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# The Intelligences Described

Although he reminds us there could be many more, the seven original intelligences identified by Howard Gardner in *Frames of Mind* are the following, plus the newer Naturalist intelligence:

- |                        |                       |
|------------------------|-----------------------|
| → Verbal/Linguistic    | → Bodily/Kinaesthetic |
| → Logical/Mathematical | → Interpersonal       |
| → Visual/Spatial       | → Intrapersonal       |
| → Musical/Rhythmic     | → Naturalist          |

(Verbal/Linguistic and Logical/Mathematical intelligences are the most recognised, appreciated and taught. They are the intelligences that assure success at school.)



Verbal/Linguistic

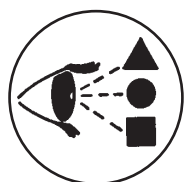
Everyone who speaks can be said to possess this intelligence, although some are more linguistically talented than others. Verbal/Linguistic intelligence expresses itself in words, both written and oral, and in auditory skills. People who have this kind of intelligence can learn by listening. They like to read, write and speak, and they like to play with words. Because tests often rely on verbal responses, people who are strong in this intelligence are often deemed to be strong in others, too.



Logical/  
Mathematical

Logical/Mathematical intelligence includes scientific ability. It is the kind of intelligence that is often called "critical thinking". People with this kind of intelligence like to do things with data; they see patterns and relationships. They like to solve mathematical problems and play strategy games, such as chess. They tend to use graphic organisers. This kind of intelligence is highly valued in our technological society.

# The Intelligences Described (cont.)



Visual/Spatial

Visual/Spatial intelligence is also called visual intelligence. People with this kind of intelligence tend to think in pictures and learn best from visual presentations such as movies, pictures, videos and demonstrations using models and props. They like to draw, paint or sculpt their ideas and often represent moods and feelings through art. They are good at reading maps and diagrams and they enjoy solving mazes and putting together jigsaw puzzles.



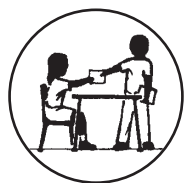
Musical/  
Rhythmic

Musical/Rhythmic intelligence is sometimes called rhythmic or musical intelligence. People with this kind of intelligence are sensitive to sounds, environmental as well as musical. They often sing, whistle or hum while engaging in other activities. They love to listen to music; they may collect albums and they often play an instrument. If musical/rhythmic intelligence is not recognised as a talent, it is often treated as a behaviour problem.



Bodily/  
Kinaesthetic

Bodily/Kinaesthetic intelligence is also called kinaesthetic intelligence. People with this kind of intelligence process information through the sensations they feel in their bodies. They like to move around, act things out and touch the people they are talking to. They are good at both small and large muscle skills and enjoy physical activities and sports.



Interpersonal

Interpersonal intelligence is evident in the individual who enjoys friends and social activities of all kinds and is reluctant to be alone. People with this kind of intelligence enjoy working in groups, learn while interacting and co-operating and often serve as mediators in case of disputes, both in a school situation and at home.



Intrapersonal

Intrapersonal intelligence is shown through a deep awareness of inner feelings. This is the intelligence that allows people to understand themselves, their abilities and their options. People with intrapersonal intelligence tend to be independent and self-directed and have strong opinions on controversial subjects. They have a great sense of self-confidence and enjoy working on their own projects and just being alone.



Naturalist

The eighth intelligence, the Naturalist intelligence, was proposed by Gardner in 1997 and fleshed out in 1999. It pertains to an affinity for learning about the natural world. Individuals enjoy observing, sorting and classifying natural things. They sense patterns in and make connections to elements in nature. People possessing enhanced levels of this intelligence may also be very interested in other species, or in the environment and the earth.

# What About Assessment?

## Can the Intelligences Be Assessed?

We know for sure that the verbal/linguistic and logical/mathematical intelligences can be assessed because we do it all the time. All of the standard tests assess either through language – oral or written – or through mathematical notation combined with language. Both IQ tests and achievement tests are language based; if a student's intelligence lies elsewhere, he or she might not get into university and may never find out that he or she is very talented in some area that is not as highly valued by society.

But, can the other intelligences identified by Gardner be assessed? And, if so, how can this be done without filtering the assessment through language, logic and mathematics? Gardner urges the use of assessment that is "intelligence-fair". Assessment that is intelligence-fair must be such that an intelligence can be judged directly and not through the medium of another intelligence.

## What Instruments Can Be Used?

Most of the so-called "new" or alternative assessments can be adapted for this purpose. Used in this way, they will, of course, still be subject to the same criticisms they are facing now.

Critics of alternative assessment methods say they are not "reliable". Reliable assessment can be defined as assessment that is consistent, no matter who scores it. This has always been true for normed tests, tests that were tried out on a representative population and standardised to produce percentiles, year-level equivalencies and letter marks – all of which could be used for purposes of comparison. The people who believe that reliability, as defined above, is all-important seem to be saying that teachers need an outside authority to validate all measurements of progress. They are also saying, whether they mean to or not, that all testing must be done objectively, through the verbal/linguistic or logical/mathematical intelligences.

Alternative assessment is not objective. In fact, it is subjective. It uses instruments such as observations verified by checklists and anecdotal records and portfolios with rubrics and reflections. It is not exact. Its application may vary from place to place, school to school, teacher to teacher and student to student. It is a tool for measuring student performance on an ongoing basis. It can be used to make recommendations about steps that should be taken both in school and at home to ensure future progress, an area of concern that Gardner feels has been long neglected in favour of norming or ranking.

## Application in the Classroom

Although Gardner recommends and does research on intelligence-fair assessment, he looks at the process from the point of view of a psychologist. It is up to educators to take this information and apply it in a way that is consistent with what actually goes on in a school. Teachers are necessarily aware of their accountability both to their administrators and, increasingly, to the parent and taxpayer communities. So, what are the tools that are presently available, and how can teachers use them to assess the eight intelligences and still meet their professional responsibilities? Let's look at the instruments mentioned above – observations verified by checklists and anecdotal records and portfolios with rubrics and reflections.

# A Simple Method For Checking Almost Anything

Checklists do not have to be complicated. This is a simple method of checking almost anything, including students' understandings of difficult concepts and their participation in class discussions.

You will need a large piece of paper divided into squares or rectangles. A large desk-pad calendar is perfect for this. Use this like a seating chart, writing in the names of the students in their approximate seat locations. If you have multiple classes, you can have a seating chart for each of your classes. Keep the charts stacked on your desk. Be sure to label them clearly (Period Two – Maths) so you do not grab the wrong one by mistake.

Make a simple key. If you are observing a class discussion, you can use a plus (+) for a correct response, a minus (-) for a response that reflects a need for individual instruction, a question mark for a student's question and so on.

You can see in the completed chart below that Martin asked a question, Tam needed some help and Robert dominated the discussion by giving eight correct responses.

## Check Chart For \_\_\_\_\_

Martin	Ben	Maria	Gabe	Tam	Vince	Danny
?	✓ -	+	?	- -	+ +	
Julie	Mary	Fran	Robert	Jenny	Marilyn	Carl
?	+	+ + +	+ + ? + + + + + +	+ -	? ?	
Pam	Liam	Betsy				
+ +	+ +	- ?				
				David	Tim	Liz
				+ +	+ + +	- + ?
				Roger	Mario	Terri
				+ +	- + +	? ? ?a

**Key:** ? = student has a question  
 + = correct response  
 ✓ = participation  
 - = needs individual attention

# Segment Three – Lesson Two (cont.)

## Operations

### Translating the Experience

Think about the experience you just had. It was a logical/mathematical experience. You were considering operations and their given answers and were asked whether or not these answers were in a reasonable range.

Think about your reaction to the experience. In this part of learning about the multiple intelligences you will be translating logical/mathematical experiences by explaining them in written words. Many people feel that logical/mathematical thinking can be made clear by writing about it.

How did you start to figure out the problems? What did you do next? Did you make any false starts? If so, how did you go about figuring out what to do then?

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Are these problems similar? Were there any steps you took in solving the second problem that you did not take in solving the first one? What were they? Explain what you did.

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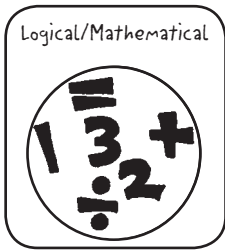
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# Segment Three – Lesson Three

## Measurement and Mapping

**Purpose:** to give students the experience of applying measurement skills to map reading

**Skills:** remembering, understanding, applying, analysing, evaluating and creating

**Intelligences:** logical/mathematical, verbal/linguistic, interpersonal, intrapersonal

**Materials:**

- copies of "How Far Is It?", one for each student
- an atlas for each group or individual student
- copies of "Translating the Experience", one for each student

**Procedures:**

Have students review the definition of logical/mathematical intelligence.

Introduce this experience with a quick, general review of measurement. (See the "References" section.)

Continue by reminding students to look at the "scales" that appear on maps.

Pass out "How Far Is It?" Students may work in groups (interpersonal) or alone (intrapersonal); it is up to you. You may prefer group work in this case because of the need for atlases.

Without any further discussion, ask students to follow the directions on the sheet entitled "How Far Is It?"

Then have students work individually on the sheet entitled "Translating the Experience".

Use these sheets for discussion during Evaluation and Processing and then place them in the students' folders.

**To Simplify:**

Omit "Translating the Experience".

**To Expand:**

Have students continue to find out how far it is from one place of their choice to another. Encourage them to share their information and check results with others.

**Evaluation and Processing:**

Allow students to share and discuss their "Translating the Experience" sheets.

# Segment Five — Nine Lessons

From the Middle of July to the First Week of August

During the fifth segment of this mini-curriculum, students will have a fourth experience with archetypal examples of the intelligences as we consider the bodily/kinaesthetic.

Bodily/Kinaesthetic intelligence means thinking through touch and movement – acting things out, manipulating objects, and using both large and small muscles in physical activities and sports of all kinds. People with this kind of intelligence process information through the sensations they feel in their bodies and express emotion and mood through dance. They enjoy games that require excellent eye/hand co-ordination.

The topics in this segment will include suggestions for exposing students to archetypal examples of bodily/kinaesthetic experience (dance, acting, professional sport), as well as affording opportunities to use manipulative materials and build things, engage in physical activities, and observe and practise gestures and other body language.

The topics selected for this segment are listed below. Brief descriptions and/or explanations follow for your convenience. You may wish to refresh your own familiarity with them. You should, of course, feel free to substitute or add your own favourite topics. If this is “your” intelligence, you will have favourite topics that make this area come alive for you.

1. Dance
2. Acting
3. Professional Sport
4. Using Manipulatives
5. Making Models and Building Things
6. Exercise and Athletics
7. Gestures and Body Language
8. Playing Eye/Hand Co-ordination Games
9. Sharing Translations





# Segment Five — Lesson Five

## Making Models and Building Things

**Purpose:** to give students experience in building a model from a kit

**Skills:** remembering, understanding, applying, analysing, evaluating and creating

**Intelligences:** bodily/kinaesthetic, verbal/linguistic, interpersonal, intrapersonal

**Materials:**

- an inexpensive model kit for each group
- copies of "Translating the Experience", one for each student

### Procedures:

Have students review the definition of bodily/kinaesthetic intelligence.

Remind students that making models and building things is easy and fun for people with bodily/kinaesthetic intelligence. Some of them will have it and some of them will not, but they will never know until they try.

Have students divide into groups. Pass out a model kit to each group. They should assign group roles, read the model directions and try to put it together.

Pass out the "Translating the Experience" sheets and have students work individually to complete them.

You can also use these sheets for discussion during Evaluation and Processing and then place them in the students' folders.

#### To Simplify:

Allow students to work with aides or parent helpers.

#### To Expand:

Encourage students who enjoy model making to bring completed models from home to share with the class.

#### Evaluation and Processing:

Allow students to share and discuss their "Translating the Experience" sheets, as well as any models they would like to display.



# Segment Eight — Lesson Two

## Keeping a Journal

**Purpose:** to give students the experience of keeping a journal

**Skills:** remembering, understanding, applying, analysing, evaluating and creating

**Intelligences:** Potentially all may be involved.

**Materials:**

- copies of "Private Journal Pages", five for each student
- copies of "Translating the Experience", one for each student

**Procedures:**

Have students review the definition of intrapersonal intelligence.

Introduce this experience by giving a brief overview of keeping a journal. (See the "References" section.)

Tell students they will be keeping a private journal at home for five days. They will be taking home enough journal pages for that length of time. They will never have to bring their journal pages back to school.

At the end of a week, pass out the page entitled "Translating the Experience" for students to complete.

Use these sheets for discussion during Evaluation and Processing and then place them in the students' folders.

*To Simplify:*

Most intrapersonal experiences are standard for everyone.

*To Expand:*

Most intrapersonal experiences are standard for everyone.

**Evaluation and Processing:**

Although students will not be expected to discuss their journals, they may want to discuss "Translating the Experience". They may also be willing to discuss whether or not they plan to continue keeping a journal and why or why not.