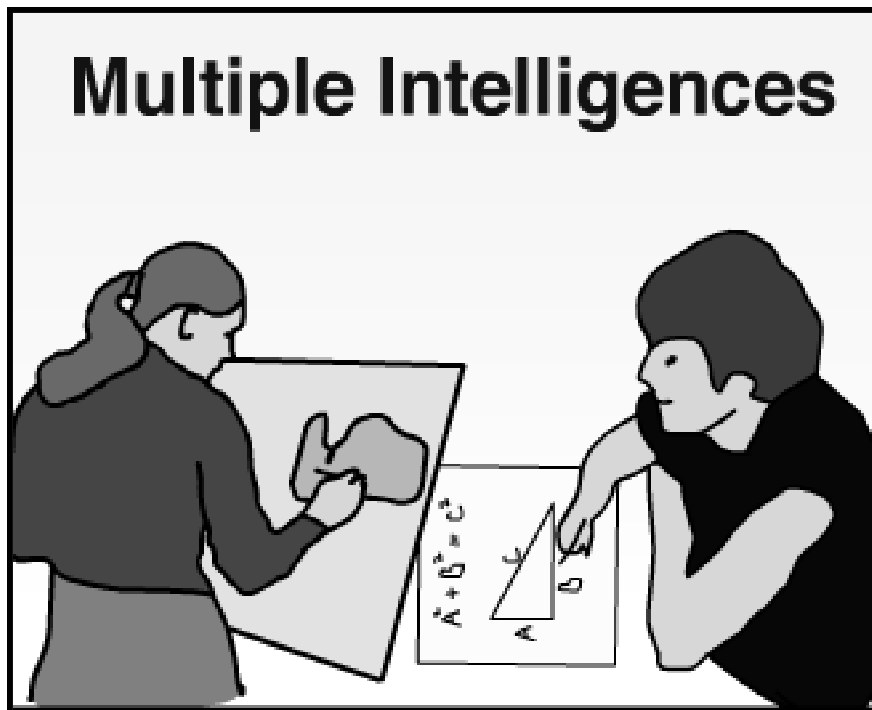
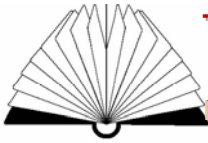


The Northern Edge

Study Guide

Multiple Intelligences





Multiple Intelligences

Introduction

This story is from **Issue #4 of The Northern Edge**. The story talks about eight 'intelligences' or different ways that people are smart. The eight areas are words, numbers, nature, the physical body, pictures or visual things, music, other people, and our self.

There's one on-line learning activity. Learners read 40 statements and check if each statement is 'not me', 'somewhat me', or 'definitely me'. Learners get feedback about their strengths based on their answers.

This story is an opportunity for learners to use the word intelligence in a very broad way. It talks about how each of us has one or more 'smarts' or things we're good at and other 'smarts' or things we're not so good at.

This section first presents a list of 10 learning activities and the written text of the story. The pages following the written text give instructor notes and handouts for each activity, in the order on the list.

This symbol marks the written text for the story.

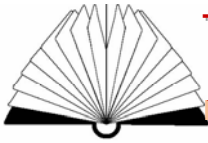




This symbol marks instructor notes.

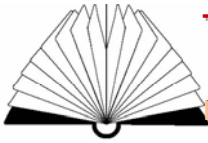


This symbol marks handouts to copy for learners.





Multiple Intelligences List of Learning Activities		
Instructor Notes 	Handouts 	Page #s
1) Vocabulary	1 handout	7, 8, 9
2) Language skills	1 handout	7, 10, 11
3) Questions	2 handouts	12 to 15
4) Writing	3 handouts	16 to 22
5) Smart score	1 handout	23 to 25
6) Smart illustrations	1 handout	26 to 30
7) Lost in the boreal forest	1 handout	31 to 33
8) A smart way to make new words	1 handout	34 to 36
9) Soap carving	1 handout	37 to 39
10) What kind of smarts?	1 handout	40 to 42



Text – Multiple Intelligences
Issue #4 The Northern Edge

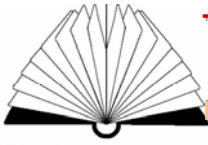
People are good at different things. For example, Joe plays guitar really well. But he's not so good at sports. He has lots of music smarts and not so many body smarts.

There are eight kinds of smarts: word smarts, math or logic smarts, picture or visual smarts, music smarts, body smarts, nature smarts, people smarts, and self smarts.

All eight kinds of smarts are important. Our world today focuses a lot on word and math smarts. But all eight smarts help contribute to a full and meaningful life.

Each person has their own combination of smarts. No combination is better or worse, more or less than any other. Each person is different and unique.

Recognize and use the smarts you have. Be proud of your strengths and respect the different strengths other people have. Each person can also decide to work hard and practice the other smarts – the smarts that they find harder.



Word Smarts

If you can read, write, and speak well you have lots of word smarts. You probably have a good vocabulary and love to read. People with lots of word smarts often do well in school. They like to read books, do word games, and talk.

People with less word smarts often have to work a lot harder in school. This is difficult because school is so important in today's world. People who are word smart often work as authors, teachers, lawyers and salespeople.

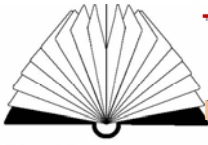
Math or Logic Smarts

If you're good with numbers you have lots of math smarts. You can add, subtract, multiply, and divide easily. You probably can figure out how things work and feel at home with abstract symbols. You're probably quite logical. People with lots of math smarts often do well at school.

People with less math smarts often have to work a lot harder in school. This is difficult because school is so important in today's world. People who are logic or math smart may work as accountants, scientists, computer programmers, or detectives.

Picture or Visual Smarts

If you're good at art and you like to draw or build things, you have lots of picture smarts. You probably like to read maps. You can estimate size and distance. People with lots of picture smarts often learn best with pictures, charts, and other visual things. They would rather make a poster than write an essay.



People with less picture smarts often have to work a lot harder at things such as art or finding their way on the land. People who are picture smart often work as artists, designers, architects, or photographers.

Music Smarts

If you love music and understand timing, pitch, tone, and rhythm you have lots of music smarts. You probably like to listen to music. You might play an instrument. People with lots of music smarts often learn best by putting things to music or listening to music.

People with less music smarts have to work a lot harder at things such as dancing or singing. People who are music smart might work as musicians, composers, conductors or singers.

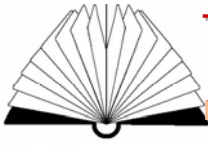
Body Smarts

If you like to do sports or handicrafts or build models you have lots of body smarts. You probably have good motor skills. People with lots of body smarts often learn best when they touch things, move things, and do things. They like the hands-on approach.

People with less body smarts have to work a lot harder at things such as riding a bike or sewing. People who are body smart often are athletes, surgeons, carpenters, or welders.

Nature Smarts

If you like animals, insects, minerals, plants, stars, and other parts of the environment you have lots of nature smarts. You probably do well when you go hunting or fishing. People with lots of nature smarts learn best when they can be outside.



People with less nature smarts often have to work a lot harder at things such as camping or going on a picnic. People who are nature smart may be hunters, trappers, biologists, or astronomers.

People Smarts

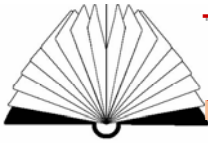
If you communicate well, make friends easily, and you're sensitive to other people you have lots of people smarts. You probably work well with other people. People with lots of people smarts often learn best when they work with a team.

People with less people smarts have to work a lot harder at things such as working on the committee or helping run the Boy Scouts. People smart people work as daycare workers, teachers, or coaches.

Self Smarts

If you are aware of your own feelings, strengths, ideas, values, and beliefs you have lots of self smarts. You probably enjoy private time to think. You use your self-knowledge to develop your own opinions. People with lots of self smarts often learn best when they can be independent and control their own learning.

People with less self smarts often have to work a lot harder at things such as being alone or having a debate about something. People who are self smart may work as philosophers, psychologists, or writers.



Vocabulary Learning Activity 1

One handout

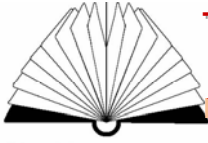
Learners look up the best meaning for words from the story **Multiple Intelligences**. Encourage learners to write down and look up the meaning of other words from the story they don't understand.



Language skills Learning Activity 2

One handout

The handout shows eight words that represent the eight kinds of smarts. Learners fill in the blanks in eight sentences with the word that fits best.



Vocabulary
Learning Activity 1

Use a dictionary to find the **best** meaning of the following words from the story **Multiple Intelligences**. Write down the meaning. Add other words from the story that you don't understand.

Smart _____

What do you think the word 'smart' means in this story?

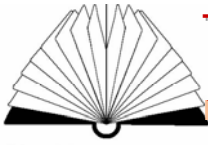
Visual _____

Logic _____

Architects _____

Strengths _____

Beliefs _____

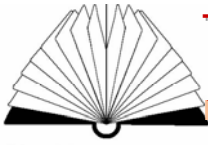


Independent _____

Abstract _____

Symbols _____

Rhythm _____

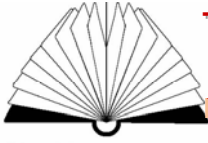


Language skills
Learning Activity 2

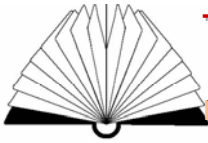
The eight words below represent eight different ways people are smart. Fill in the blank in each sentence with the word that fits best.

self nature people body
number music word visual

- 1) A person who prefers to work on their own has a lot of _____ smarts.
- 2) A person who does really well in the renewable resources course in Fort Smith has a lot of _____ smarts.
- 3) People who like to work in groups have _____ smarts.
- 4) A student who enjoys physical education probably has _____ smarts.
- 5) A person who likes to measure things or who can easily make change with money probably has more _____ smarts.



- 6) A person who can't tell a guitar from a piano has less _____ smarts than someone who plays the fiddle.
- 7) People who like to read and write stories probably have good _____ smarts.
- 8) People who would rather draw a picture than write a story probably have _____ smarts.



Questions Learning Activity 3

Two handouts

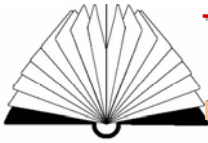
3-1: Story questions

Learners first choose one of three phrases to define 'multiple intelligences'.

Learners do the on-line questionnaire and answer questions based on results. If they don't have access to the on-line questionnaire you will have to adapt the questions.

3-2: Journal writing

Learners use questions to guide their journal writing.



Questions
Learning Activity 3

3-1: Story questions

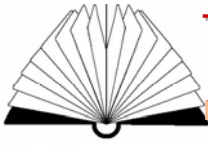
Circle the letter beside the phrase that best describes 'multiple intelligences'.

- a) How smart people are in school
- b) Each person does things, solves problems, and learns and creates things in different ways.
- c) Each person has one 'smart'

Do the on-line questionnaire about smarts. Write one or more sentences to answer the following questions. Begin each sentence with a capital letter and end with the correct punctuation.

- 1) Everyone has 'smarts'. Most people are really good at some smarts and less good at others. According to the on-line questionnaire, what are your strongest smarts?

- 2) According to the on-line questionnaire, what smarts do you need to strengthen?

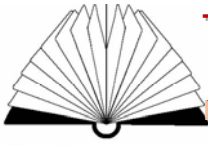


3) Schools and libraries offer extra activities such as chess, reading, science, music, art, and sports. Why do you think they offer these activities?

4) Physical education is one of five credit courses high school students must take. Why?

5) Many people have a hobby. Do you think this is a useful activity? Why or why not?

6) Look at your answer to question 2. What could you do to strengthen your weaker smarts?

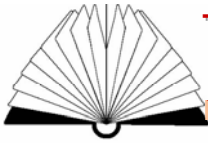


Questions
Learning Activity 3

3-2: Journal writing

Use these questions to guide your journal writing.

- ✓ What have you learned from this story?
- ✓ Comment on the idea that people may have one or two smarts but they may not know very much in those areas.
- ✓ Do you think everyone has at least one kind of smart?
- ✓ Is being smart always a matter of one person being more intelligent than another? Why or why not?



Writing Learning Activity 4

Three handouts

4-1: Multiple smarts

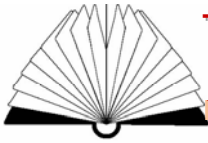
Learners think about a person who has multiple strengths. They each make a web to organize the information and write a paragraph to describe the person.

4-2: What I can do

Learners use transition words to write five sentences to compare their strengths with areas they need to strengthen.

4-3: What would you do?

Learners use their problem-solving smarts to deal with a fictional situation. Ask learners to share their answers. Encourage learners to recognize how people use different smarts to solve problems.

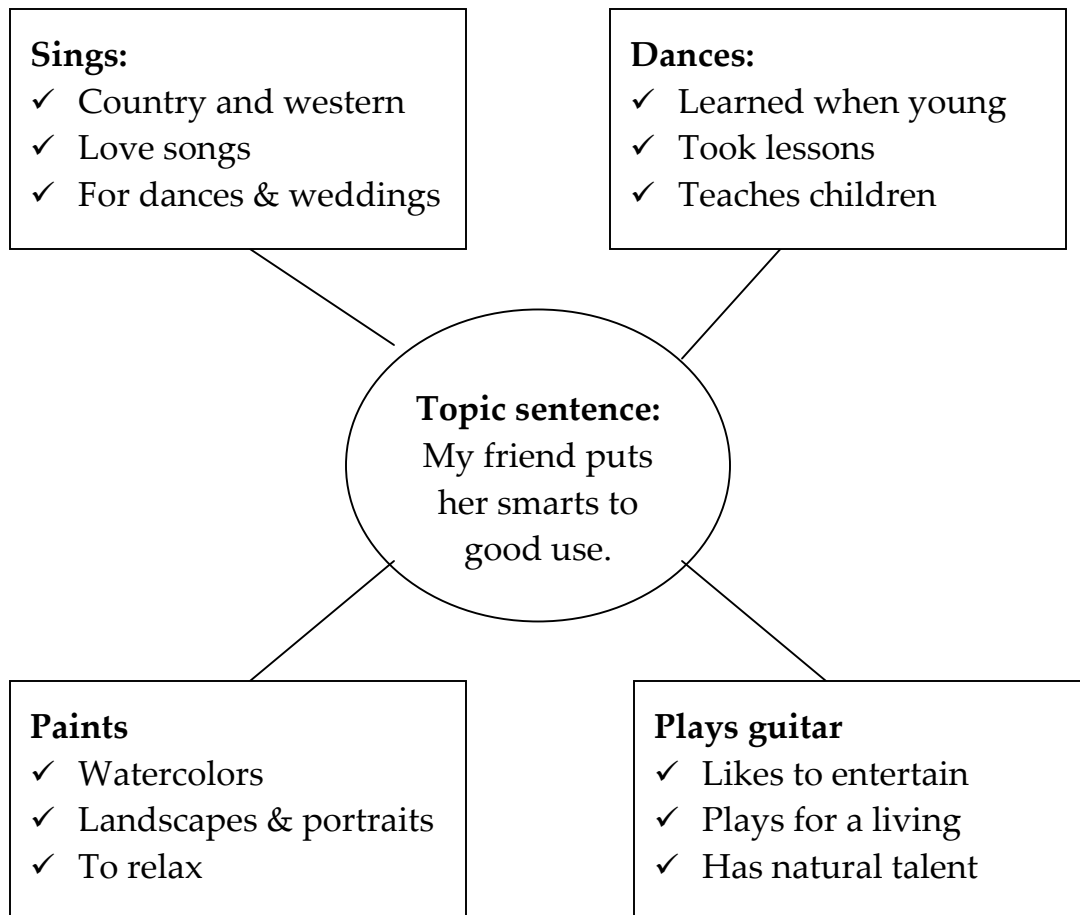


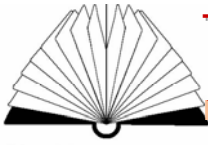
Writing Learning Activity 4

4-1: Multiple smarts

During this activity you'll develop a web about someone you know and the smarts they're good at. Then you'll use the web to write a paragraph about the person.

Look at this sample web. This person sings, dances, paints pictures, and plays guitar.

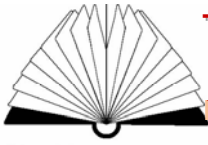




Think about someone you know who has several smarts. Make a web about this person and their smarts – like the sample web. Put a topic sentence in the middle like in the sample.

Use the information in the web to write a paragraph about the person.

- ✓ Write the main idea in the first sentence.
- ✓ Write one or two sentences about each detail.
- ✓ Write a concluding sentence that relates to the topic sentence.
- ✓ Put a title at the beginning of your paragraph.
- ✓ Print your paragraph on the computer.
- ✓ Post your paragraph on the school bulletin board or in the school newsletter.



Writing Learning Activity 4

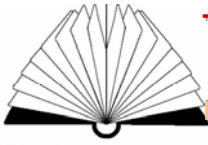
4-2: What can I do?

Everyone does some things really well. We should be proud of the ways that we use our best smarts every day. And it's okay to admit that we're not so good at some things.

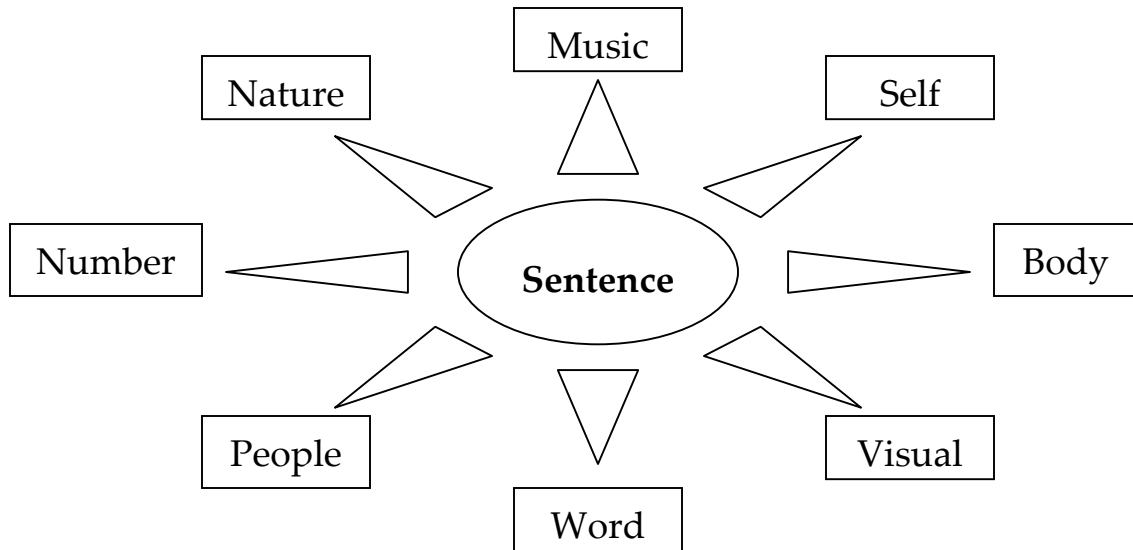
Write five sentences. In each sentence compare something you do well with something you're not so good at or something you'd like to strengthen.

Examples:

- ✓ I am very musical, but I cannot bead moccasins.
- ✓ I'd rather watch a movie than lift weights or go for a jog.
- ✓ I like to play games. However, I don't like to play cards.
- ✓ My best subject is physical education. On the other hand, I don't do so well with social studies.
- ✓ I'm very good at writing, but I feel uncomfortable if I have to speak in front of lots of people.

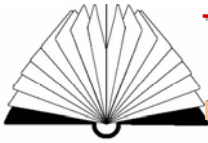


Use this web of different kinds of smarts to help you organize your ideas.



Write your five sentences on the next page. Use the following four words or phrases to compare things, if you want to.

but rather than on the other hand however



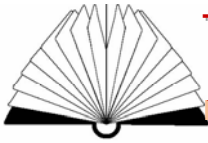
1) _____

2) _____

3) _____

4) _____

5) _____



Writing
Learning Activity 4

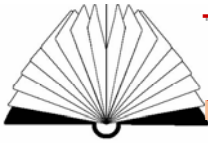
4-3: What would you do?

You are the pilot of a plane that carries over 400 people. You have just taken off from the airport and a passenger crashes through the cockpit door.

What kinds of smarts do you use to deal with this problem?

- 1) _____
- 2) _____
- 3) _____

What would you do? How would you handle the situation?



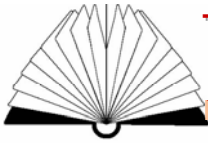
Smart score
Learning Activity 5

One handout

Learners need to first complete the on-line activity for the story **Multiple Intelligences**. Learners use their results from the on-line questionnaire to build a bar graph.

Learners enter their results in a table. The table also has a set of sample scores. The handout has a sample bar graph that shows the sample scores.

Learners use their own scores to make a bar graph.

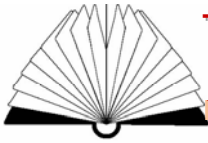


**Smart score
Learning Activity 5**

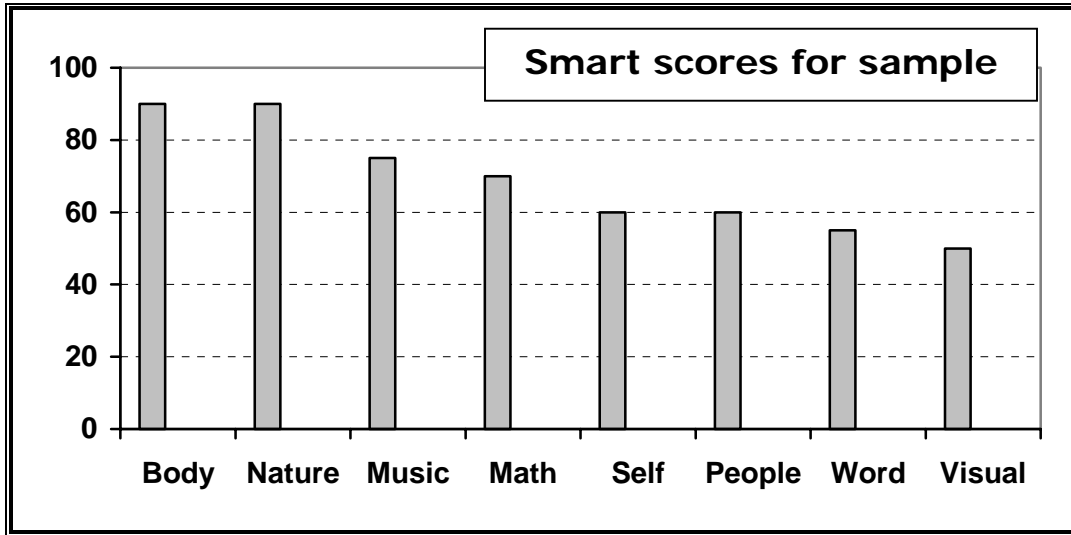
Go on-line and do the activity connected with the story **Multiple Intelligences**. Answer the 40 questions in the questionnaire.

When you finish the questionnaire, the computer gives you the results. Write your smart scores in the right column of the table below. The table also gives a set of sample scores from the same questionnaire.

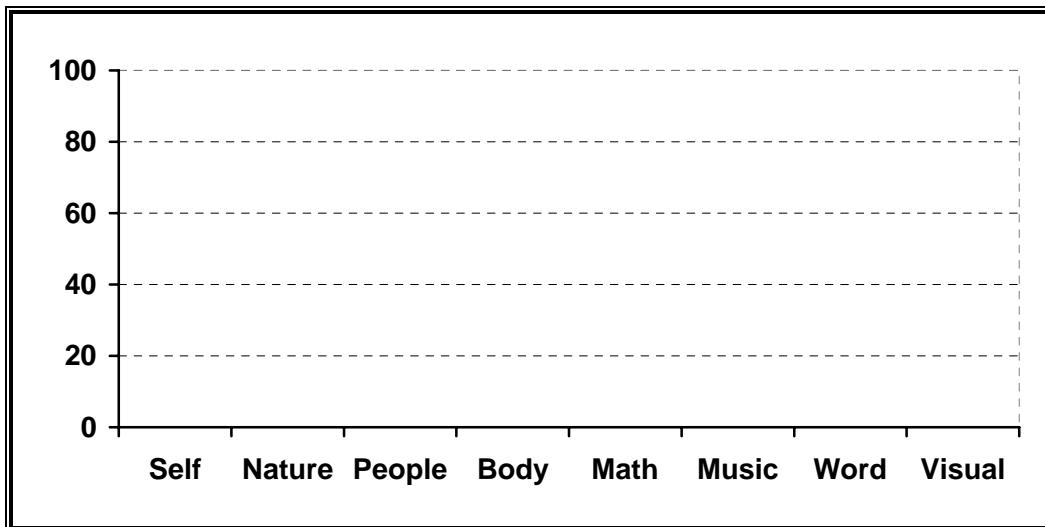
Sample		Your score	
	Score		Score
Body	90	Body	
Nature	90	Nature	
Music	75	Music	
Number	70	Number	
Self	60	Self	
People	60	People	
Word	55	Word	
Visual	50	Visual	

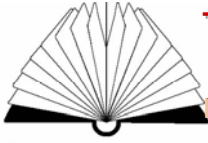


Here is a bar graph that shows the sample scores from the on-line quiz.



Make a bar graph that shows your smart scores from the on-line quiz.



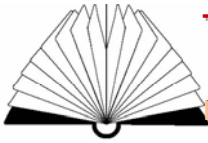


**Smart illustrations
Learning Activity 6**

One handout

Learners draw their version of the eight smarts. Play some background music as they draw, sketch, or paint. Ask learners to bring in their own music for this activity.

Then ask learners to write in their journals how the music affected them as they worked on their pictures.

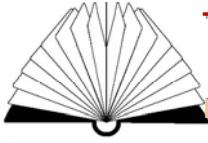


**Smart illustrations
Learning Activity 6**

Use your visual smarts to draw a picture of your eight strengths.

Self

Nature

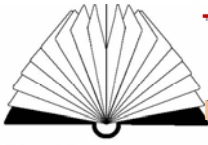


People

A large, empty rectangular box with a black border, intended for notes or drawings related to the 'People' category.

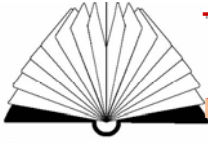
Body

A large, empty rectangular box with a black border, intended for notes or drawings related to the 'Body' category.



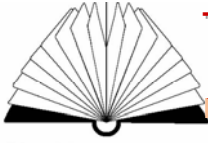
Number

Music



Visual

Word



Lost in the boreal forest Learning Activity 7

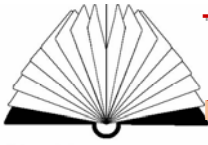
One handout

Learners use their number smarts to count by twos and by tens in this activity.

Joe and Jack are lost in the boreal forest. Learners move from square to square to get them out of the forest to home. They can move one square up, down, right, left, or diagonally. Make sure learners understand the word diagonally before they start.

Learners count by tens to get Jack out of the forest and by twos to get Joe out. It's much harder to get Joe out.

After learners get Jack and Joe home, the handout asks them to divide 70 by 10 and by 2. It also asks what other numbers divide evenly into 70.



**Lost in the boreal forest
Learning Activity 7**

During this activity you'll use your number smarts to get Joe and Jack out of the boreal forest to home.

- i) Start with Jack. Find Jack in the 10 box at the bottom right corner. Move Jack one box at a time to get him home. Home is the 70 box in the middle of the bottom row.

Count by tens. Move Jack one box with each count. You can move one square up, down, right, left, or diagonally. Draw a line from box to box with each count to show the path to home.

Before you start:

What does diagonally mean? _____

- ii) Now help Joe. Find Joe in the 2 box in the middle. Move Joe one square at a time to get him home. Home is the 70 box in the middle of the bottom row. This one is much harder.

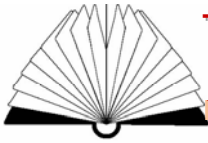
Count by twos. Move Joe one square with each count. You can move one square up, down, right, left, or diagonally. Draw a line from box to box with each count to show the path to home.

After you finish:

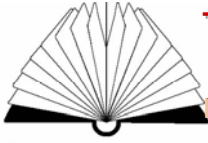
The number 70 ends with 0. The numbers 2 and 10 divide evenly into any number that ends with 0.

$70 \div 10 =$ _____ $70 \div 2 =$ _____

What other numbers divide evenly into 70? _____



The Boreal Forest								
62	50	48	44	42	42	22	30	20
60	48	46	44	42	40	20	24	26
54	60	48	12	38	26	20	24	26
48	50	10	36	40	44	16	26	30
52	54	6	34	42	14	30	34	46
62	54	8	32	4	6	8	10	44
60	56	30	2	2 Joe	4	10	12	70
58	30	28	2	2	4	14	12	60
32	60	6	26	4	20	16	14	50
38	62	8	24	22	18	18	40	40
40	64	27	10	24	20	50	40	30
22	42	66	64	26	60	40	20	20
20	18	22	68	70 Home	50	50	11	10 Jack



A smart way to make new words Learning Activity 8

One handout

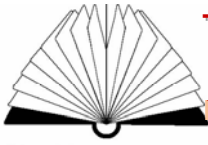
Suffix:

Letters we can add to the end of a word to make another form of that word.

Learners use suffixes to change the form of different words. The handout gives the following suffixes as options:

- ✓ -al
- ✓ -ment
- ✓ -ist
- ✓ -tion
- ✓ -ent
- ✓ -er

The handout has 10 sentences. Each has a different word in front and a blank somewhere in the sentence. Learners choose a suffix to change the form of the word in front to fill in the blank in each sentence.



A smart way to make new words Learning Activity 8

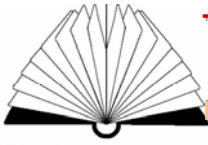
We can make a new kind of word when we add a suffix to the root word.

What is a suffix? A suffix is the letters we can add to the end of a word to make a new kind of word.

Here are a few examples.

Root word	Suffix	New kind of word
Report	-er	Reporter
Enter	-ance	Entrance
Agree	-ment	Agreement
Piano	-ist	Pianist
Select	-tion	Selection
Option	-al	Optional
Friend	-ly	Friendly
Admire	-able	Admirable
Respect	-ful	Respectful

Use this list of suffixes to help make new words to fill in the blanks on the next page.



Read these sentences. Add a suffix to the word in front of each sentence to make a new word to fit in the blank.

art A person who has visual smarts may be an

_____ .

depend People who do what they say they will do are

_____ people.

write A famous _____ knows
how to use words to make a living.

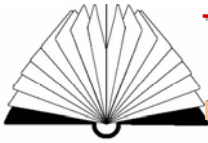
biology What does a _____ do when
she finds a wolverine?

logic People who are _____ make
good computer programmers or math teachers.

arrange He made a lovely flower _____ for
the wedding.

describe She gave a good _____ of
the thief and got an award.

announce Have you received the birth _____?



Soap carving Learning Activity 9

One handout

Learners use their body and visual smarts to carve a sculpture from a bar of soap.

Materials:

- ✓ One bar of soap for each learner
- ✓ Craft sticks, popsicle sticks, paper clips, pencil, toothpicks
- ✓ Newspaper
- ✓ Small plastic bags to store materials

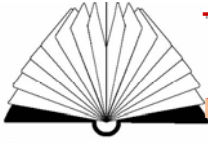
To introduce the activity, show learners pictures of carved animals or objects and real carvings.

Review these words with learners:

- ✓ **Sculpture:** The art of shaping objects out of hard materials such as stone or wood.
- ✓ **Whittle:** To cut away slowly.
- ✓ **Texture:** How a surface feels or looks. For example fur has a fuzzy texture and stone has a smooth texture.

Review the handout.

- ✓ How do learners transfer a drawing to the soap?
- ✓ **Shape:** How is a sculpture different than a picture? What is possible and not possible when carving a shape? How do the learners carve a shape?



- ✓ **Lines:** How can learners make lines in soap?
- ✓ What do we need to be careful about?

Discuss with learners when they finish carving:

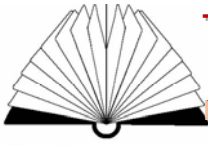
- ✓ What did they like about their own work?
- ✓ What did they like about other peoples' work?
- ✓ What would they do differently next time?
- ✓ Would they like to try carving stone? What would be the main differences?

Encourage learners to use new vocabulary words.

Alternate or extended carving activities:

- ✓ Clay
- ✓ Modelling clay
- ✓ Styrofoam
- ✓ Soapstone

Learners can also write a critique of their soap carving in their journal.



Soap carving Learning Activity 9

Use your body and visual smarts to carve a sculpture from a bar of soap.

What do these words mean?

- ✓ Sculpture
- ✓ Whittle
- ✓ Texture

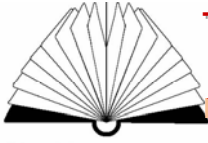
Find a picture of an animal or object you want to carve. Make a simple drawing the same size as your soap bar. Use a pencil to mark the drawing on the soap.

Shape: Use the craft stick to carefully whittle small pieces of soap. Cradle the soap in your hands and turn it over as you work.

Lines: Hold the craft stick like a pencil and make lines. Use a pencil, toothpicks, paper clips, popsicle sticks, or a sharp object to make different textures.

Be careful:

- ✓ Work on three or four layers of newspaper. When one layer gets covered with soap bits, remove it and use the next layer.
- ✓ Keep your hands away from your nose and eyes.
- ✓ Don't blow on the soap bits on the table or on the sculpture.
- ✓ Keep soap off the floor so it doesn't get slippery.
- ✓ Scrape your craft stick over the newspaper to keep it clean.



What kind of smarts? Learning Activity 10

One handout

Learners match different activities with different kinds of smarts.

Math smarts

Visual smarts

Body smarts

Self smarts

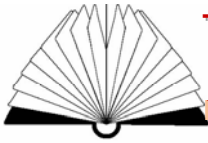
People smarts

Music smarts

Word smarts

Nature smarts

Ask learners to work in pairs or groups of three. Compare and discuss answers.



**What kind of smarts?
Learning Activity 10**

Look at the list of activities below. Decide what kind of smarts a person uses most for each activity.

Math smarts

Visual smarts

Body smarts

Self smarts

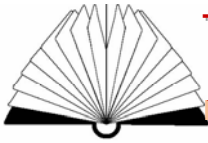
People smarts

Music smarts

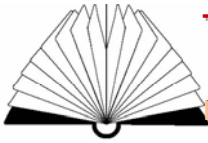
Word smarts

Nature smarts

Activity	What kind of smarts?
Tell a story.	
Draw a map of the community.	
Make a cover for a book.	
Make up a game to play.	
Write a song.	
Work in a group.	
Talk about personal values.	
Look for berries.	
Write a play.	
Build a doghouse.	
Take photos of flowers.	



Activity	What kind of smarts?
Act in a play.	
Play guitar.	
Keep a diary.	
Collect different kinds of rocks.	
Compare one story with another.	
Plan a budget.	
Paint designs on furniture.	
Ride a bike.	
Dance.	
Discuss problems in a group.	
Know about personal needs or problems.	
Garden.	



Resources

Websites:

- ✓ www.vark-learn.com/english/index.asp

Learners can use this site to learn more about their learning style. Go to the site and click on 'questionnaire'.

- ✓ <http://surfaquarium.com/MI/inventory.htm>

This multiple intelligence inventory site identifies nine multiple intelligence areas. Print the questionnaire, score sheet, and graph. Use this as another way to talk about how people have different strengths and how all of us can build strength in our weaker areas.

- ✓ www.mitest.com/

References for multiple intelligences, including some education resources and another questionnaire learners can do on-line.

Books

- ✓ McKenzie, Walter.

Multiple Intelligences and Instructional Technology: A Manual for Every Mind

Eugene, Oregon ISTE, 2002 ISBN 1-56484-192-8

Book and video available at Thebacha Campus Library

- ✓ Armstrong, Thomas

Multiple Intelligences in the Classroom

Alexandria, Va ASCD 1994

A guide to teaching multiple intelligences in the classroom with lesson plans, teaching strategies, etc.