

SPECIAL ED

PHYSICAL & CHEMICAL CHANGES

BOOK

ACTIVITIES

EXPERIMENTS

ASSESSMENT

INCLUDES GOOGLE SLIDES



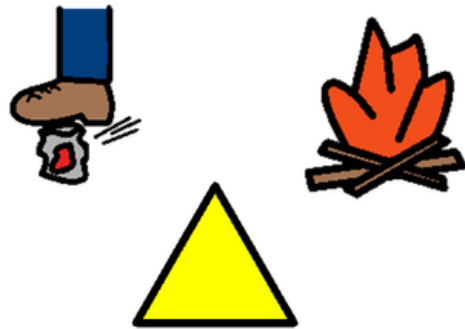
For students who:

- *are emerging or non-readers*
- *take alternate assessments*
- *are in special education*
- *short-attention span*
- *lack pre-requisite skills*
- *benefit from the use of pictures for support*
- *middle or high school*



Physical and Chemical Changes

By
Christa Joy
Special Needs for Special Kids



Christa Joy, Special Needs for Special Kids
The Picture Communication Symbols ©1981–2018 by Tobii Dynavox. All Rights Reserved
Worldwide. Used with permission. Boardmaker® is a trademark of Tobii Dynavox

Table of Contents

Pages	Activity
4-5	Vocabulary board
6-9	Vocabulary cards
10-18	Vocabulary cut and paste
19-24	Flash cards (color only)
25-31	Circle maps
32-36	Sorting Activities
37-51	Change Experiments
52-58	Cloze worksheets
59-69	Assessment
70-71	Terms of Use

Also included in this resource as separate files:

- Lesson plans
- Links and directions to digital activities
- PowerPoints (these are the books in the lesson plans)
- Activities in black and white

Christa Joy, Special Needs for Special Kids
The Picture Communication Symbols ©1981–2018 by Tobii Dynavox. All Rights Reserved
Worldwide. Used with permission. Boardmaker® is a trademark of Tobii Dynavox

This unit contains over 100 pages of material. I have included a detailed lesson plan to help you make the most of everything in this unit including how to add some group activities.

The activities come in 2 separate files, one in color and one in black and white.

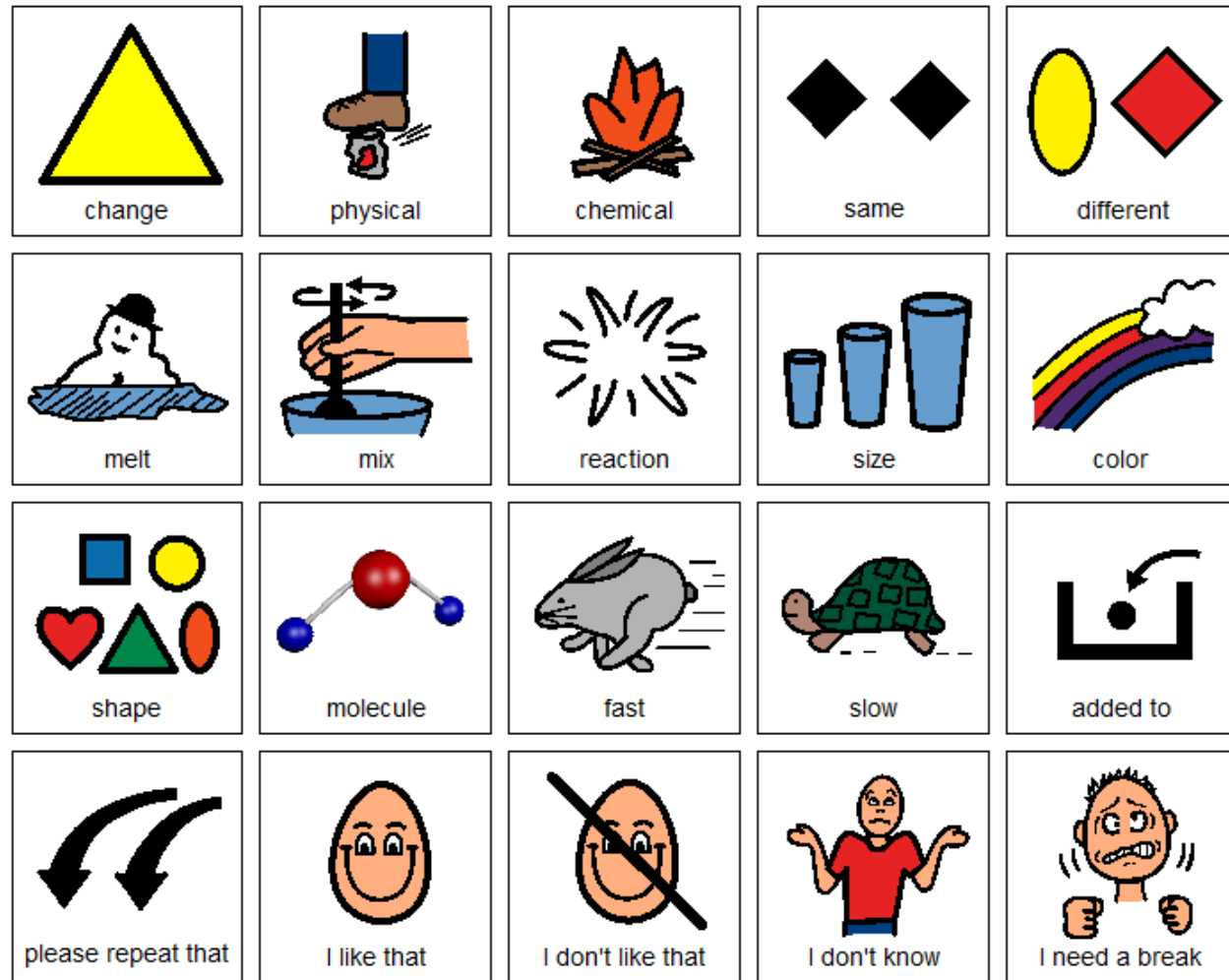
14 days

Day 4

Activity	Notes	Materials
Read or listen to a recording of the book (10 minutes)	<ul style="list-style-type: none">• Read through the story, asking lots of questions• Continue to make connections between book and vocabulary board	<ul style="list-style-type: none">• Book• Vocabulary board
Vocabulary cards cut and paste (15 minutes)	<ul style="list-style-type: none">• This is the first time you are doing the activity, so I would choose the easier option of having students find the matching picture that goes with the definition• Great way to assess if your students are connecting the content to your visual supports, like the vocabulary board• Use color coding if needed	<ul style="list-style-type: none">• Vocabulary cut and paste worksheets• Scissors• Glue• Vocabulary board
Review (5 minutes)	<ul style="list-style-type: none">• Review the sorting activity from yesterday	<ul style="list-style-type: none">• Finished sorting activity
Sorting Activity (10 minutes)	<ul style="list-style-type: none">• Complete the sorting activity using the symbols• Use color coding as needed	<ul style="list-style-type: none">• Sorting activity• Scissors• Glue
Sharing (10 minutes)	<ul style="list-style-type: none">• Each student shares their finished sorting activity	<ul style="list-style-type: none">• Completed activity• Communication devices
Essential Questions	<ul style="list-style-type: none">• You can ask lots of questions about the pictures you are sorting.• How can you tell by looking at the picture what type of change is occurring?	

The lesson plans contain:

- Overall tips for teaching students with significant needs
- A quick look at what you will do each day
- Detailed instructions on how that day's lesson should run

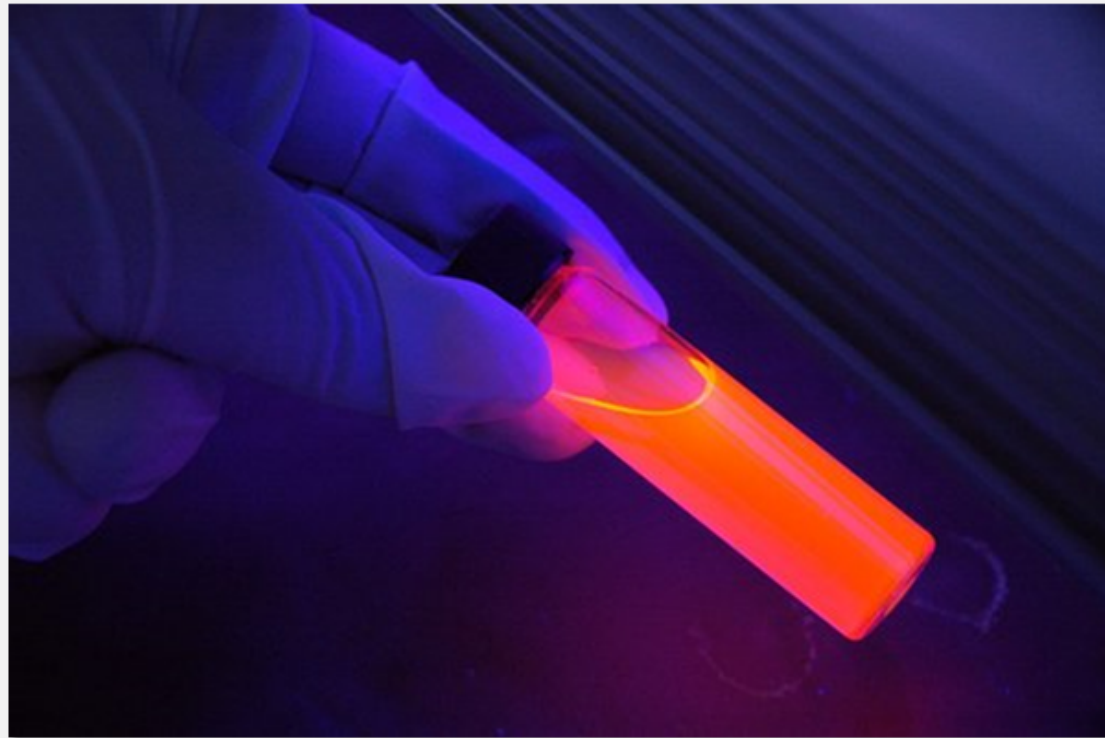


This unit comes with a vocabulary board.

Vocabulary boards are great for ALL students to assist with participation and engagement in group discussions.

Tips on how to use in the unit!!

Chemical changes occur when there is an actual change in the molecular structure of the object. Something new is created.



There is a book with this unit using simple text and photos. It is 45 pages and is an overview of the difference between physical and chemical changes.

It comes in PowerPoint versions as well as a movie (mp4) version.

physical change

Change in the shape, size or color of an object that does **NOT** change the molecules in the object.



chemical change

Change that results in a new substance being formed.



physical property

Things that describe how an object looks and feels.



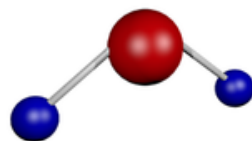
chemical property

Things about an object that determine how it will react with another object.



molecules

Make up objects and held together by strong bonds.



oxidized

Iron will react with the oxygen in the air and causes a chemical change seen as rust.



reactant

Something added to cause a chemical reaction to occur.



reagent

Something added to cause a chemical reaction to occur that also gets **used up** during the reaction.



There are 12 vocabulary cards that come in color and black and white.

Included are suggestions for group activities to do with these each day.

product

New substance formed after a chemical reaction.



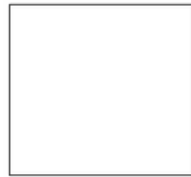
chain reaction

When one chemical change causes others to occur.



synthesis reaction

Two substances combine to make a new substance.

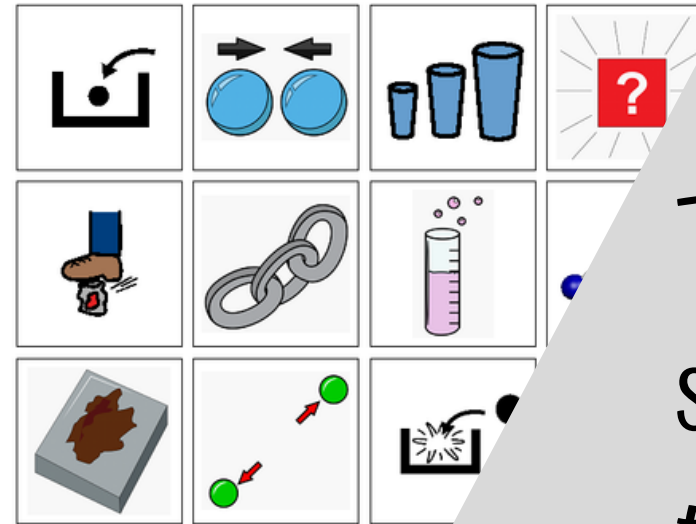


decomposition reaction

One substance breaks apart into two new substances.



Cut apart and match pictures with definition.



There is an activity where students will match either the picture to the definition or the definition to the picture (harder).

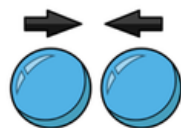
product



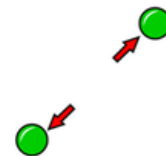
chain reaction



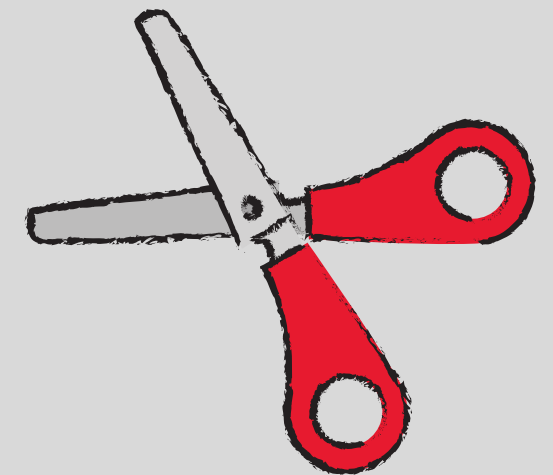
synthesis reaction



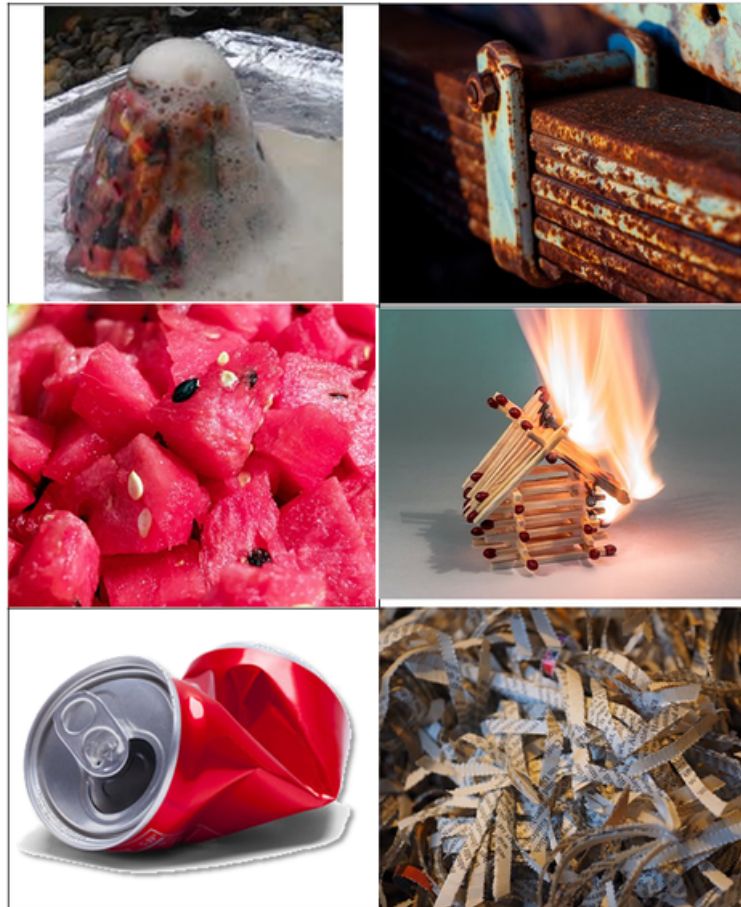
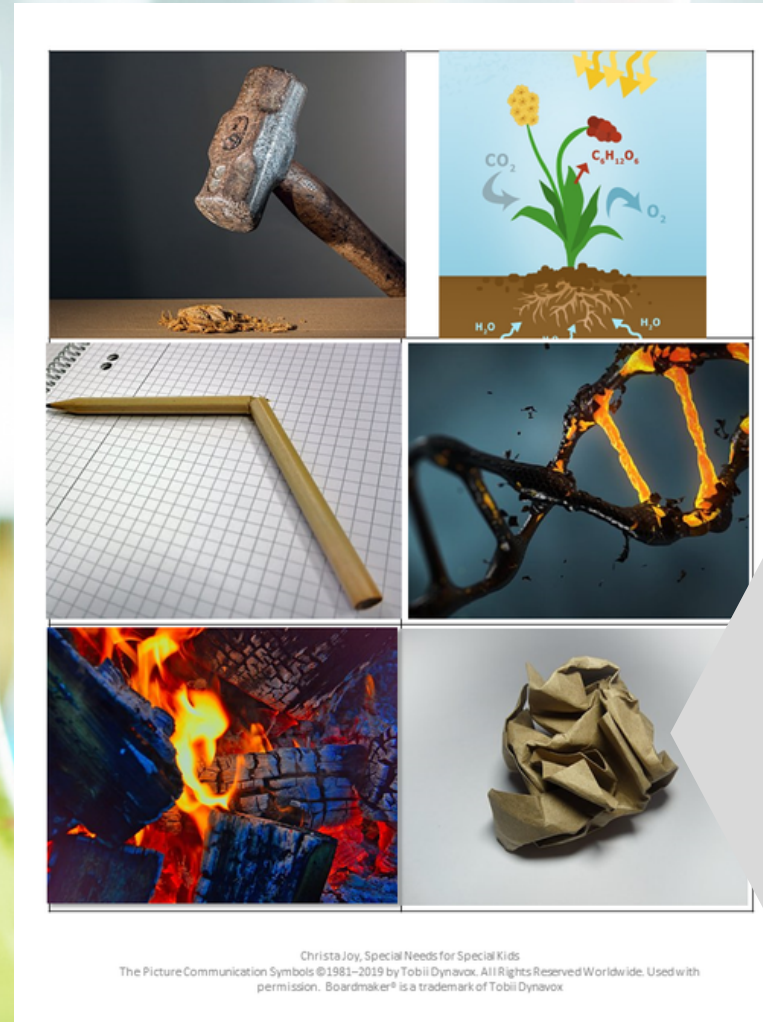
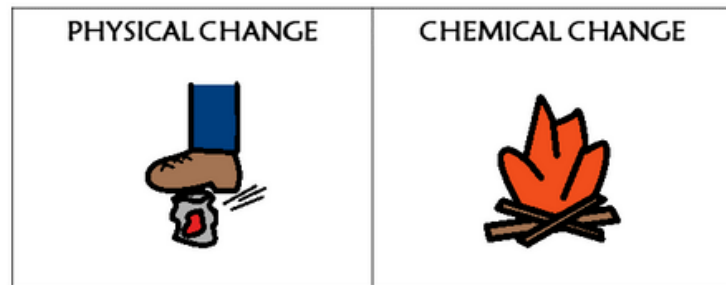
decomposition reaction



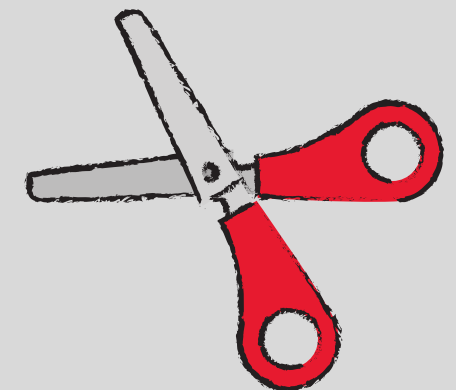
Iron will react with the oxygen in the air and causes a chemical change seen as rust.	Things about... determine how... another...
Something added to cause a chemical reaction to occur.	New substance formed... chemical reaction...
Things that describe how an object looks and feels.	Change in the shape, size... of an object that does NOT... change the molecules in the...
When one chemical change causes others to occur.	Two substances combine to make... new substance.
One substance breaks apart into two new substances.	Something added to cause a chemical reaction to occur that also gets used up during the reaction.
Change that results in a new substance being formed.	Make up objects and held together by strong bonds.



Physical and chemical change label cards used for students to hold up when you show a picture identifying the correct type of change.

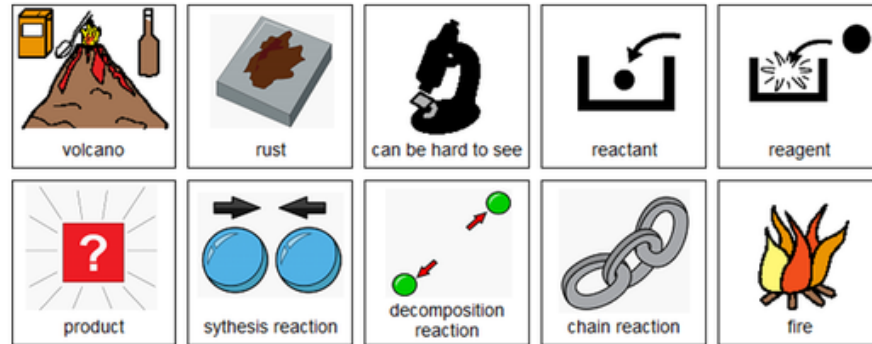


There is a set of flash cards.
There are 24 photos and 2
category labels. Students will
identify what is the change is in
each photo.

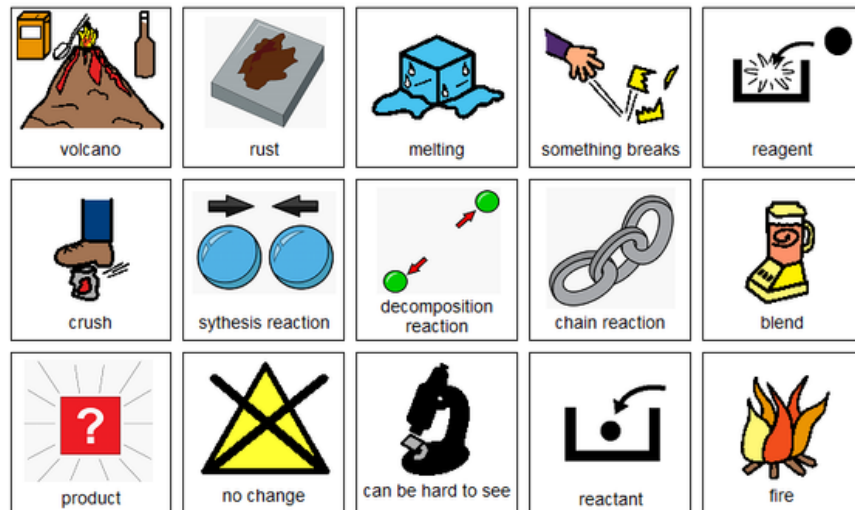


Errorless version

Cut apart pictures and place in circle map about chemical changes.



Cut apart pictures and place in circle map **ONLY IF** they relate to chemical changes.



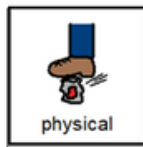
Christa Joy, Special Needs for Special Kids
Picture Communication Symbols ©1981–2019 by Tobii Dyr
Used worldwide. Used with permission. Boardmaker® is a trademark



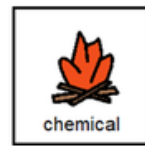
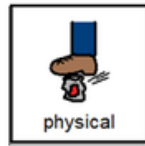
There are 2 circle maps. There is one on physical changes and one on chemical changes.

Circle maps are a great way for students to see the concept at a glance. There are 2 versions:

- One is errorless
- One has wrong answers mixed in students will have to set aside



Christa Joy, Special Needs for Special Kids
The Picture Communication Symbols ©1981-2019 by Tobii Dynavox. All Rights Reserved
Worldwide. Used with permission. Boardmaker® is a trademark of Tobii Dynavox



Christa Joy, Special Needs for Special Kids
The Picture Communication Symbols ©1981-2019 by Tobii Dynavox. All Rights Reserved
Worldwide. Used with permission. Boardmaker® is a trademark of Tobii Dynavox

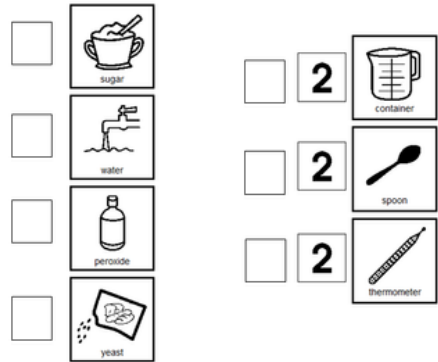
Students will sort physical and chemical changes. There are photos and picture symbols included. Suggestions for differentiation is included.

Physical or Chemical Change Experiment #1

Heat or No Heat

People on my team: _____

Materials needed:



Physical or Chemical Change Experiment #1

Heat or No Heat

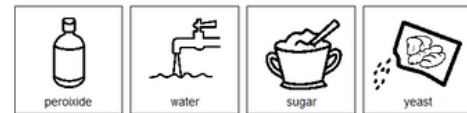
Data collection

Mixture #1
Contains:
Peroxide and
yeast

1 []

Mixture #2
Contains:
Sugar and water

2 []

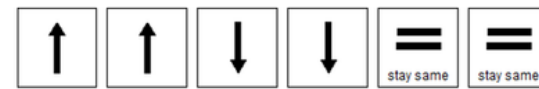


Physical or Chemical Change Experiment #1

Heat or No Heat

My hypothesis

I think the temperature of:
Mixture #1 will []
Mixture #2 will []

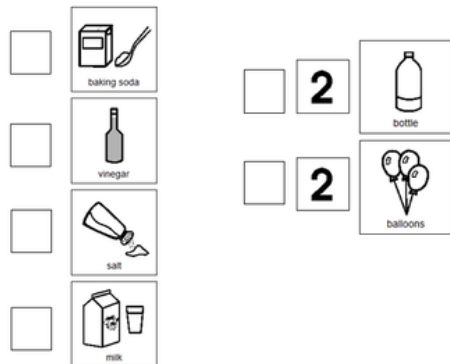


Physical or Chemical Change Experiment #2

Producing a Gas

People on my team: _____

Materials needed:

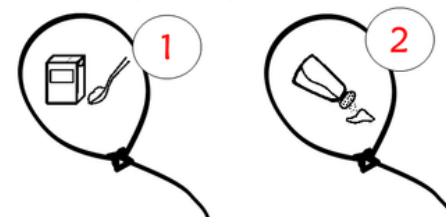


Physical or Chemical Change Experiment #2

Producing a Gas

Preparing Materials

In each balloon, put 1 teaspoon of:



In each bottle, put 1 cup of:



Physical or Chemical Change Experiment #2

Producing a Gas

What I knew

When there is a chemical change gas [] released.

When there is a physical change then gas is released. []

What I learned

Bottle #1 had a [] change.

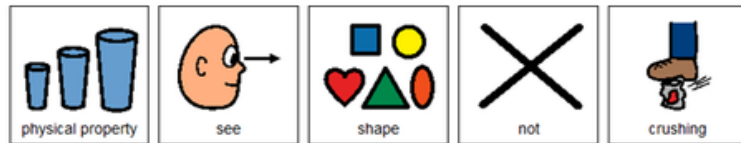
Bottle #2 had a [] change.



There are 2 experiments that walk students through the scientific method step by step using pictures.

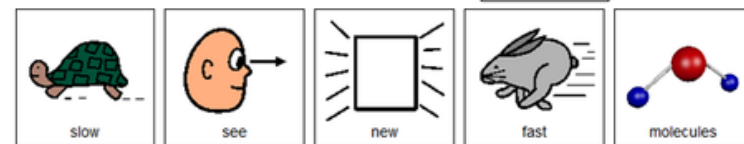
Physical Changes

1. A physical change does change the molecules in the object.
2. An example of a physical change is a can.
3. Physical changes change the of the object.
4. An example of a physical property is the of the object.
5. It is easy to a physical change.



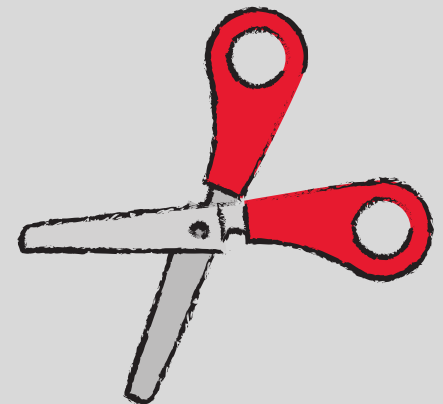
Chemical changes

1. A chemical change actually changes the in .
2. When there is a chemical change, you end up with a product.
3. Some chemical changes are like a firecracker.
4. Some chemical changes are like when rust forms.
5. Chemical changes are not always easy to .

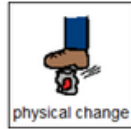


There are 4 close worksheets that are a great informal assessment. There are 2 for physical and 2 for chemical changes.

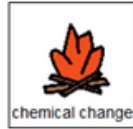
Answer key included.



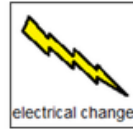
1. This change results in a NEW substance being formed.



physical change



chemical change

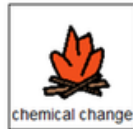


electrical change

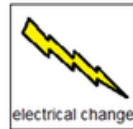
2. This change just changes how the object looks.



physical change

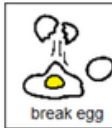


chemical change



electrical change

3. Circle all the examples of physical changes.



break egg



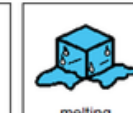
fireworks



break



crush

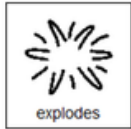


melting



light match

4. A physical change can also be when something like an ice cream cone:



explodes



melts

5. Chemical changes can be harder to:



find



feel

1. This change results in a NEW substance being formed.

- A. Physical change
- B. Chemical change
- C. Electrical change

2. This change just changes how the object looks.

- A. Physical change
- B. Chemical change
- C. Electrical change

3. Circle all the examples of physical changes.

- A. Break an egg
- B. Fireworks
- C. Break a stick
- D. Crush a can
- E. Melting ice cube
- F. Light a match

4. A physical change can also be when something like an ice cream cone:

- 1. Explodes
- 2. Melts
- 3. bakes

5. Chemical changes can be harder to:

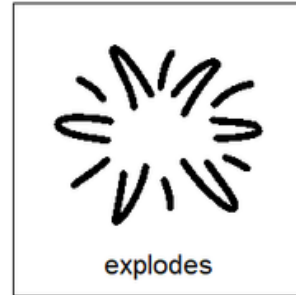
- A. Find
- B. Feel
- C. See

6. Chemical changes actually make what change:

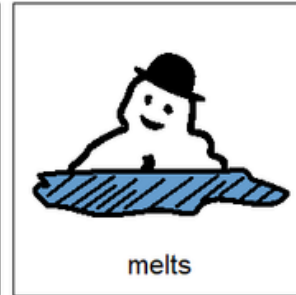
- A. Molecules
- B. Feathers
- C. Weather

Print onto cardstock or mount on index cards. Cut pictures apart and show student answer choices for each question.

Q 4



explodes



melts



bakes

Version 3



feel

Christa Joy, Special Needs for Special Kids
The Picture Communication Symbols ©1981-2019 by Tobii Dynavox. All Rights Reserved.
Used with permission. Boardmaker® is a trademark of Tobii Dynavox



FINALLY the assessment!! There are 3 versions.

- 10 questions with 3 picture choices for each question
- cut out the answer choices and glue them on index cards
- traditional multiple choice

Answer key included.

For example, when you tear a piece of paper into small pieces, that is a physical change. Those small pieces are still paper. It has not changed into a new thing. The size is just smaller.

Listen to the book read aloud about physical and chemical changes

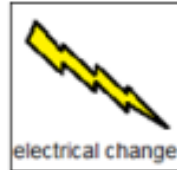


Christa Joy, Special Needs for Special Kids

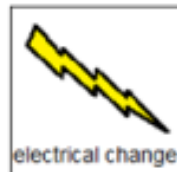
This unit also has digital activities. There is a movie version of the books students can listen to read aloud.

Great for review

1. This change results in a NEW substance being formed.



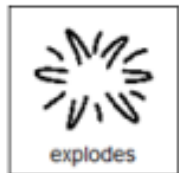
2. This change just changes how the object looks.



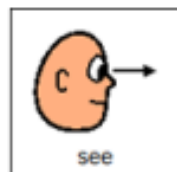
3. Circle all the examples of physical changes.



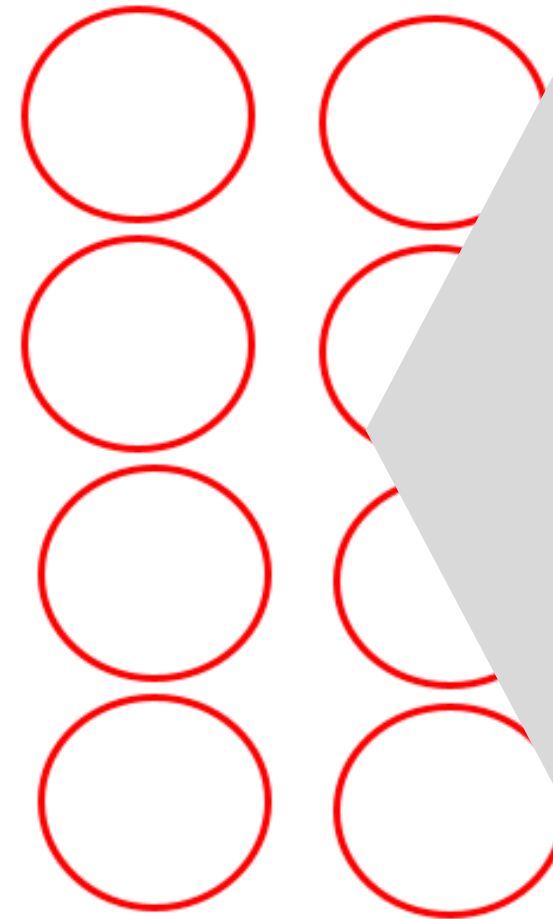
4. A physical change can also be when something like an ice cream cone:



5. Chemical changes can be harder to:



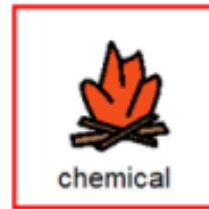
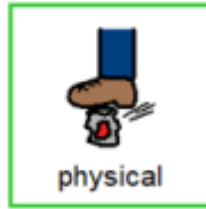
Circle the correct answer.



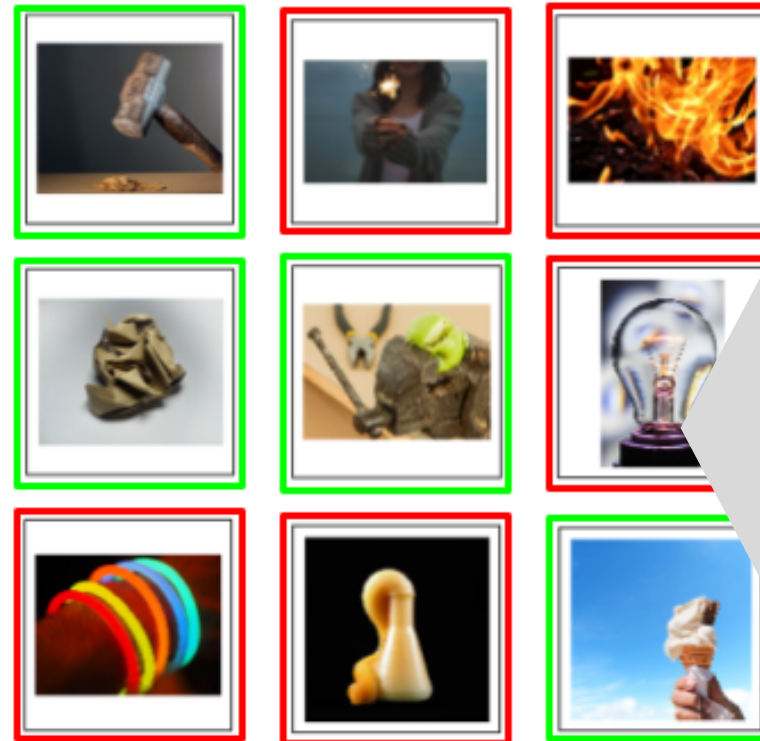
The digital activities have students click and drag their answers.

perfect for all learning levels

Day 3



Sort pictures into correct column on previous page. If you are not sure, place it on the middle line.



There are 2 sets of slides. One set has color-coding for more support.

Heat or No Heat

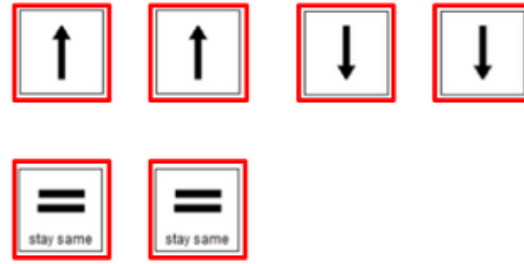
Use the pictures to finish the hypothesis. There are more pictures than you need.

My hypothesis

I think the temperature of:

Mixture #1 will

Mixture # 2 will



There is also a set of slides that leads students through both experiments.

Heat or No Heat

What I knew

When there is a chemical change the temperature

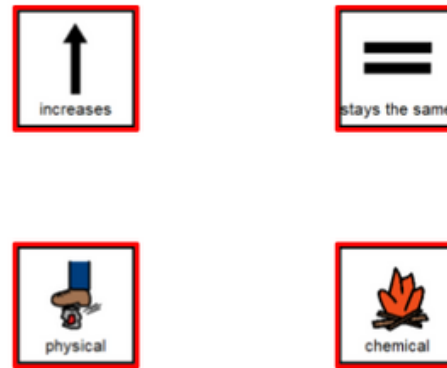
When there is a physical change the temperature

What I learned

Mixture #1 had a change.

Mixture #2 had a change.

Use the pictures to finish each sentence showing what you learned in the experiment.



This resource comes in a zipped folder. You will need to unzip the folder to access all the contents which include:

- ***14 days of lesson plans***
- ***Physical and chemical changes activities in color***
- ***Physical and chemical changes activities in black and white***
- ***Voice-recorded PowerPoint show***
- ***Physical and chemical changes book (PowerPoint) to use with activities***
- ***Physical and chemical changes experiments***
- ***Links and directions to digital activities***