



UNIT 5

C-1: Concepts of Life Science



KEY VOCABULARY



Key Vocabulary

ASEXUAL REPRODUCTION

when an organism reproduces one or more copies of itself

BIOLOGICAL EVOLUTION

the process by which the genetic structure of populations change over time

CLASSIFICATION

a system by which objects are put in order so that they can be referred to again and identified

Key Vocabulary

GENETICS

the study of how traits are inherited

HEREDITY

the passing down of inherited traits from one generation to another

LIFE CYCLE

a series of stages that occur during the lifetime of all organisms



Key Vocabulary

MUTATION

any permanent change in a gene or chromosome of a cell

NATURAL SELECTION

the process by which the organisms that are best suited for their environment survive and pass on their traits

ORGANISM

any living thing that can carry out its life processes on its own



Key Vocabulary

SEXUAL REPRODUCTION

the form of reproduction by the joining of a male reproductive cell with a female reproductive cell



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.



Turn and Face

Mount the vocabulary pictures on the walls and board. Group the students together in the center of the classroom. Say one of the vocabulary words and the students should turn to face the picture for the word you said. Depending upon the size of your class, this activity may be done in small groups. This activity may also be done in team form. In this case, have a player from each team stand in the center of the classroom. When a player faces the wrong direction (i.e., the wrong picture), he/she is “out” until a later round of the activity. Repeat until all players have had an opportunity to participate.

Student Support Materials

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

SPEAKING



Balloon Volleyball

Group the students into two teams. The two teams should stand, facing one another. Toss a round, inflated balloon to the members of Team One. The members of Team One must then bounce the balloon to the members of Team Two. The players should continue to bounce the balloon back and forth in this way until a team loses the balloon. You may wish to establish the rule that players may not move their feet during the activity. When a team loses the balloon, show them a vocabulary picture and all team members in that team must say the vocabulary word for it. Repeat until players in both teams have responded a number of times.

Slip String

Mount the vocabulary pictures on the board. Join all of the students together with a long length of string. Before tying the ends of the string together, insert a roll of tape over one end of the string (a large washer can also be used). Then, tie the ends of the string together. Face away from the students. The students should then pass the roll of tape as quickly as possible along the string. When you clap your hands, the student who is holding the roll of tape, must identify (orally) a vocabulary picture you point to. For added motivation, you may wish to place more than one roll of tape (or washer) on the line of string. Repeat until many students have responded.

Science Language for Success

SPEAKING (CONTINUED)



Roll ‘Em Again!

Mount the vocabulary pictures on the board. Number each picture using the numbers 1 to 6 (repeat a number as often as necessary). Then, group the students into two teams. Give the first player in each team a die. When you say “Go,” the first player in each team must roll his/her die. He/She should call the number showing on it and then say a complete sentence about a vocabulary picture on the board that has the same number. Repeat this process until all students have participated.

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.

Deal

Before the activity begins, obtain two decks of playing cards. Give all of the cards from one deck to the students (if possible, arrange it so that all students have the same number of cards). Mount the sight words on the board. Hold a playing card from the other deck of cards against one of the sight words on the board. The student who has the matching playing card must identify the sight word. When the student has done this correctly, he/she should place that playing card to the side. Continue in this way until a student or students have no playing cards left in their hands.

Letter Encode

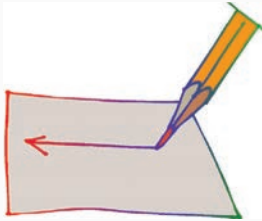
Give each student his/her envelope that contains the alphabet letters. Mount one of the science pictures on the board. The students must use the cut-out letters to spell the word. Review the students’ work. Repeat, until all of the words have been spelled in this way.

Student Support Materials

Have the students complete the sight recognition and encoding activities in the Student Support Materials. When finished, review their work.

Science Language for Success

WRITING



Mirror Writing

Group the students into two teams. Have the first player from each team stand in front of the board. Give each of the two players a small, unbreakable mirror. Stand some distance behind the two players with pictures for the sight words. Hold up one of the pictures. When you say “Go,” the players must use the mirrors to look over their shoulders to see the picture you are holding. When a player sees the picture, he/she must write the sight word for that picture on the board. The first player to do this correctly wins the round. Repeat this process until all players in each team have had an opportunity to respond.

Yarn Spell

Group the students into two teams. Give the first player in each team lengths of yarn or string. Say a vocabulary word. When you say “Go,” the first player in each team must then use the yarn or string to “write” the word on the floor. The first player to complete his/her word wins the round. Repeat this process until all players in each team have played. If pipe cleaners are available, they may be used in place of the yarn or string (have both long and short lengths of the pipe cleaners ready for the activity).

Student Support Materials

Provide the students with a copy of the writing pages from the Student Support Materials. When finished, review the students’ work.



VOCABULARY PICTURES





ASEXUAL REPRODUCTION

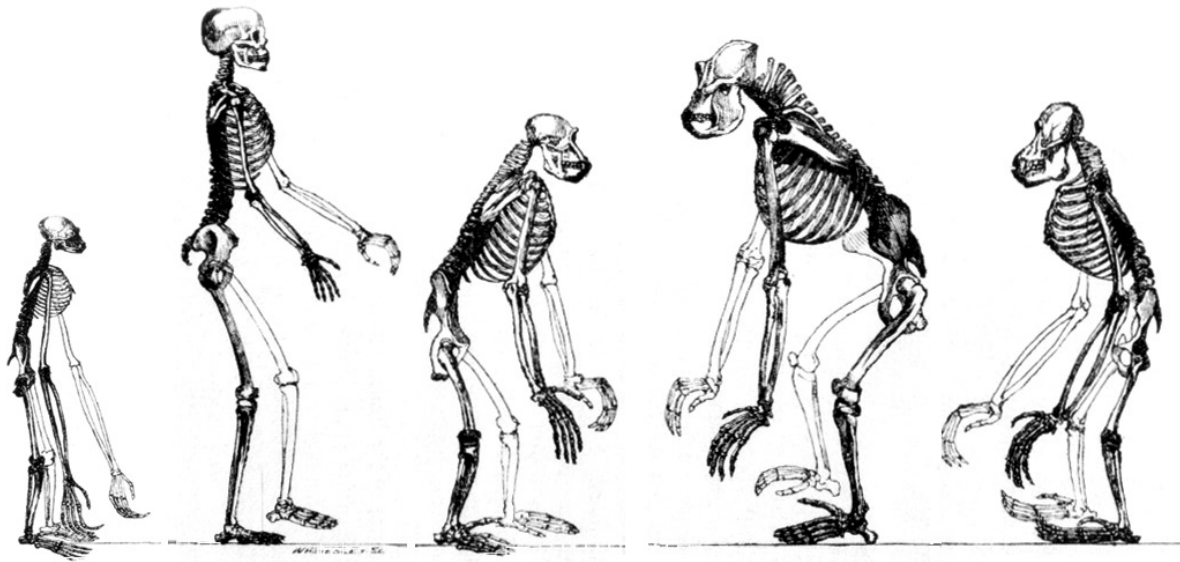
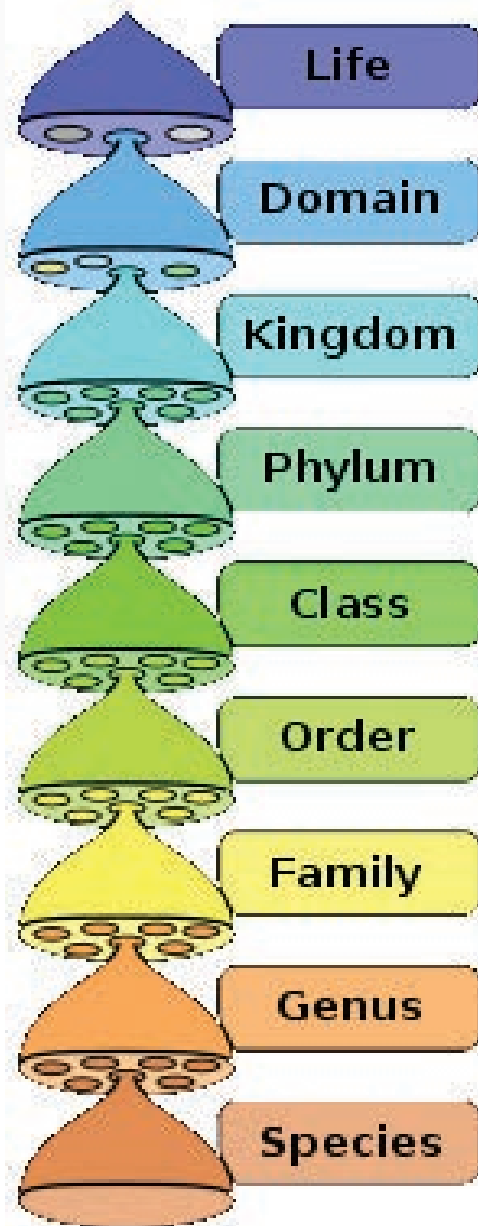


Diagram illustrating the evolution of the human skeleton from an early hominid to modern man.

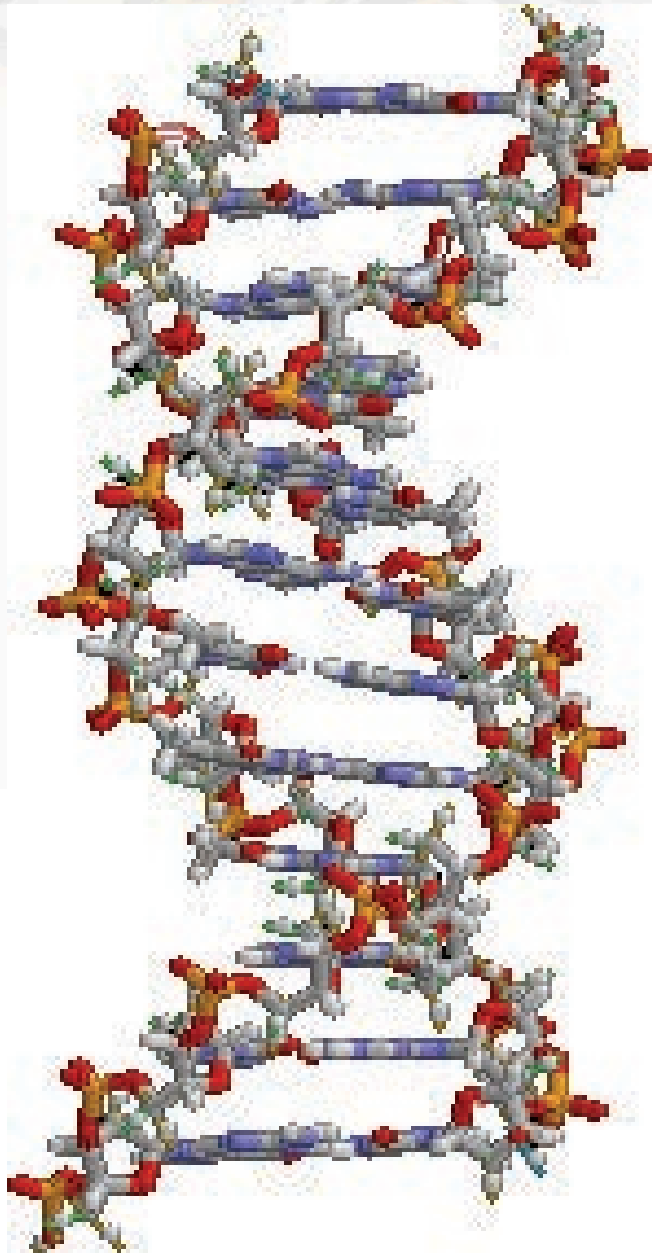


BIOLOGICAL EVOLUTION





CLASSIFICATION



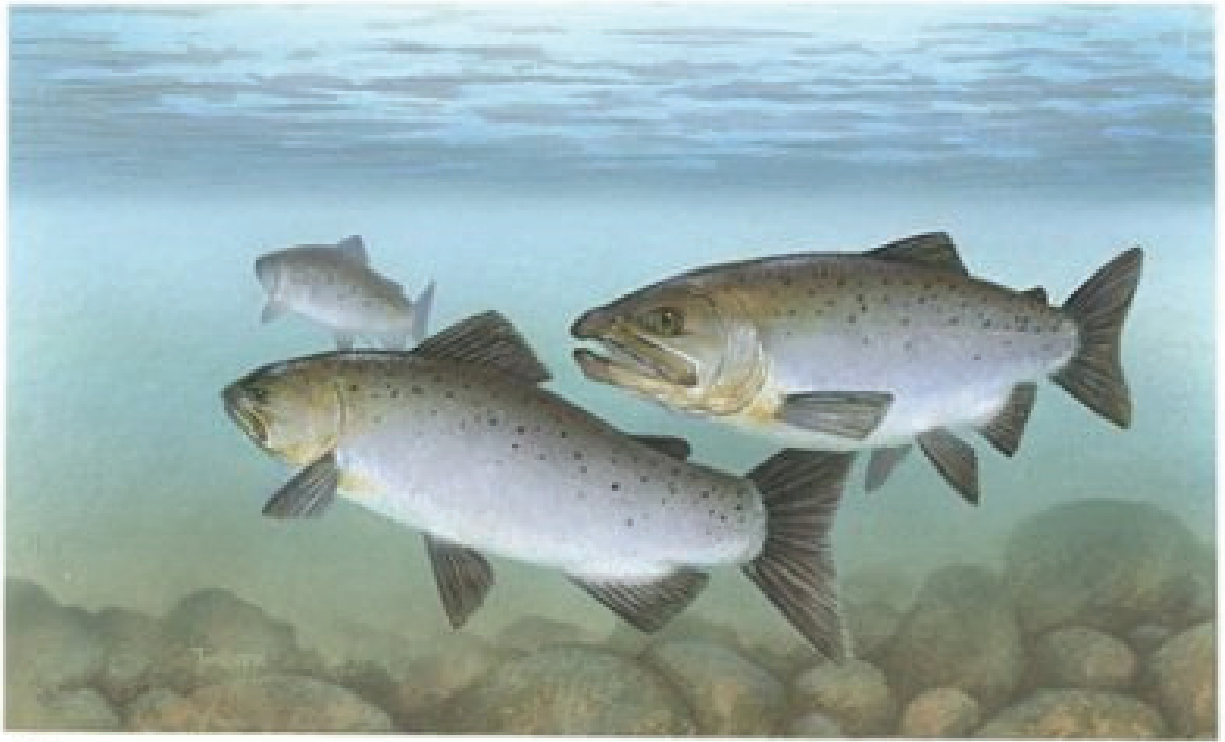


GENETICS





HEREDITY





LIFE CYCLE





MUTATION





NATURAL SELECTION





ORGANISM





SEXUAL REPRODUCTION



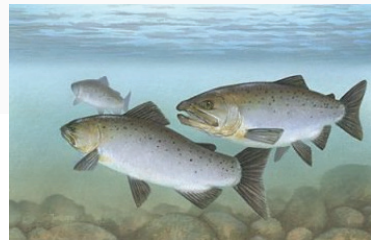
STUDENT SUPPORT MATERIALS

Listening • Mini Pictures

Listening: Mini Pictures



Have the students cut out the pictures. Say the key math words from this unit, and the students should hold up the pictures for them.





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 Heredity is the study of how traits are inherited. True
False
- 2 Asexual reproduction is the form of reproduction by the joining of a male reproductive cell with a female reproductive cell. True
False
- 3 Genetics is the passing down of inherited traits from one generation to another. True
False
- 4 Natural selection is the process by which the genetic structure of populations change over time. True
False
- 5 Sexual reproduction is when an organism reproduces one or more copies of itself. True
False
- 6 Biological evolution is the process by which the organisms that are best suited for their environment survive and pass on their traits. True
False
- 7 A life cycle is a series of stages that occur during the lifetime of all organisms. True
False
- 8 Classification is a system by which objects are put in order so that they can be referred to again and identified. True
False
- 9 A mutation is any permanent change in a gene or chromosome of a cell. True
False
- 10 An organism is any living thing that can carry out its life processes on its own. True
False



STUDENT SUPPORT MATERIALS

Sight Words



asexual reproduction

biological evolution

classification






genetics

heredity

life cycle



mutation

natural selection

organism





sexual reproduction



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.



asexual sexual reproduction classification	biological evolution genetics mutation	heredity life cycle natural selection organism
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N	A	T	U	R	A	L	S	E	L	E	C	T	I	O	N
P	M	M	U	T	A	T	I	O	N	H	F	B	T	P	O
C	E	T	W	Y	H	Q	A	Y	C	B	E	R	N	Y	B
L	E	O	G	E	N	E	T	I	C	S	Z	W	S	H	I
A	W	T	A	R	B	I	T	Y	U	H	J	O	E	L	O
S	X	C	D	S	D	F	H	T	Y	S	N	R	X	O	L
S	Q	X	E	E	E	N	G	N	Y	I	O	G	U	L	O
I	X	W	R	E	T	X	Q	B	E	R	Y	A	A	R	G
F	R	E	P	R	O	D	U	C	T	I	O	N	L	O	I
I	H	R	M	S	N	A	T	A	E	W	N	I	P	K	C
C	M	J	I	O	L	K	M	T	L	C	E	S	D	C	A
A	V	F	R	T	G	B	N	H	T	M	Y	M	I	O	L
T	Z	S	E	X	D	R	C	F	T	V	G	Y	B	H	U
I	N	J	L	I	F	E	C	Y	C	L	E	I	M	K	O
O	M	K	O	P	L	Q	A	Z	W	S	X	E	D	C	R
N	F	E	V	O	L	U	T	I	O	N	V	R	G	B	N

Sight Words Activity Page

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



asexual
sexual
reproduction
classification

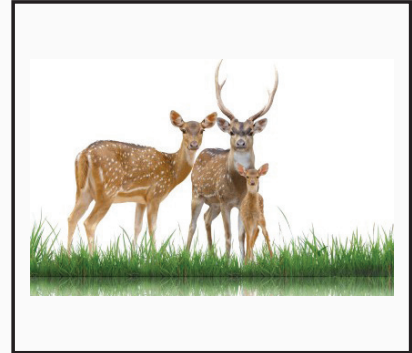
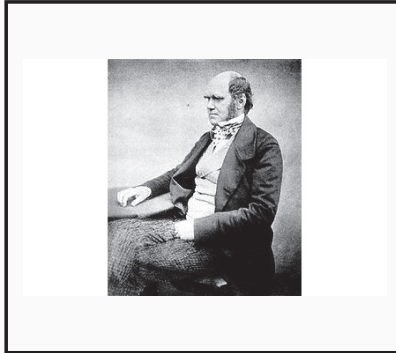
biological
evolution
genetics
mutation

heredity
life cycle
natural selection
organism

N	A	T	U	R	A	L	S	E	L	E	C	T	I	O	N
		M	U	T	A	T	I	O	N						
C								Y							B
L			G	E	N	E	T	I	C	S			S		I
A			A			I						O	E		O
S				S	D							R	X		L
S				E	E							G	U		O
I			R			X						A	A		G
F	R	E	P	R	O	D	U	C	T	I	O	N	L		I
I								A				I			C
C									L			S			A
A												M			L
T															
I			L	I	F	E	C	Y	C	L	E				
O															
N		E	V	O	L	U	T	I	O	N					

Sight Words Activity Page

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



asexual
reproduction

biological
evolution

classification

genetics

heredity

life cycle

mutation

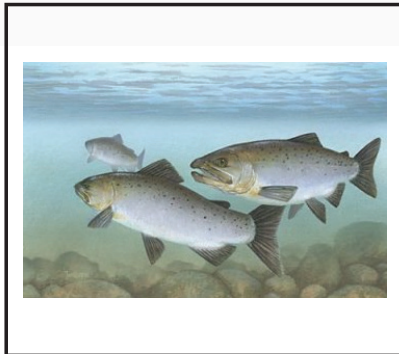
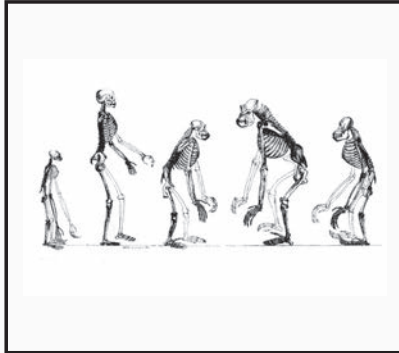
natural selection

organism

sexual
reproduction



Sight Words Activity 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.



gen || ics || et

it || her || ed || y

mut || tion || a



Encoding Activity Page

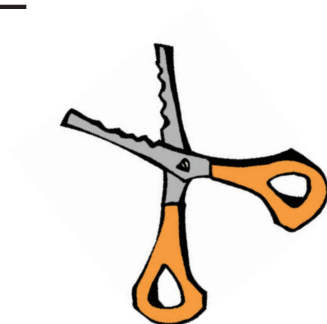
Have the students cut out and encode the syllables of the words, OR number the syllables in their correct sequence.



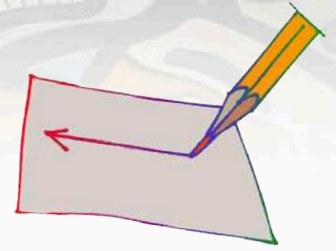
org || m || an || is

i || class || if || cat || ion

life || cle || cy



Word Scramble Activity Page



Rearrange or unscramble the following letters to form one of the listed unit words.
As you use a word, cross it off.

asexual reproduction
sexual reproduction
biological evolution

classification
natural selection

evolution
organism

life cycle
mutation

heredity

neovtluoi

___ _ _ _ u _ i _ _ _

ydtiheer

___ _ _ e _ i _ _ _

tlaruan

___ _ t _ _ _ a _ _

esclenito

___ _ l e _ _ _ _ _ n

lgoiboclai

b i _ _ _ _ _ _ _ a _ _

iotvnoelu

___ _ o _ _ _ _ _ _ n

slaexu

s _ x _ _ _ _

roouctrinped

___ _ p _ _ _ d _ _ _ _ _ o _ _

xaalues

a _ _ _ _ u _ _ _

rdoeupcntiro

___ _ p _ _ _ _ c _ i _ _ _

taoniumt

_ _ u _ _ _ _ i _ _ _ _

ielccefyl

_ _ i _ e _ _ _ y _ _ _ _

oairsnmg

___ _ g _ _ _ _ _ m

linosacaifctis

c _ _ _ s _ _ _ _ _ c _ _ _ _ _ _



STUDENT SUPPORT MATERIALS

Reading Comprehension

Reading Comprehension Activity Page

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



<p>the passing down of inherited traits from one generation to another</p>	<p>when an organism reproduces one or more copies of itself</p>	<p>the study of how traits are inherited</p>
<p>the process by which the organism that are best suited for their environment survive and pass on their traits</p>	<p>the form of reproduction by the joining of a male reproductive cell with a female reproductive cell</p>	<p>the process by which the genetic structure of populations changes over time</p>
<p>a series of stages that occur during the life time of all organisms</p>	<p>a system by which objects are put in order so that they can be referred to again and identified</p>	<p>any permanent change in a gene or chromosome of a cell</p>
<p>any living thing that can carry out its life processes on its own</p>		

<p>asexual reproduction</p>	<p>biological evolution</p>	<p>classification</p>	<p>genetics</p>
<p>heredity</p>	<p>life cycle</p>	<p>mutation</p>	<p>natural selection</p>
<p>organism</p>	<p>sexual reproduction</p>		



Reading Comprehension Activity Page

Write the word or words that best complete each sentence in the space below. Words may be used only once.



asexual reproduction	classification	evolution	life cycle	heredity
sexual reproduction	natural selection	organism	mutation	
biological evolution				

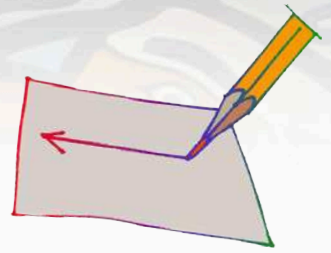
- 1 _____ is the process by which the genetic structures of populations change over time.
- 2 All living things have a _____ .
- 3 _____ is the production of a new organism from a single parent, such as a spider plant or a jellyfish.
- 4 _____ can be a theory to explain evolution or how an organism survives and passes on traits.
- 5 _____ is the passing down of traits from one generation to another.
- 6 The study of how traits are inherited is called _____ .
- 7 A _____ is any permanent change in a gene or chromosome of a cell.
- 8 A system of _____ is used to group living things.
- 9 An _____ is any living thing.
- 10 _____ is the production of a new organism from two parents, such as deer or beaver.



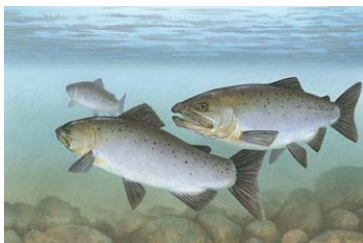
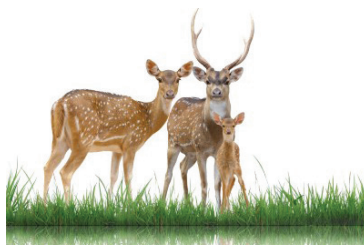
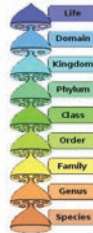
STUDENT SUPPORT MATERIALS

Basic Writing

Basic Writing Activity Page

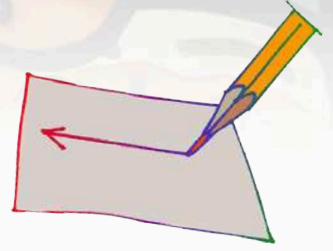


Have the students write the word for each picture.



Basic Writing Activity Page

Have the students write in the missing letters.



asexual re_____uction

bio_____ical evolution

classi_____ation

g_____tics

he_____ity

life c_____e

m_____ion

na_____al selection

or_____ism

sexual repro_____ion

Graphic Organizer

Model the process for students using the following unit words.

WHAT IT IS:		WHAT IT IS NOT:
EXAMPLES:	asexual reproduction	NOT EXAMPLES:

WHAT IT IS:		WHAT IT IS NOT:
EXAMPLES:	biological evolution	NOT EXAMPLES:

WHAT IT IS:		WHAT IT IS NOT:
EXAMPLES:	classification	NOT EXAMPLES:

WHAT IT IS:		WHAT IT IS NOT:
EXAMPLES:	genetics	NOT EXAMPLES:

WHAT IT IS:		WHAT IT IS NOT:
EXAMPLES:	heredity	NOT EXAMPLES:

Graphic Organizer

WHAT IT IS:		WHAT IT IS NOT:
	life cycle	
EXAMPLES:		NOT EXAMPLES:

WHAT IT IS:		WHAT IT IS NOT:
	mutation	
EXAMPLES:		NOT EXAMPLES:

WHAT IT IS:		WHAT IT IS NOT:
	natural selection	
EXAMPLES:		NOT EXAMPLES:

WHAT IT IS:		WHAT IT IS NOT:
	organism	
EXAMPLES:		NOT EXAMPLES:

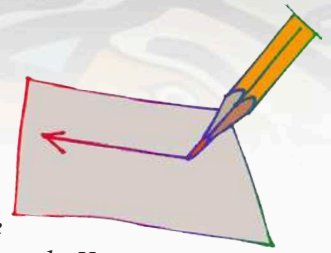
WHAT IT IS:		WHAT IT IS NOT:
	sexual reproduction	
EXAMPLES:		NOT EXAMPLES:



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.

ASEXUAL REPRODUCTION

BIOLOGICAL EVOLUTION

CLASSIFICATION

GENETICS

HEREDITY

LIFE CYCLE

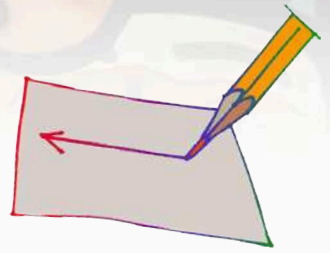
MUTATION

NATURAL SELECTION

ORGANISM

SEXUAL REPRODUCTION

Creative Writing Activity Page



On the lines below, write a paragraph based on the picture above. Before you begin writing, reflect on the unit words – genetics, heredity, and life cycle.





UNIT ASSESSMENT

C-1: Concepts of Life Science



SCIENCE PROGRAM

Unit Assessment Teacher's Notes
Grade 7 • Unit 5 (C-1)
Theme: Concepts of Life Scienc

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 pages 1 in your test. Look at the pictures in the boxes.

1. Write the number 1 on top of the picture for **ASEXUAL REPRODUCTION**.
2. Write the number 2 on top of the picture for **BIOLOGICAL EVOLUTION**.
3. Write the number 3 on top of the picture for **CLASSIFICATION**.
4. Write the number 4 on top of the picture for **GENETICS**.
5. Write the number 5 on top of the picture for **HEREDITY**.
6. Write the number 6 on top of the picture for **LIFE CYCLE**.
7. Write the number 7 on top of the picture for **MUTATION**.
8. Write the number 8 on top of the picture for **NATURAL SELECTION**.
9. Write the number 7 on top of the picture for **ORGANISM**.
10. Write the number 8 on top of the picture for **SEXUAL REPRODUCTION**.

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. Heredity is the study of how traits are inherited.
2. Asexual reproduction is the form of reproduction by the joining of a male reproductive cell with a female reproductive cell.
3. Genetics is the passing down of inherited traits from one generation to another.
4. Natural selection is the process by which the genetic structure of populations changes over time.
5. Sexual reproduction is when an organism reproduces one or more copies of itself.
6. Biological evolution is the process by which the organism that are best suited for their environment survive and pass on their traits.



Unit Assessment

7. A life cycle is a series of stages that occur during the life time of all organisms.
8. Classification is a system by which objects are put in order so that they can be referred to again and identified.
9. A mutation is any permanent change in a gene or chromosome of a cell.
10. An organism is any living thing that can carry out its life processes on its own.

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 scrambled letters on the left. Rearrange or unscramble the letters to form each of the unit words.

READING COMPREHENSION

Turn to page 6 in your test. Write the word or words that best complete each sentence in the space below. Words may be used only once.

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.



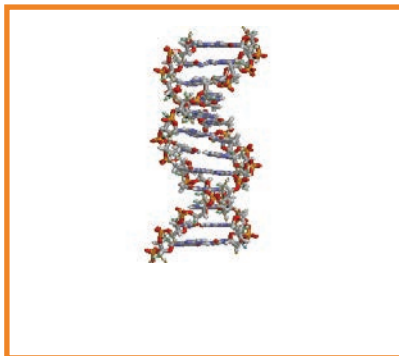
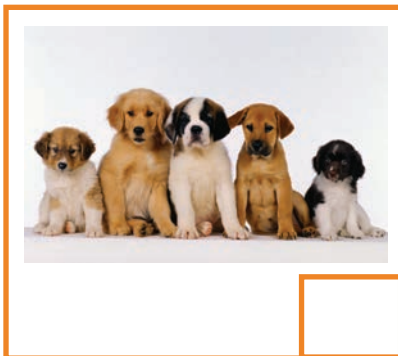
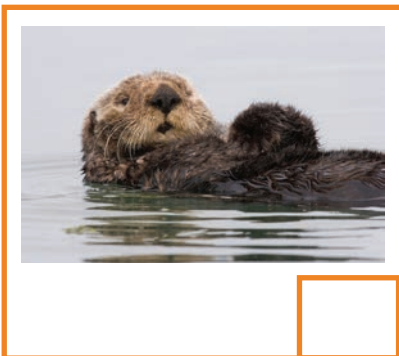
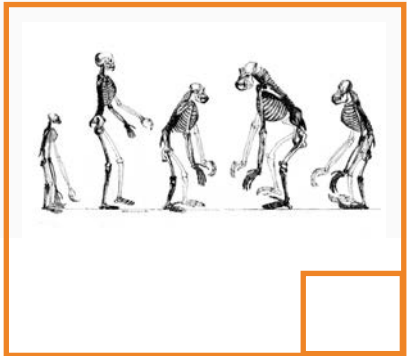
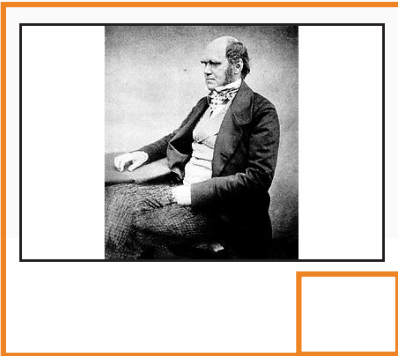
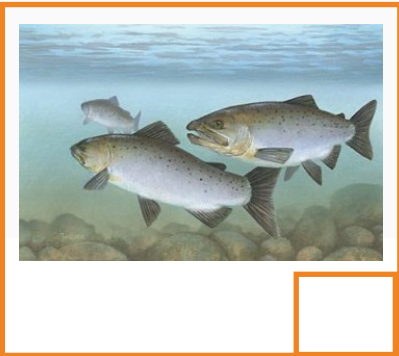


SCIENCE PROGRAM

Unit Assessment Student Pages
Grade 7 • Unit 5 (C-1)
Theme: Concepts of Life Science

Date: _____ Student's Name: _____

Number Correct: _____ Percent Correct: _____

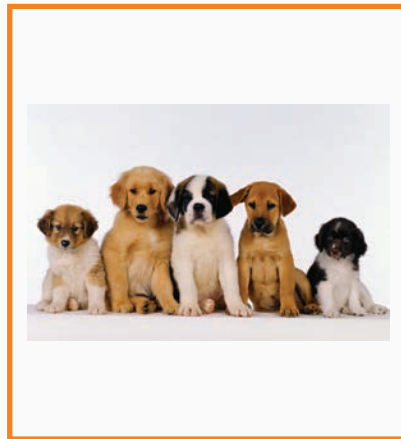




1. **T** **F**
2. **T** **F**
3. **T** **F**
4. **T** **F**
5. **T** **F**
6. **T** **F**
7. **T** **F**
8. **T** **F**
9. **T** **F**
10. **T** **F**



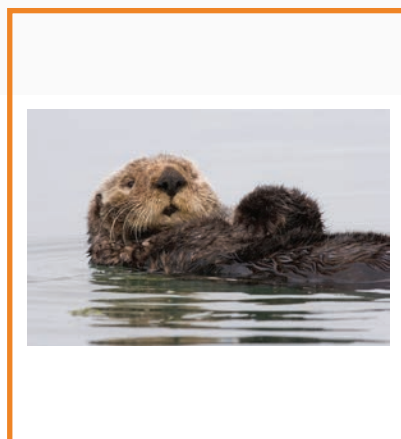
asexual reproduction
 biological evolution
 classification
 genetics
 heredity
 life cycle
 mutation
 natural selection
 organism
 sexual reproduction



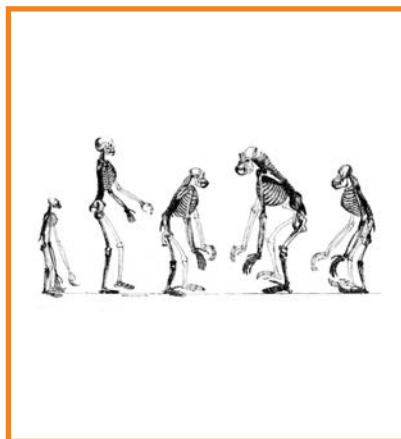
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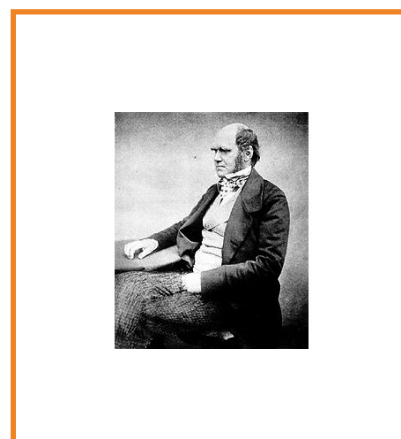
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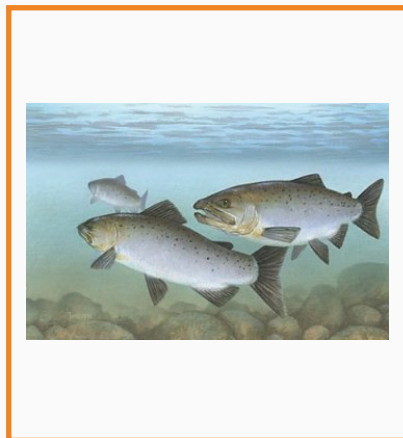
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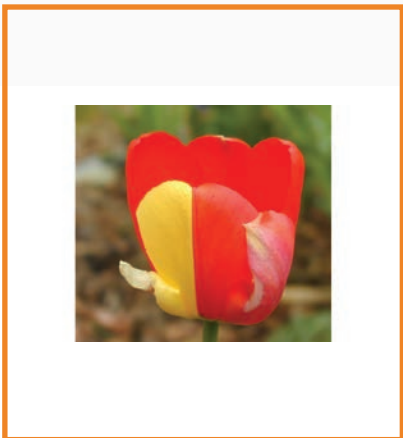
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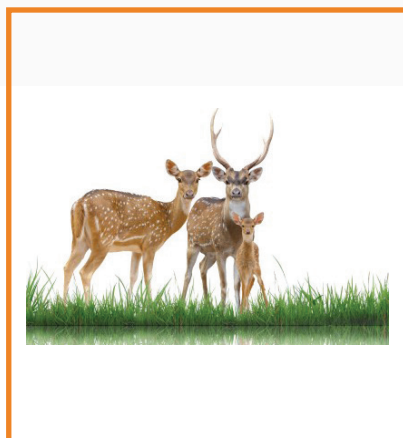
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biological evolution

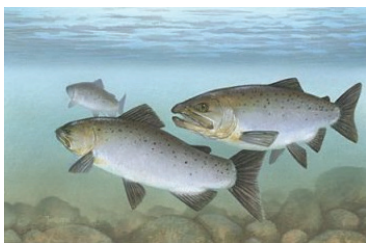
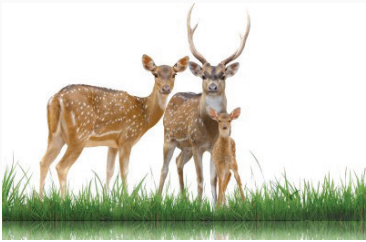
classification
natural selection

evolution
organism

life cycle
mutation

heredity

- ① _____ is the process by which the genetic structures of populations change over time.
- ② All living things have a _____ .
- ③ _____ is the production of a new organism from a single parent, such as a spider plant or a jellyfish.
- ④ _____ can be a theory to explain evolution or how an organism survives and passes on traits.
- ⑤ _____ is the passing down of traits from one generation to another.
- ⑥ The study of how traits are inherited is called _____ .
- ⑦ A _____ is any permanent change in a gene or chromosome of a cell.
- ⑧ A system of _____ is used to group living things.
- ⑨ An _____ is any living thing.
- ⑩ _____ is the production of a new organism from two parents, such as deer or beaver.





ASEXUAL REPRODUCTION

BIOLOGICAL EVOLUTION

CLASSIFICATION

GENETICS

HEREDITY

LIFE CYCLE

MUTATION

NATURAL SELECTION

ORGANISM

SEXUAL REPRODUCTION
