UNIT 3

B-1: Concepts of Physical Science

KEY VOCABULARY

Culturally Responsive & Place-Based Introduction of Science Vocabulary

CHEMICAL PROPERTY

Place-Based Perspective

Show the students a piece of metal that has rusted. Ask them if the metal is the same now as it had been before the rust. Explain that the iron is no longer just iron but iron oxide. This change took place as part of a chemical reaction and is known as a chemical property of iron. The property is iron's ability to react with oxygen in the presence of water, over time.

Heritage Cultural Perspective

The chemical properties of elements found in Southeast Alaska have long been recognized by Tlingit, Haida and Tsimshian peoples. Copper, for example, will eventually react with other elements to form copper carbonate — a blue-green substance on the surface of the metal. Given that copper was used in a variety of ways, the people undoubtedly observed these color changes!

UNIVERSAL

Place-Based Perspective

Show students the end of a power cord and point out the two metal prongs. Ask the students if the cord is universal in that it can be plugged into any outlet. Explain then that though it is universal in the US, it is not universal around the world. Chemicals have properties that are universal too and remain the same no matter where you are.

Heritage Cultural Perspective

There are many things that are universal to the human experience. Humans have shared same experiences and needs throughout the world and throughout time. Food, water, and shelter are universal needs. Love and companionship are common universal aspirations. Alaska Native peoples share these universal components of human life on Earth with all other people.

CHARACTERISTIC

Place-Based Perspective

Ask for student volunteers to draw funny faces on the board. Then ask students to point out some of the details of those faces. Explain that such details are characteristics of the face. Tell the students that characteristics can also apply to chemicals, behavior, personality and any number of details used to describe an object or substance. Ask them what characteristics orange juice has.

Heritage Cultural Perspective

In Southeast Alaska, the indigenous peoples have been familiar with the characteristics of local landscapes for thousands of years. Familiarity with these characteristics allowed them to navigate, recognize landmarks, and identify environmental changes. A deep understanding of one's immediate surroundings influences one's sense of place in self-identity, a key aspect of Tlingit culture.

Culturally Responsive & Place-Based Introduction of Science Vocabulary

BEHAVIOR

Place-Based Perspective

Show students the picture of a kittiwake chick on p. 211. Ask the students what the chick seems to be doing. What does it want? Explain that this behavior of begging is normal; the chick is hungry and is asking its parent to feed it. Explain that non-living materials can have behaviors too. Ask the students what the behavior of soda in a glass is immediately after pouring it (demonstrate if possible).

Heritage Cultural Perspective

Respectable behavior was paramount in Tlingit culture. Those of high social class especially were expected to control their behavior, emotions and words at all times. They were to be modest, gentle, and generous. Furthermore, they were expected not to brag about their status, wealth, or family lineage.

NUCLEAR

Place-Based Perspective

Show the students a peach and ask them to imagine the peach is an atom but much, much larger. Cut the peach in half and show them the cross section. Explain that the center of the atom is called the nucleus. In this case the seed is representing the nucleus. Tell the students that it is reactions involving this nucleus that produce mass amounts of electricity, such as that produced by nuclear power plants and nuclear bombs.

Heritage Cultural Perspective

While the nucleus of atoms was traditionally an unknown concept in Alaska Native culture, the term is also used to refer to the "core" of other objects. A "nuclear family" for example, includes parents and their children. Traditionally, Tlingit and Haida people would live with their extended families. Today however, many people live with only their nuclear families — the standard western household.

FLAMMABILITY

Place-Based Perspective

Place a stick in a waterless cup and another in a cup full of water. Ask the students which ones they would use in a campfire and why. Explain that the characteristics of an object or substance determine its "flammability." Ask the students which is more flammable, water or gasoline. Dry wood or wet wood?

Heritage Cultural Perspective

The flammability of substances found in their environment was important for Alaska Native people. Fire was needed for cooking as well as for a light source. Brittle dry and dead wood would burn more readily and faster than wet, recently cut live wood. In other parts of Alaska, people often need to use caution with flammable materials since wildfires can quickly ignite in drier climates!

Culturally Responsive & Place-Based Introduction of Science Vocabulary

INITIAL

Place-Based Perspective

Have several students come up to the board and give them markers. Tell them to listen carefully to a long string of numbers that you say aloud: 42, 36, 115, 93, 10, 2, 78. Now have the volunteers try to write the "initial" number that you said. Explain that it can be hard to remember strings of numbers but that initial refers to that which came at the beginning. Processes also have initial events, followed by those that come later.

Heritage Cultural Perspective

Tlingit memorial ceremonies involve a three stage process. After someone has "Walked into the Forest" or has died, the INITIAL ceremony is the funeral with community members comforting and assisting the mourning family. The second ceremony is held by the family of the deceased. The final ceremony, which is called the ku.éex', is held a year after a person's death to repay those who comforted and assisted the mourning family.

ENERGY

Place-Based Perspective

Turn off all of the lights in the room and shut down any computers. Ask the students what it is that they are now lacking in the room. Energy in the form of electricity! Explain that energy is the capacity to do work. Just as the lights need energy so do our bodies. Energy is needed too for a chemical reaction to take place. Tell the students that there are many ways of harnessing energy and that we use a lot of it in the modern world.

Heritage Cultural Perspective

The sun's energy and its effects on Tlingit culture have forever been present and recognized. Not only does this energy permit the growth of forests, it provides daylight for all of mankind. A prominent Tlingit legend titled "How Raven Stole the Sun", explains the origins of this celestial body and exemplifies its importance to people.

PHENOMENA

Place-Based Perspective

Show the students a picture of the aurora borealis on p. 221. Ask how many of the students have seen this common event in the north. Explain that any event that is observable is a phenomenon. Some phenomena are natural while others are forced to take place in a laboratory. What other natural phenomena can the students think of?

Heritage Cultural Perspective

There were many natural phenomena that occurred throughout Southeast Alaska prior to western contact. The indigenous peoples of the region often tried to explain these events through stories and song. They would integrate knowledge of natural phenomena into their culture and were able to recognize changes in the time and occurrence of these!

LESSONS

Science Language for Success

Introduce the key science vocabulary, using concrete materials and/or pictures.

LISTENING

Use the Mini Pictures activity page from the Student Support Materials. Have the students cut out the pictures. Say the key words and the students show the pictures.

Let's Move

Identify an appropriate body movement for each vocabulary word. This may involve movements of hands, arms, legs, etc. Practice the body movements with the students. When the students are able to perform the body movements well, say a vocabulary word. The students should respond with the appropriate body movement. You may wish to say the vocabulary words in a running story. When a vocabulary word is heard, the students should perform the appropriate body movement.

Student Support Materials

Have the students work on the activity pages from the Student Support Materials from this unit. Afterward, review their work.

SPEAKING

Actions!

Group the students together in front of you. Perform an action which represents one of the key vocabulary words. The students should say the vocabulary word for the action you perform. Repeat, using a different action for each vocabulary word.

One to Six

Provide each student with two blank flashcards. Each student should then write a number between one and six on each of his flashcards (one number per card). When the students' number cards are ready, toss two dice and call the numbers showing. Any student or students who have those two numbers must then identify a vocabulary picture you show. The students may exchange number cards periodically during this activity.

Picture Bingo

Give the students the mini pictures used earlier. Each student should place them face down on his/her desk. Then, have each student turn one picture face up. Say a vocabulary word. Any student or students who have the picture for that word face up must say a complete sentence using that vocabulary word. Those pictures should then be put to the side and other pictures turned over. Continue in this way until a student or students have no pictures left on their desks.

Science Language for Success

READING

Introduce the science sight words to the students—match the sight words with the vocabulary pictures. The sight words are included in the Student Support Materials, attached to these lesson plans.

Note: After each unit, mount a set of the unit's words on the walls around the room. Use the "word walls" for review and reinforcement activities.

Face

Mount the sight words around the classroom on the walls, board, and windows. Group the students into two teams. Give the first player in each team a flashlight. Darken the classroom, if possible. Say one of the sight words. When you say "Go," the students should turn their flashlights on and attempt to locate the sight word you said. The first player to do this correctly wins the round. Repeat until all players in each team have participated.

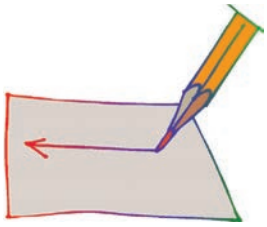
String Along

Join all of the students together with string (the students do not need to move from their seats). Before tying the ends of the string together, insert a roll of tape over one of the ends of the string. Tie the ends of the string together. Turn your back to the students. The students should pass the roll of tape along the string as quickly as possible. When you clap your hands, the student left holding the tape must then identify a sight word you show him. Repeat this process until many students have responded and until all of the sight words have been correctly identified a number of times.

Letter Encode

Give each student his/her envelope that contains the alphabet letters. Mount one of the science pictures on the board. The students must use the cut out letters to spell the word. Review the students' work. Repeat, until all of the words have been spelled in this way.

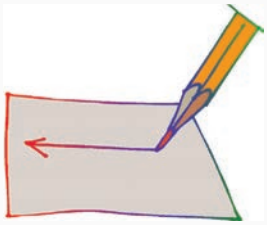
WRITING



Let's Write

Provide the students with a copy of the creative writing page from the Student Support Materials. The students should write as much as they can about the graphic. Later, have each student read his/her writing to the class.

WRITING (CONTINUED)



Flashlight Writing

If possible, darken the classroom. Give a student a flashlight. Say one of the vocabulary words and the student should write that word with the light of the flashlight on a wall or on the board. Repeat until many students have had a chance to participate. An alternative is to provide each student with writing paper and a pen. Darken the classroom, if possible. Use the light of a flashlight to write one of the sight words on the wall or board. When you have completed the writing of the word, each student should then write the same word on his/her sheet of paper. Repeat until all sight words have been written in this way.

This activity may also be done in team form. In this case, group the students into two teams. Darken the classroom. Use the light of a flashlight to write one of the sight words on the board. When you say "Go," the first player in each team should rush to the board and use chalk to write the same word on the board. The first player to do this correctly wins the round. Repeat until all players have played.

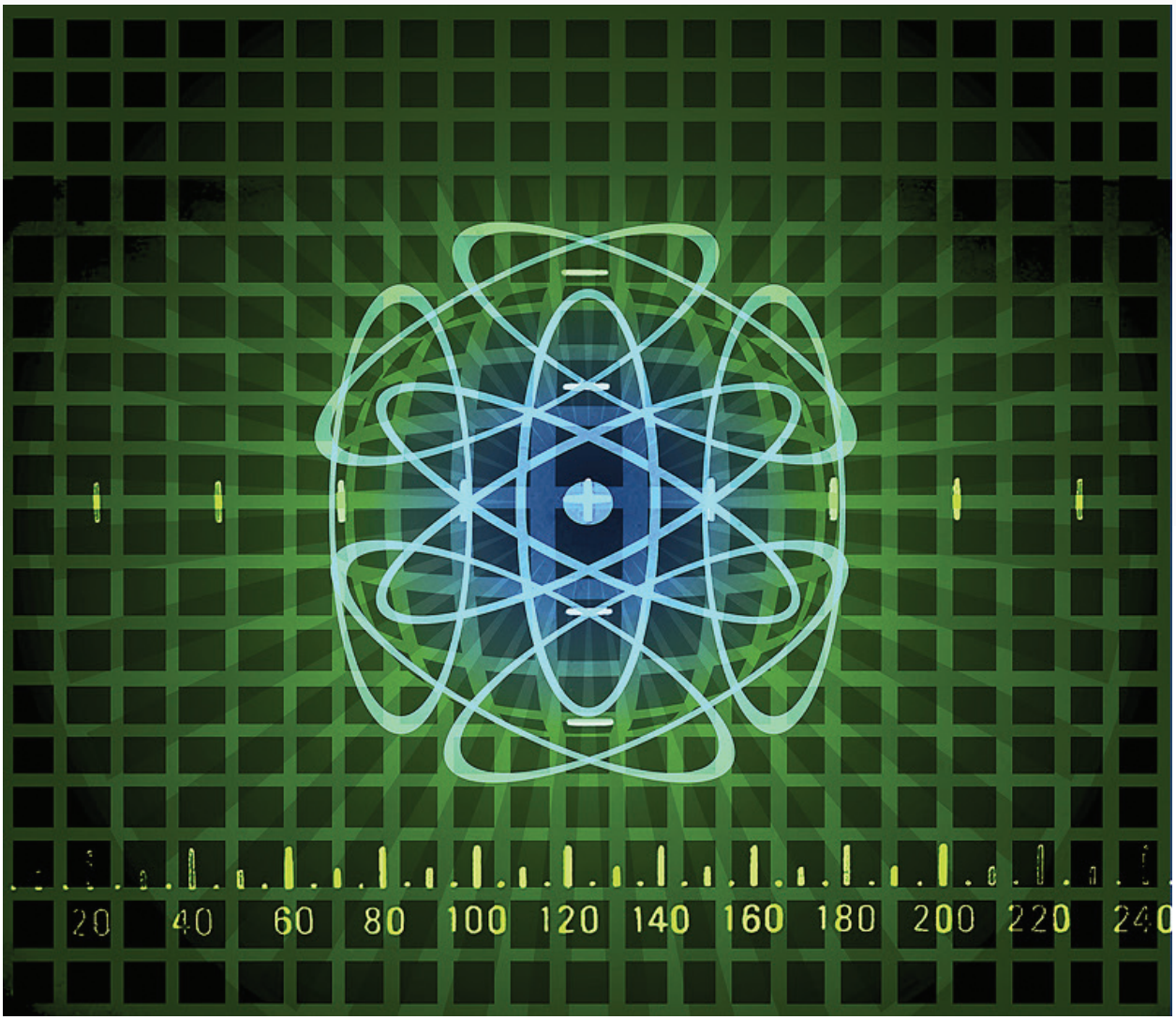
VOCABULARY PICTURES

CHEMICAL PROPERTY

UNIVERSAL

CHARACTERISTIC

BEHAVIOR


20
40
60
80
100
120
140
160
180
200
220
240

NUCLEAR

FLAMMABILITY

INITIAL

ENERGY

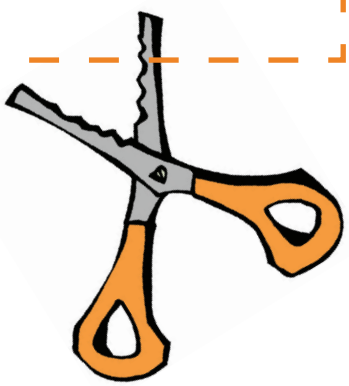
PHENOMENA

STUDENT SUPPORT MATERIALS

Listening • Mini Pictures

Listening: Mini Pictures

Prepare a copy of these pages for each student. The students should cut out the pictures and lay them on the floor or desk. Say the key words and the students should show you the pictures. Repeat a number of times. This activity can also be done with pairs of students to determine who is the fastest player.



STUDENT SUPPORT MATERIALS

Listening Comprehension

Listening Comprehension

Read the following sentences to the students. The students should circle "true" or "false" for each of the sentences. Review the students' work.

1. Chemical properties can often be seen during experiments. **True** **False**

2. Most car parts are universal and can be used in any other car. **True** **False**

3. A characteristic of orange juice is its green color. **True** **False**

4. The behavior of soda when poured is a bubbling action. **True** **False**

5. The outside of a molecule is its nucleus. **True** **False**

6. The flammability of gasoline is never a concern. **True** **False**

7. The initial energy of a runner is usually very low. **True** **False**

8. Muscles do not need energy in order to do work. **True** **False**

9. The northern lights are considered spectacular natural phenomena. **True** **False**

Listening Comprehension: Answer Key

Read the following sentences to the students. The students should circle "true" or "false" for each of the sentences. Review the students' work.

1	Chemical properties can often be seen during experiments.	**True** / False
2	Most car parts are universal and can be used in any other car.	True / **False**
3	A characteristic of orange juice is its green color.	True / **False**
4	The behavior of soda when poured is a bubbling action.	**True** / False
5	The outside of a molecule is its nucleus.	True / **False**
6	The flammability of gasoline is never a concern.	True / **False**
7	The initial energy of a runner is usually very low.	True / **False**
8	Muscles do not need energy in order to do work.	True / **False**
9	The northern lights are considered spectacular natural phenomena.	**True** / False

STUDENT SUPPORT MATERIALS

Sight Words

chemical property

universal

characteristic

behavior

nuclear

flammability

initial

energy

phenomena

STUDENT SUPPORT MATERIALS

Basic Reading • Sight Recognition

Sight Words Activity Page

Have the students highlight or circle the words in this word find. Words appear horizontally.

characteristic
nuclear
phenomena

chemical property
universal
flammability

energy
behavior
initial

m i h n e l e h v o v r e n e r g y
e v c l c h a r a c t e r i s t r i
i n i t i a l c a u n i v e r t e m
h c h e m i c a l p r o p e r t y a
l i c n u c l e a r r h i h r m l i
l m r m o m a h i i a m e t y u v l
i n c g o p c y f l a m m a b i l t
c i i e n l v i e n e e i e b l l r
e m a b e h a v i o o m o s i o a e
m b p h e n o m e n a t e h a a l h
c t l l r i i p r l b e h a v i o r
i h i p h e n o m e n o a c a y e m
a e n t a l n e c e c i n i t i a n
c r n u n i v e r s a l t c a e i h
p c h a r a c t e r i s t i c i h e
l l c r e v l h m c i e h c t p r y
y e r e e y f l a m m a b i l i t y
n h e e r t n b i r r t i n u c l n
c c h e m i c a l p r o p e r a e i
u b e o i c c u o s o i o t a e h i

Sight Words Activity Page

Answer Key

characteristic
nuclear
phenomena

chemical property
universal
flammability

energy
behavior
initial

m i h n e l e h v o v r e n e r g y
e v c l c h a r a c t e r i s t r i
i n i t i a l c a u n i v e r t e m
h c h e m i c a l p r o p e r t y a
l i c n u c l e a r r h i h r m l i
l m r m o m a h i i a m e t y u v l
i n c g o p c y f l a m m a b i l t
c i i e n l v i e n e e i e b l l r
e m a b e h a v i o o m o s i o a e
m b p h e n o m e n a t e h a a l h
c t l l r i i p r l b e h a v i o r
i h i p h e n o m e n o a c a y e m
a e n t a l n e c e c i n i t i a n
c r n u n i v e r s a l t c a e i h
p c h a r a c t e r i s t i c i h e
l l c r e v l h m c i e h c t p r y
y e r e e y f l a m m a b i l i t y
n h e e r t n b i r r t i n u c l n
c c h e m i c a l p r o p e r a e i
u b e o i c c u o s o i o t a e h i

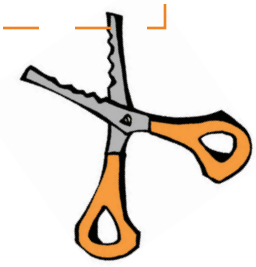
Sight Words Activity Page

Have the students cut out the key words and glue them at the bottom of their pictures.

chemical property | initial | nuclear | energy

flammability | behavior | universal | phenomena

characteristic



Sight Words Activity Page

Have the students print the key words from this unit horizonally in the boxes (each word may be written more than once). They should then fill in all other boxes with any letters. Have the students exchange pages. The students should then circle the words on the page.

STUDENT SUPPORT MATERIALS

Basic Reading • Encoding

Encoding Activity Page

Have the students cut out and encode the syllables of the words, OR number the syllables in their correct sequence.

chem | er | i | cal

_____ _____ _____ _____

ty | prop

_____ _____

ver | uni | sal

_____ _____ _____

it | in | ial

_____ _____ _____

Encoding Activity Page

Have the students cut out and encode the syllables of the words, OR number the syllables in their correct sequence.

ter	ac	tic	is	char

ior	be	hav

cle	ar	nu

Encoding Activity Page

Have the students cut out and encode the syllables of the words, OR number the syllables in their correct sequence.

i	ty	ma	bil	flam

en	gy	er

nom	na	e	phe

Encoding Activity Page

Have the students cut out the word halves and glue them together to create the key words for this unit.

chem	eristic
univ	vior
charact	ability
beha	gy
nuc	ial

Encoding Activity Page

Have the students cut out the word halves and glue them together to create the key words for this unit.

flamm	**ersal**
init	**ena**
ener	**ical**
phenom	**lear**

STUDENT SUPPORT MATERIALS

Reading Comprehension

Reading Comprehension Activity Page

Have the students read the text and then select the correct answer for it. They should fill in the appropriate bullet beside the answer of their choice.

1. Which of the following is an example of a chemical property?
   - ❍ a steel garbage can rusting
   - ❍ a dog that has been punished
   - ❍ salt water sitting in a dish
   - ❍ cutting down a tree

2. Objects that are universal can be used:
   - ❍ only in one location
   - ❍ in all locations
   - ❍ only one time
   - ❍ many times

3. A characteristic of orange juice is its:
   - ❍ color
   - ❍ taste
   - ❍ acidity
   - ❍ all of the above

4. What is the behavior of soda, a carbonated beverage, when poured?
   - ❍ turning color
   - ❍ becoming a solid
   - ❍ bubbling
   - ❍ evaporating

5. The nucleus of an atom refers to its:
   - ❍ center
   - ❍ color
   - ❍ taste
   - ❍ all of the above

Reading Comprehension Activity Page

6 Flammability refers to:

- ❍ the height of wildfire flames
- ❍ the ease that a substance will ignite
- ❍ the amount of water in soup
- ❍ none of the above

7 Another word for initial is:

- ❍ money
- ❍ end
- ❍ beginning
- ❍ rotten

8 Energy is defined as:

- ❍ the capacity to roll your tongue
- ❍ the capacity to eat
- ❍ the capacity to do work
- ❍ the capacity to multi-task

9 Which of the following are examples of natural phenomena:

- ❍ tornadoes
- ❍ lightning
- ❍ northern lights
- ❍ all of the above

Reading Comprehension Activity Page

ANSWER KEY

1. Which of the following is an example of a chemical property?
   - ● a steel garbage can rusting
   - ❍ a dog that has been punished
   - ❍ salt water sitting in a dish
   - ❍ cutting down a tree

2. Objects that are universal can be used:
   - ❍ only in one location
   - ● in all locations
   - ❍ only one time
   - ❍ many times

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   - ❍ acidity
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Reading Comprehension Activity Page

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- ❍ tornadoes
- ❍ lightning
- ❍ northern lights
- ● all of the above

Reading Comprehension Activity Page

Have the students write the letters for sentence halves that match.

1	A chemical property is one that becomes	A	its nucleus.
2	Objects that are universal can be used	B	high and thus requires caution.
3	A distinctive characteristic of a brown bear	C	the energy he/she has BEFORE the race.
4	A child who doesn't listen is	D	natural phenomenon.
5	The center of an atom is considered	E	that gives it the ability to do work.
6	The flammability of gasoline is quite	F	evident during a chemical reaction.
7	The initial energy of a runner is	G	considered to be poorly behaved.
8	Energy is the property of matter	H	practically anywhere.
9	The northern lights are a	I	is the large hump on its shoulder.

1→_____ 2→ _____ 3→ _____ 4→ _____

5→ _____ 6→ _____ 7→ _____ 8→ _____

9→ _____

Reading Comprehension Activity Page

ANSWER KEY

1	A chemical property is one that becomes	A	its nucleus.
2	Objects that are universal can be used	B	high and thus requires caution.
3	A distinctive characteristic of a brown bear	C	the energy he/she has BEFORE the race.
4	A child who doesn't listen is	D	natural phenomenon.
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7	The initial energy of a runner is	G	considered to be poorly behaved.
8	Energy is the property of matter	H	practically anywhere.
9	The northern lights are a	I	is the large hump on its shoulder.

1→ F 2→ H 3→ I 4→ G

5→ A 6→ B 7→ C 8→ E

9→ D

Reading Comprehension Activity Page

Have the students cut out the words and glue them under their definitions.

A property that becomes evident during a chemical reaction	**A feature or quality of something**	**Ease with which a material ignites**
Any observable event	**Of or relating to the center of an atom**	**The capacity to do work**
Applicable everywhere or in all cases	**Occurring at the beginning**	**Action or reaction of something under specific circumstances**

chemical property **initial** **nuclear** **energy**

flammability **behavior** **universal**

characteristic **phenomena**

Reading Comprehension Activity Page

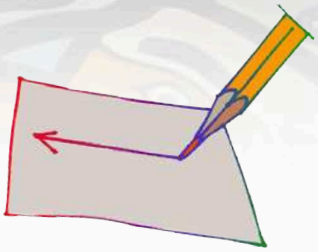
ANSWER KEY

A property that becomes evident during a chemical reaction chemical property	**A feature or quality of something** characteristic	**Ease with which a material ignites** flammability
Any observable event phenomena	**Of or relating to the center of an atom** nuclear	**The capacity to do work** energy
Applicable everywhere or in all cases universal	**Occurring at the beginning** initial	**Action or reaction of something under specific circumstances** behavior

STUDENT SUPPORT MATERIALS

Basic Writing

Basic Writing Activity Page



Have the students write in the missing letters.

ch_____al pr_____ty

uni_____l

chara_____stic

b_____ior

nu_____ar

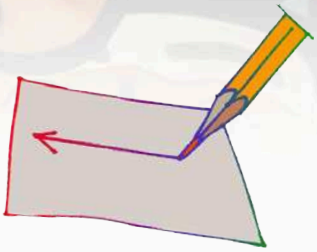
flam_____ty

in_____l

e_____gy

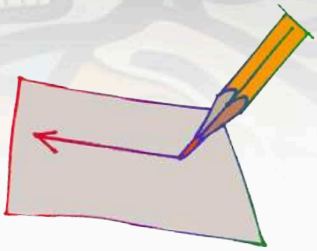
ph_____ena

Basic Writing Activity Page



Have the students write the word for each picture.

Basic Writing Activity Page



ANSWER KEY

flammability

phenomena

initial

chemical property

behavior

nuclear

characteristic

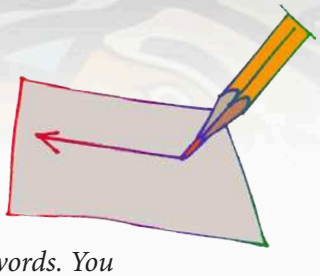
energy

universal

STUDENT SUPPORT MATERIALS

Creative Writing

Creative Writing Activity Page



Have the students write sentences of their own, using the key words from this unit. When the students' sentences are finished, have them take turns reading their sentences orally. The students should say "Blank" for the key words; the other students must name the "missing" words. You may wish to have the students write the "definitions" for the key words.

CHEMICAL PROPERTY

_____

UNIVERSAL

_____

CHARACTERISTIC

_____

BEHAVIOR

_____

NUCLEAR

_____

FLAMMABILITY

_____

INITIAL

_____

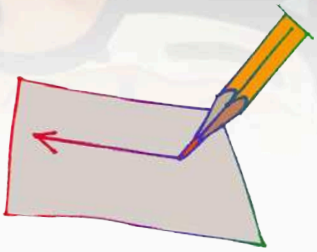
ENERGY

_____

PHENOMENA

_____

Creative Writing Activity Page



Have the students write sentences of their own, based on the picture below. When finished, have each student read his/her sentences to the others.

UNIT ASSESSMENT

B-1: Concept of Physical Science

SCIENCE PROGRAM

Unit Assessment Teacher's Notes
Grade 8 • Unit 3 (B–1)
Theme: Concepts of Physical Science
Date:_____

Unit Assessment

Provide each student with a copy of the students' pages. Read the following instructions aloud. The students should answer the questions on their copies of the assessment.

BASIC LISTENING

Turn to page 1 in your test. Look at the pictures in the boxes.

1. Write the number 1 by the picture for **CHEMICAL PROPERTY**.
2. Write the number 2 by the picture for **UNIVERSAL**.
3. Write the number 3 by he picture for **CHARACTERISTIC**.
4. Write the number 4 by the picture for **BEHAVIOR**.
5. Write the number 5 by the picture for **NUCLEAR**.
6. Write the number 6 by the picture for **FLAMMABILITY**.
7. Write the number 7 by the picture for **INITIAL**.
8. Write the number 8 by the picture for **ENERGY**.
9. Write the number 9 by the picture for **PHENOMENA**.

LISTENING COMPREHENSION

Turn to page 2 in your test. Listen to the sentences I say. Circle "T" for true and "F" for false sentences."

1. The ability of metal to rust is an example of its chemical properties.
2. Some properties of chemicals are universal.
3. A characteristic of orange juice is its yellow/orange color.
4. The behavior of soda immediately after being poured is complete evaporation.
5. Nuclear is of or related to the outer edge of an atom.
6. Flammability refers to a substance's ability to float.
7. A runner's initial energy tends to be greater before a race than his/her energy is afterward.
8. Energy is a substance's ability to be lazy. Energy is a substance's ability to be lazy.
9. An example of natural phenomena is the northern lights.

Unit Assessment

Provide each student with a copy of the students' pages. Read the following instructions aloud. The students should answer the questions on their copies of the assessment.

SIGHT RECOGNITION

Turn to pages 3 and 4 in your test. Look at the pictures in the boxes. Circle the word for each picture.

DECODING/ENCODING

Turn to page 5 in your test. Look at the word parts in the boxes. Circle the other half or part of each word.

READING COMPREHENSION

Turn to page 6 in your test. Read the sentence part and fill in the bullet for the correct sentence ending.

BASIC WRITING

Turn to page 7 in your test. Look at the pictures in the boxes. Write the word for each picture.

CREATIVE WRITING

Turn to page 8 in your test. Write a sentence of your own, using each word.

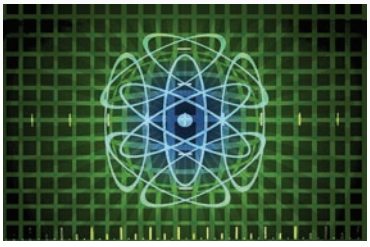
Teacher: To get a percentage for this student's assessment, divide the total number of questions correct by the total number of questions, then multiply this answer by 100 to determine the percentage of questions answered correctly.

SCIENCE PROGRAM

Unit Assessment Student Pages
Grade 8 • Unit 3 (B–1)
Theme: Concepts of Physical Science

Date:_____ Student's Name:_____

Number Correct:_____ Percent Correct:_____



1. T F

2. T F

3. T F

4. T F

5. T F

6. T F

7. T F

8. T F

9. T F

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phenomena

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	mena
	mina
	mona

1. Which of the following is a chemical property of some metals?
   - ❍ ability to sink
   - ❍ ability to rust
   - ❍ ability to be found

2. A universal property is one that is applicable:
   - ❍ in all cases
   - ❍ in few cases
   - ❍ never

3. A characteristic of brown bears, but not of black bears is:
   - ❍ teeth
   - ❍ a shoulder hump
   - ❍ hair

4. The action or reaction of something under specified conditions is a:
   - ❍ cost
   - ❍ ceremony
   - ❍ behavior

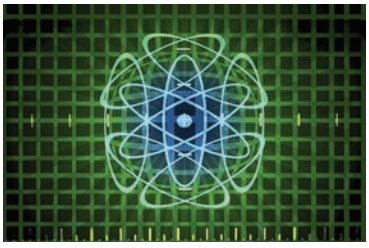
5. Nuclear refers to which part of an atom?
   - ❍ outer edge
   - ❍ inner edge
   - ❍ center

6. Flammability measures a material's ability to:
   - ❍ harvest a moose
   - ❍ melt a glacier
   - ❍ ignite

7. The initial energy of a runner refers to his/her energy:
   - ❍ before the race
   - ❍ during the race
   - ❍ after the race

8. A muscle's energy gives it the capacity to:
   - ❍ speak a foreign language.
   - ❍ deteriorate.
   - ❍ do work.

9. Phenomena are events that can be:
   - ❍ Tasted
   - ❍ Smelled
   - ❍ Salmon
   - ❍ Observed



CHEMICAL PROPERTY

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UNIVERSAL

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CHARACTERISTIC

_____

BEHAVIOR

_____

NUCLEAR

_____

FLAMMABILITY

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INITIAL

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ENERGY

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PHENOMENA

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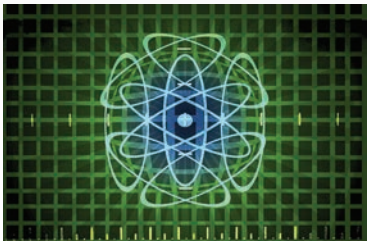
SCIENCE PROGRAM

Unit Assessment ANSWER KEY
Grade 8 • Unit 3 (B–1)
Theme: Concepts of Physical Science

1

7

9



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1. **T** **F**

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3. **T** **F**

4. **T** **F**

5. **T** **F**

6. **T** **F**

7. **T** **F**

8. **T** **F**

9. **T** **F**

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ul	jay	nuna
yl	gey	mana
ial	die	mena
iel	dy	mina
iol	dee	mona

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initial

universal

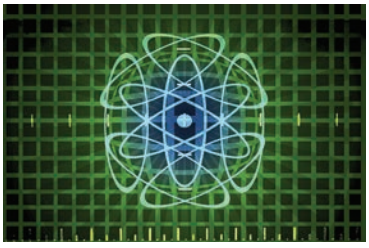
behavior

chemical property

energy

phenomena

flammability



nuclear

characteristic