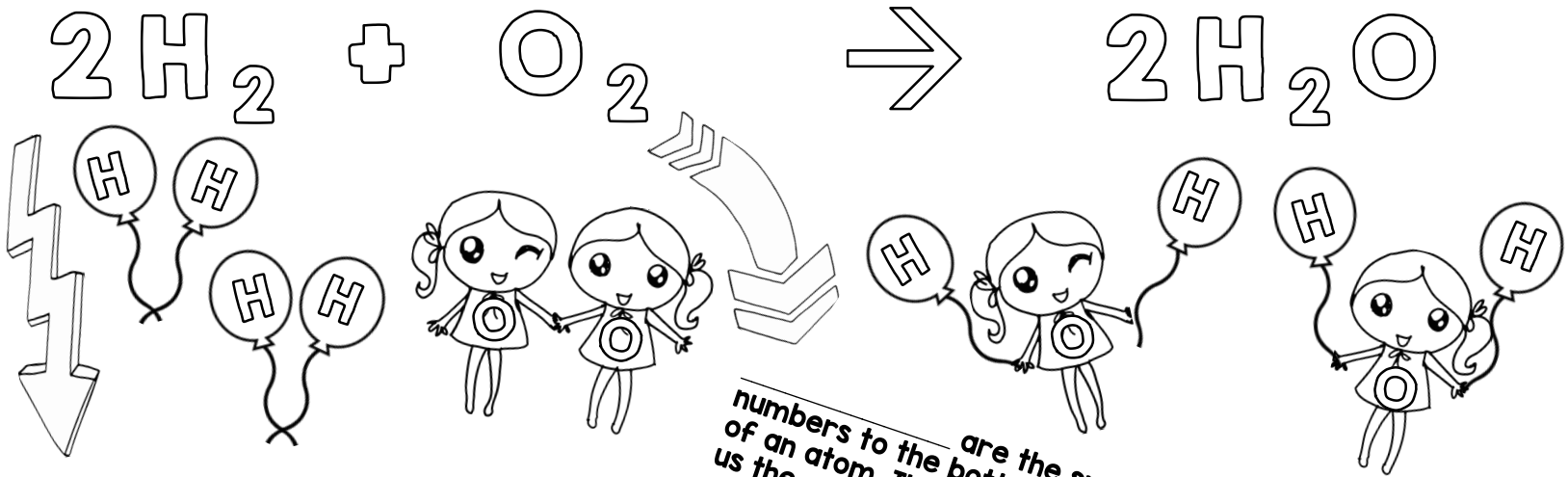
Iron and sulfur are…



2

A chemical formula tells us…

Do Label each part of the equation. Then, explain or show how the pictures relate to the equation.



_____ are the BIG number in front of each atom or chemical formula. This number applies to _____ type of atom in the formula. If there is not a coefficient, then it is an invisible **1**!

_____ are the small numbers to the bottom right of an atom. This number tells us the number of atoms of _____ that element.

TOPIC QUESTIONS:

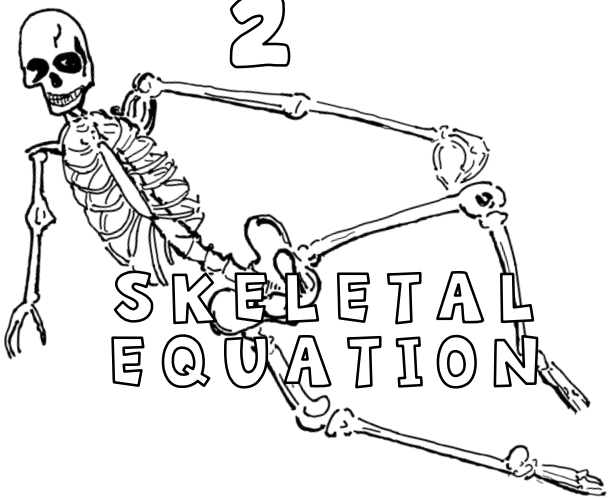
3

1

EQUATION

WORDS

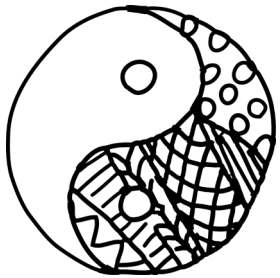
2



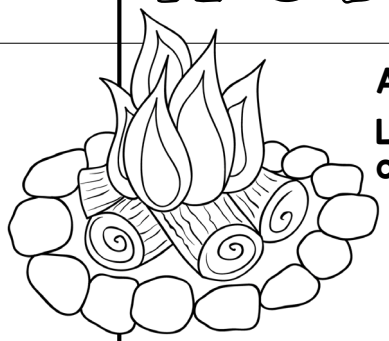
SKELETAL EQUATION

3

EQUATION



4

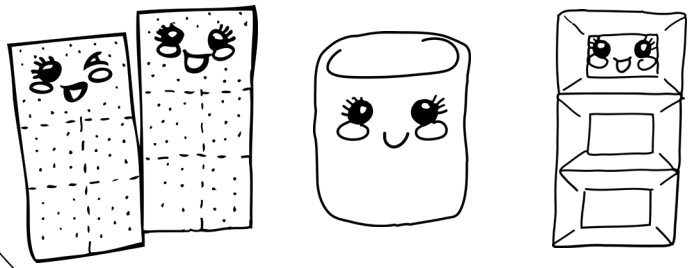


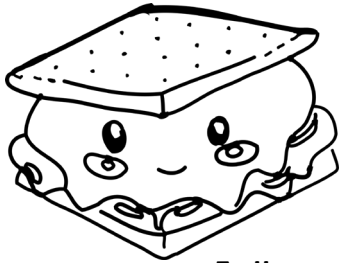
A balanced equation has…

Let's use an analogy! - S'mores! Graham crackers (_____), marshmallow (_____), and chocolate squares (_____) combine to _____ a s'more.

To make a complete s'more, you'll need ___ graham crackers, ___ marshmallow, and ___ chocolate squares:

$$2Gc + Mm + 3Cs \rightarrow Gc_2MmCs_3$$



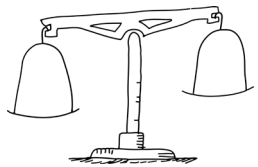


Do Underline each coefficient and circle each subscript.

Do Count the number of *each type of ingredient on each side of the equation.*

Reactants	'Ingredient'	Products

Is the equation balanced?



How would your equation change if you needed to make 4 s'mores? You can ONLY change coefficients!

$$Gc + Mm + Cs \rightarrow Gc_2MmCs_3$$

Double check: is your new equation balanced?

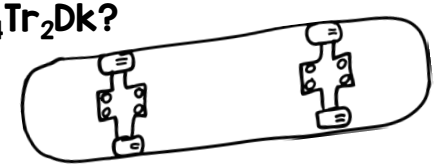
TOPIC QUESTIONS:

4

What is a balanced equation? (continued)

YOU TRY!

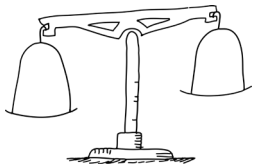
To make a skateboard you need 4 wheels (Wh), 2 trucks (Tr), and 1 deck (Dk). Can you write the 'equation' for making a skateboard if the chemical formula for the final product, the skateboard, is Wh_4Tr_2Dk?



Count the number of *each type of part on each side of the equation.*

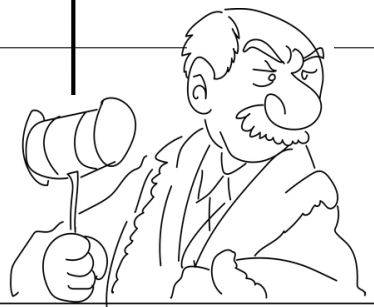
Reactants	'Part'	Products

Is the equation balanced?



How would your equation change if you needed to make 3 skateboards? You can ONLY change coefficients!

5

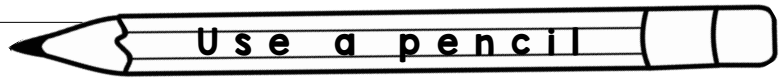


Chemical reactions abide by…

This Law states that…

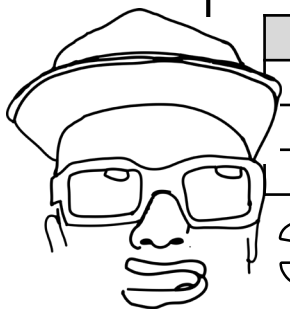
In other words, all _____ that were present in the beginning are also _____ afterwards-their _____ is just different.

To balance a chemical equation:



1

2



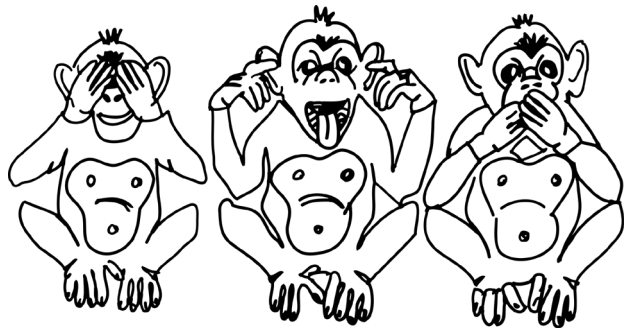
3

4

5

6

IMPORTANT! You can never, ever, ever…



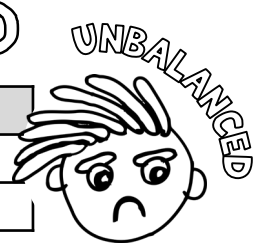
TOPIC QUESTIONS:

5

What steps do you need to follow when balancing a chemical equation? (continued)

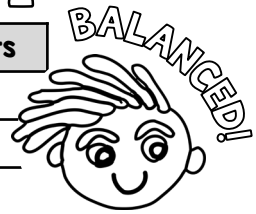
Example: Sodium reacts with oxygen to yield sodium oxide.

$Na + O_2 \rightarrow Na_2O$



Reactants	Atom	Products

$4Na + O_2 \rightarrow 2Na_2O$

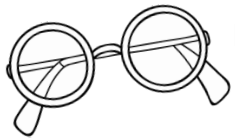


Reactants	Atom	Products

Trial and error: If we multiply the Na by ____, then the sodium will be balanced, but the oxygens still won't. If we multiply the Na_2O by ____, then the oxygens will balance (2) but the sodium won't.

~~$2Na + O_2 \rightarrow Na_2O$~~ ~~$Na + O_2 \rightarrow 2Na_2O$~~

BUT since we'll then have _____ Na atoms on the _____, (2 Na_2O) we can multiply the Na on the left by 4 and balance both the oxygen and the sodium.



Notice that we did not change subscripts. We only added coefficients!

Do Draw a picture to represent this balanced equation using shapes.

YOU TRY! **Nitrogen gas reacts with hydrogen gas to yield ammonia.**

$N_2 + H_2 \rightarrow NH_3$

Reactants	Atom	Products

$N_2 + H_2 \rightarrow NH_3$

Reactants	Atom	Products

SUM IT UP!

1. Use the "word bank" to create the skeletal chemical equation being described by the word equation.

MnO_2	H_2O	HCl	$MnCl_2$	Cl_2

Hydrochloric acid combines with manganese oxide to yield manganese chloride plus water plus chlorine gas.

2. What can you NEVER EVER do to balance a chemical equation?

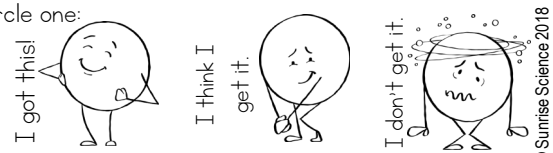
3. Balance the following equation:

$NaCl + F_2 \rightarrow NaF + Cl_2$

QUICK WATCH: **TedEd The Law of Conservation of Mass https://tinyurl.com/hyk9grd**

$2 SUMMARY: **Write a summary of the video clip. You have $2 and each word costs 10 cents.**

How are you feeling about the concept of balancing chemical equations? Circle one:



Name: _____ Class: _____ Date: _____

Balancing Equations

ESSENTIAL QUESTION:

TOPIC QUESTIONS:

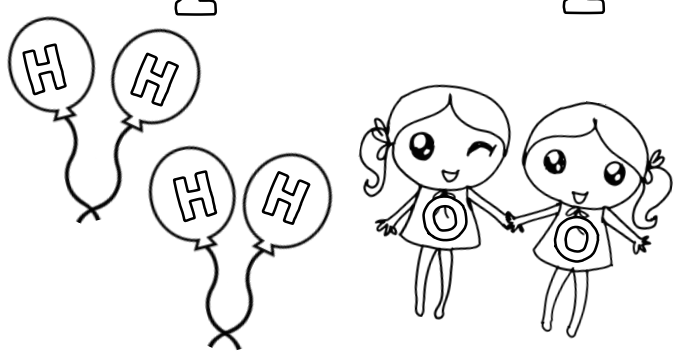
1

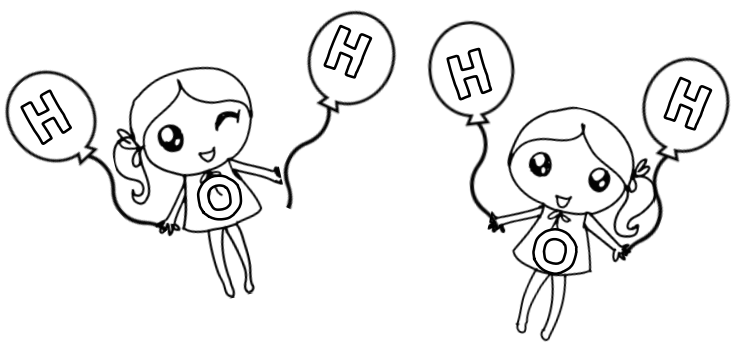
$$Fe + S \rightarrow FeS$$

2

Do Label each part of the equation. Then, explain or show how the pictures relate to the equation.

$$2H_2 + O_2 \rightarrow 2H_2O$$



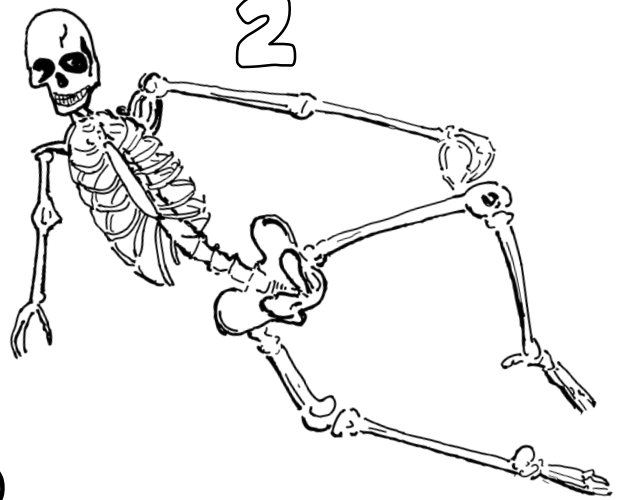


TOPIC QUESTIONS:

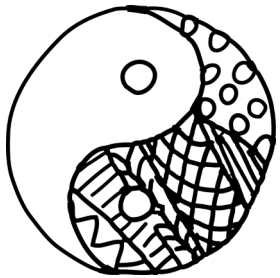
3

1

2

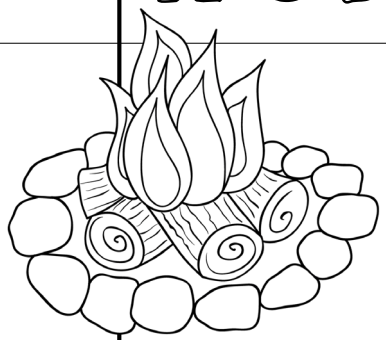


3

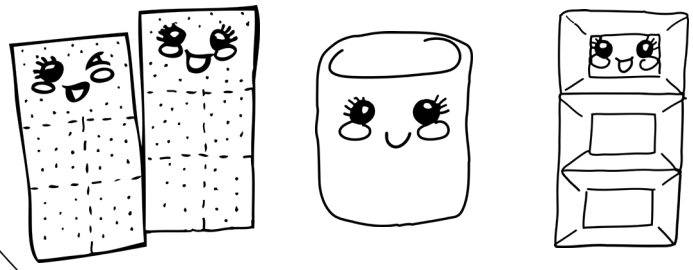


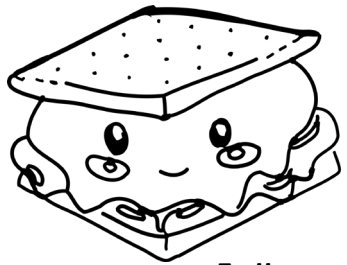
WORDS

4



Do → Underline each coefficient and circle each subscript.

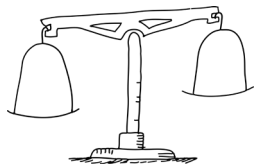




Do → Count the number of *each type of ingredient on each side of the equation.*

Reactants	'Ingredient'	Products

Is the equation balanced?



How would your equation change if you needed to make 4 s'mores? You can ONLY change coefficients!

Double check: is your new equation balanced?

TOPIC QUESTIONS:

4

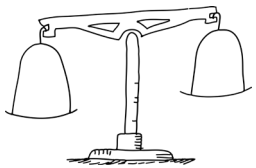
What is a balanced equation? (continued)

YOU TRY!

Count the number of *each type of part on each side of the equation.*

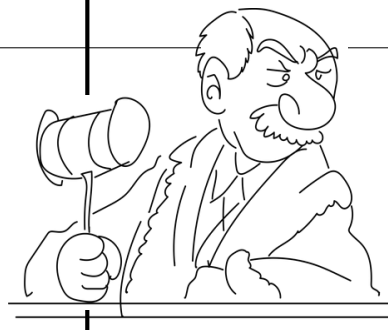
Reactants	'Part'	Products

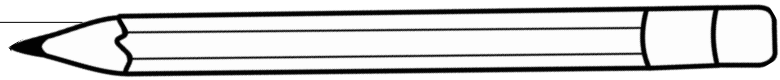
Is the equation balanced?



How would your equation change if you needed to make 3 skateboards? You can ONLY change coefficients!

5





1

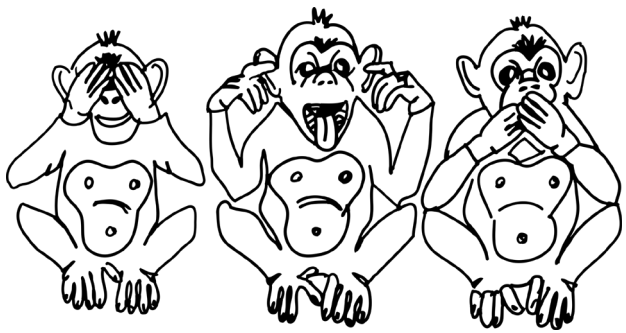
2

3

6

5

4

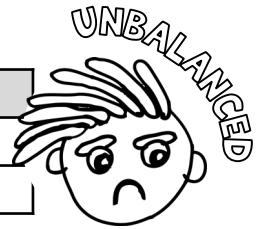


TOPIC QUESTIONS:

5

What steps do you need to follow when balancing a chemical equation? (continued)

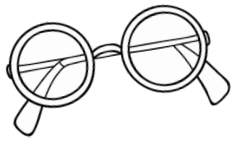
Example:



Reactants	Atom	Products

Reactants	Atom	Products

Trial and error:



~~$2Na + O_2 \rightarrow Na_2O$~~ ~~$Na + O_2 \rightarrow 2Na_2O$~~

Do **Draw a picture to represent this balanced equation using shapes.**

YOU TRY! **Nitrogen gas reacts with hydrogen gas to yield ammonia.**

Reactants	Atom	Products

Reactants	Atom	Products

SUM IT UP!

1. Use the "word bank" to create the skeletal chemical equation being described by the word equation.

MnO_2	H_2O	HCl	$MnCl_2$	Cl_2

Hydrochloric acid combines with manganese oxide to yield manganese chloride plus water plus chlorine gas.

2. What can you NEVER EVER do to balance a chemical equation?

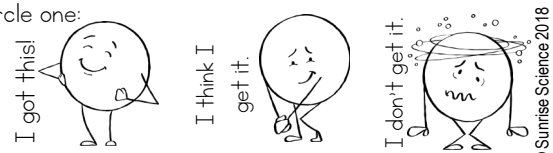
3. Balance the following equation:

$NaCl + F_2 \rightarrow NaF + Cl_2$

QUICK WATCH: **TedEd The Law of Conservation of Mass https://tinyurl.com/hyk9grd**

$2 SUMMARY: **Write a summary of the video clip. You have $2 and each word costs 10 cents.**

How are you feeling about the concept of balancing chemical equations? Circle one:



TERMS OF USE

© SUNRISE SCIENCE

Thank you for your purchase! The **original** purchaser of this document/product is granted permission to reproduce the pages in needed quantities for the purchaser's classroom/home use only. By purchasing this resource, you are agreeing that the contents are the property of Sunrise Science and **licensed to you only for classroom/personal use as a single user**. I retain the copyright, and reserve all rights to this product.

YOU MAY:

- Use items (free and purchased) for your own classroom students, or your own personal use.
- Reference this product in blog posts, at seminars, professional development workshops, or other such venues PROVIDED there is both credit given to myself as the author and a link back to my TPT store is included in your post/presentation.
- Distribute and make copies of **free items only** to other teachers PROVIDED there is credit given to Sunrise Science and a link back to my TPT store.

YOU MAY NOT:

- Claim this work as your own, alter the files in any way (unless this has been advertised as an editable resource), or remove/attempt to remove the copyright/watermarks.
- Sell the files or combine them into another unit for sale/free.
- Post this document for sale/free elsewhere on the internet (this includes public classroom websites and Google Doc links on blogs).
- Make copies of purchased items to share with others is strictly forbidden and is a violation of the Terms of Use, along with copyright law.
- Obtain this product through any of the channels listed above.

Thank you for abiding by universally accepted codes of professional ethics while using this product.

If you encounter an issue with your file, notice an error, or are in any way experiencing a problem, please contact me at SunriseScienceTPT@gmail.com and I will be more than happy to help sort it out!

Thank you 😊 Karla @ Sunrise Science

/SunriseSciences @SunriseScience @SunriseScienceClassroom

Sunrise SCIENCE

CREDIT FOR FONTS AND GRAPHICS

Thank you to these amazing artists!

kimberly geswein fonts kg

Kate Hadfield DESIGNS

OW Fonts

GLITTER meets glue designs Glitter Without the Mess!

A LITTLE PEACE OF AFRICA

KB3 TEACH FONTS

SARAH PECORINO illustration

Kelly B.'s Clipart

CARRIE STEPHENS art & design

ron leishman digital toonage

away·with·the·pixels Graphics & Clip Art

PRIME AND PI

CLIP ART by PRINCE PADANIA

Teachers Resource Force

Workman's Wonders

WANT TO SAVE MONEY ON FUTURE PURCHASES?

Earning 'TPT Credit' saves you money on future purchases! You can simply apply the credits you earn to a purchase at checkout. To earn your credit, go to your My Purchases on TeachersPayTeachers.com and click on 'Provide Feedback' underneath each purchase. You will be taken to a page where you can give a quick rating and leave a comment about the product.

Easy peasy!