

*The Metropolitan Center for Research on
Equity and the Transformation of Schools*
The NYS Statewide Language Regional
Bilingual Education Resource Center at NYU
Presents:

Developing Bilingualism and Biliteracy
Teaching For Success in Your Dual
Language Program(Gr. 1-5)

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Agenda


I. The Need to Increase Rigor in Dual Language Programs

- a. Revisiting the Goals of A Dual Language Program: Bilingualism/Biliteracy, Cross-Cultural Competence and Academic Achievement
- b. Maximizing Language Development in Both Languages: Making Sure Students Are Ready to Handle Grade Level Materials in the Upper Elementary Grades

II. Planning Instruction with Rigor In Mind

- a. A Framework for “Double Planning” to account for the needs of each language group enrolled in our Dual Language Programs
- b. A Model Unit on Hurricanes/Cyclones/Typhoons—Why This Unit and How It Links with the Science Standards?

Agenda

- 
- II. The Need to Increase Rigor in Dual Language Planning Instruction with Rigor In Mind (Continued)
 - c. Resources to Assist Us in Identifying Academic Language To Teach
 - d. Finding Leveled Books on a Theme in the Instructional Language
 - e. How to Use Single Language and Dual Language Trade Books
 - f. Teaching Activities and Resources for Promoting Listening, Speaking, Reading and Writing
 - g. Model Bridging Activities and GLAD Strategies for Language Development and for Bridging Across the Two Languages (Translanguaging)

Agenda (continued)

III. Outward Extensions

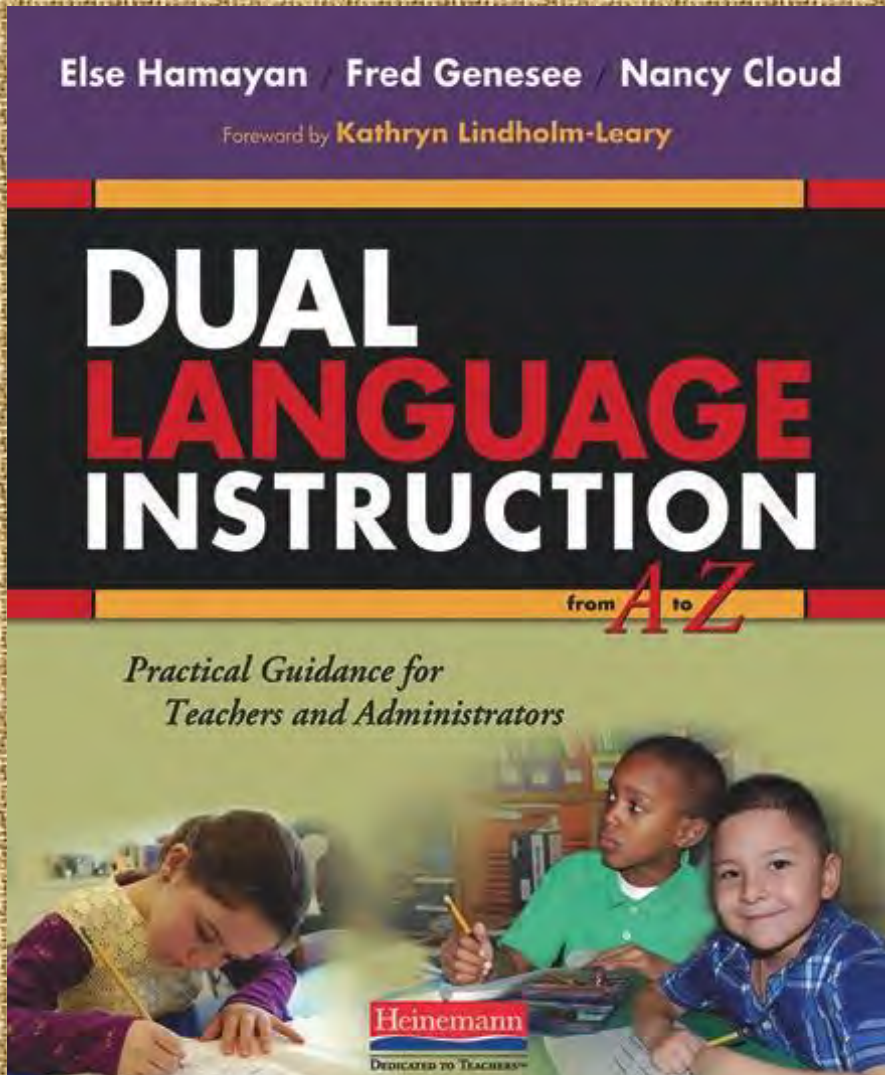
- a. Linking with Authentic Literature: Connecting our Informational Texts with Fictional Texts on the Topic
- b. Linking with Home and Community: Reaching Out to Families to Connect Learning at School with Learning at Home

IV. Wrap Up/Questions



FOUNDATIONS

2013



Argentina



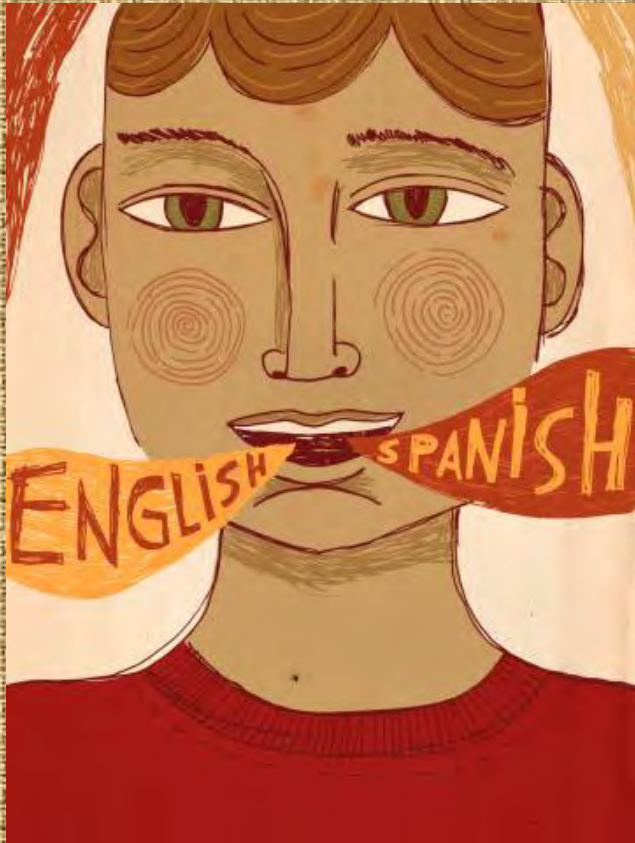
Northeast
USA



Canada

Planning and Revisiting Your DL Program

Revisiting the Non-Negotiable Goals of Dual Language Programs



- **Bilingualism; Biliteracy**
- **High Levels of Academic Achievement**
- **Biculturalism**

At Grade Level

GUIDING PRINCIPLES FOR DUAL LANGUAGE EDUCATION

THIRD EDITION



Elizabeth R. Howard • Kathryn J. Lindholm-Leary • David Rogers • Natalie Olague
José Medina • Barbara Kennedy • Julie Sugarman • Donna Christian

CAL CENTER
FOR APPLIED
LINGUISTICS



Dual Language
Education
of New Mexico

 **SANTILLANA** USA

Third Edition: Guiding Principles for DL Education

<http://www.cal.org/resource-center/publications/guiding-principles-3>

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Guiding Principles at a Glance

STRAND 1	PROGRAM STRUCTURE
Principle 1	All aspects of the program work together to achieve the three core goals of dual language education: grade-level academic achievement, bilingualism and biliteracy, and sociocultural competence.
Principle 2	The program ensures equity for all groups.
Principle 3	The program has strong, effective, and knowledgeable leadership.
Principle 4	An effective process is in place for continual program-planning, implementation, and evaluation.
STRAND 2	CURRICULUM
Principle 1	The program has a process for developing and revising a high-quality curriculum.
Principle 2	The curriculum is standards-based and promotes attainment of the three core goals of dual language education.
Principle 3	The curriculum effectively integrates technology to deepen and enhance learning.
STRAND 3	INSTRUCTION
Principle 1	Instructional methods are derived from research-based principles of dual language education and ensure fidelity to the model.
Principle 2	Instructional strategies support the attainment of the three core goals of dual language education.
Principle 3	Instruction is student-centered.
Principle 4	Instructional staff effectively integrate technology to deepen and enhance the learning process.
STRAND 4	ASSESSMENT & ACCOUNTABILITY
Principle 1	The program creates and maintains an infrastructure that supports an assessment and accountability process.
Principle 2	Student assessment is aligned with program goals and with state content and language standards, and the results are used to guide and inform instruction.
Principle 3	Using multiple measures in both languages of instruction, the program collects and analyzes a variety of data that are used for program accountability, program evaluation, and program improvement.
Principle 4	Student progress toward program goals and state achievement objectives is systematically measured and reported.
Principle 5	The program communicates with appropriate stakeholders about program outcomes.
STRAND 5	STAFF QUALITY & PROFESSIONAL DEVELOPMENT
Principle 1	The program recruits and retains high-quality dual language staff.
Principle 2	The program provides high-quality professional development that is tailored to the needs of dual language educators and support staff.
Principle 3	The program collaborates with other groups and institutions to ensure staff quality.
STRAND 6	FAMILY & COMMUNITY
Principle 1	The program has a responsive infrastructure for positive, active, and ongoing relations with families and the community.
Principle 2	The program promotes family and community engagement and advocacy through outreach and support services that are aligned with the three core goals of dual language education.
Principle 3	The program views and involves families and community members as strategic partners.
STRAND 7	SUPPORT & RESOURCES
Principle 1	The program is supported by all key stakeholders.
Principle 2	The program is equitably and adequately funded to meet program goals.
Principle 3	The program advocates for support.

Maximizing Language Development in Both Languages Depends on Well-Designed Curriculum and Instruction

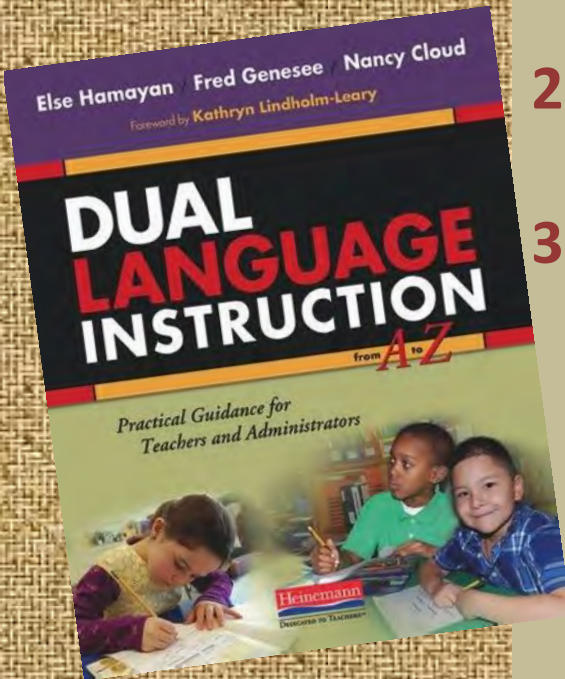


ENCOURAGING MAXIMUM LANGUAGE USE AND DEVELOPMENT IN THE TARGET LANGUAGE

Makes sure that students are ready to handle grade level demands in the upper elementary grades

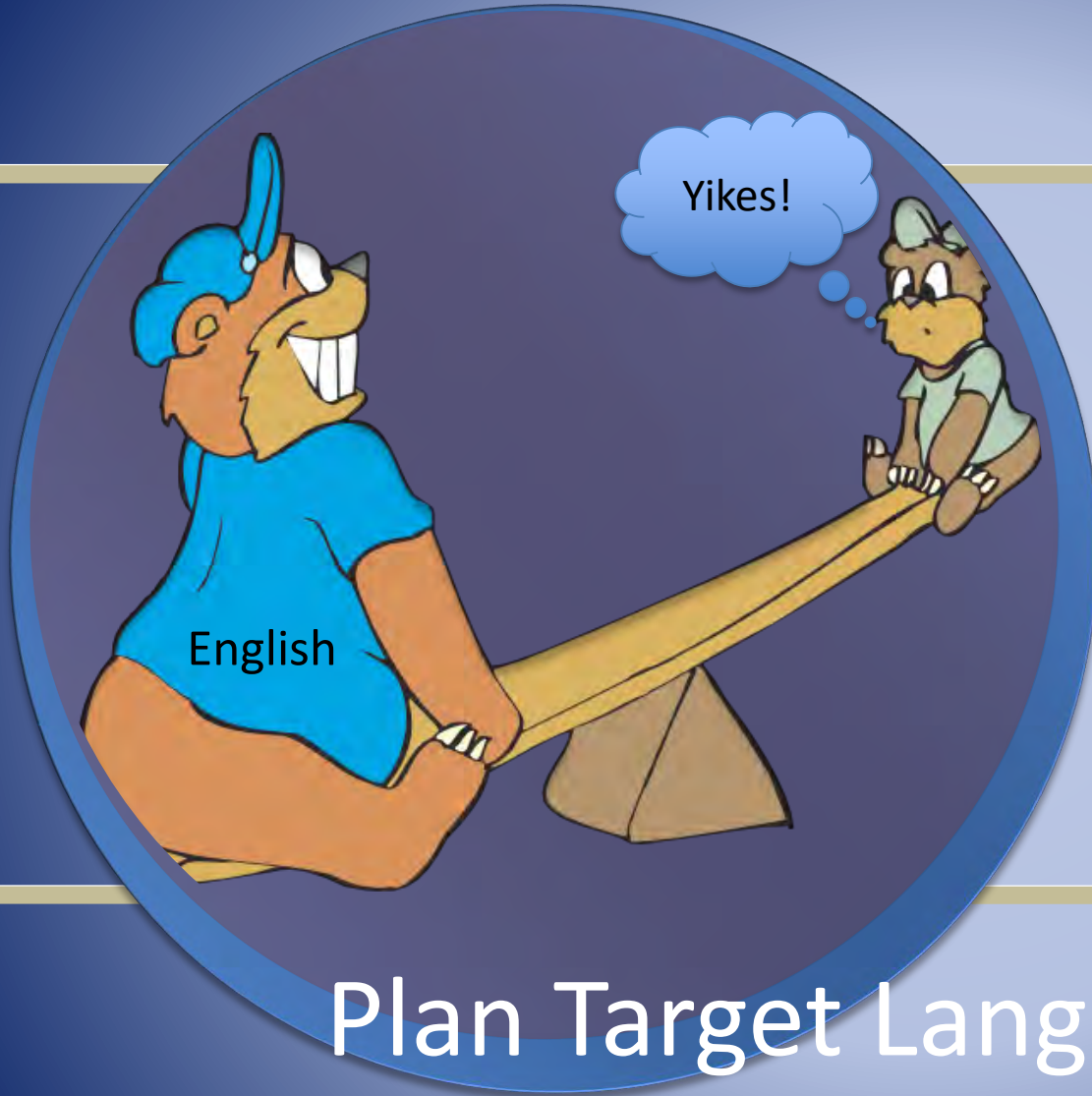
Principles that Guide the Development of Two Languages

(pp. 161-165)



1. **The Status Principle:** The two languages in a DL program must have equal status to ensure that students attain full proficiency in both.
2. **The Bridge Principle:** Students need to access what they know in their two languages.
3. **The Balanced Literacy Principle:** To develop literacy in two languages, use instructional strategies that begin with authentic and interesting text, and then focus on specific aspects of written language.
4. **The Integrated Instruction Principle:** It is easiest to learn language and to learn about language through another content area.
5. **The Oral Language Foundation Principle:** Literacy is developed on a foundation that is set in oral language.

Implement Your Program Model with Fidelity

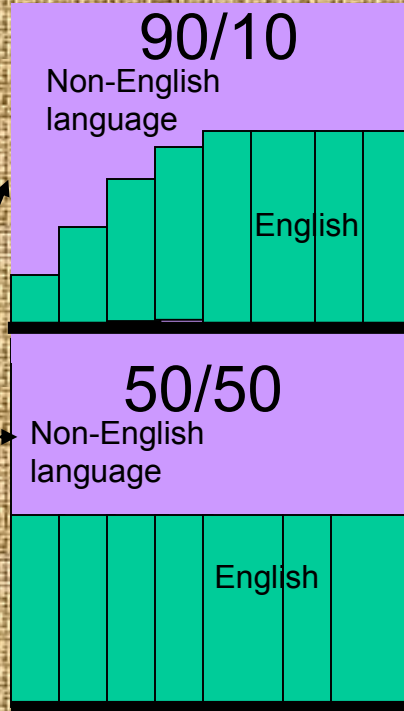


You must guarantee ample use and development of Chinese, Haitian Creole or Spanish to achieve DL program goals

Plan Target Language Instruction with Rigor in Mind

Language Allocation and Use

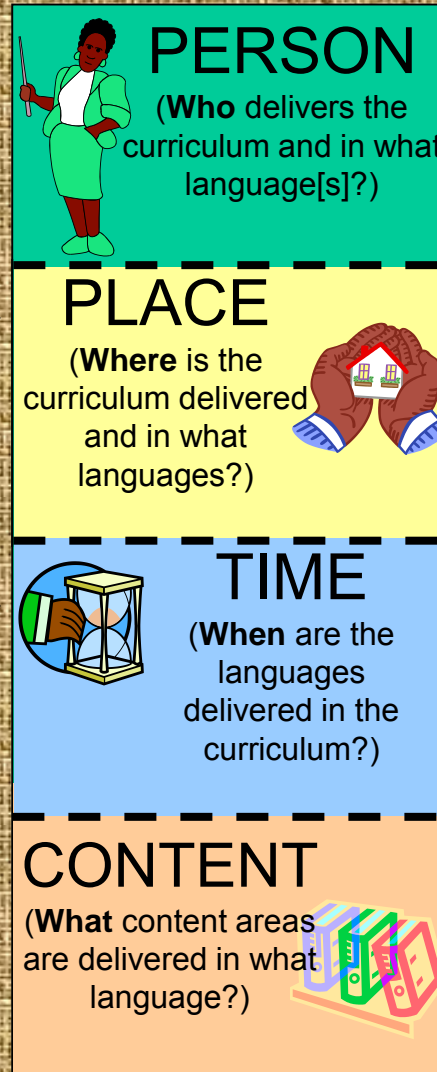
Programmatic Level



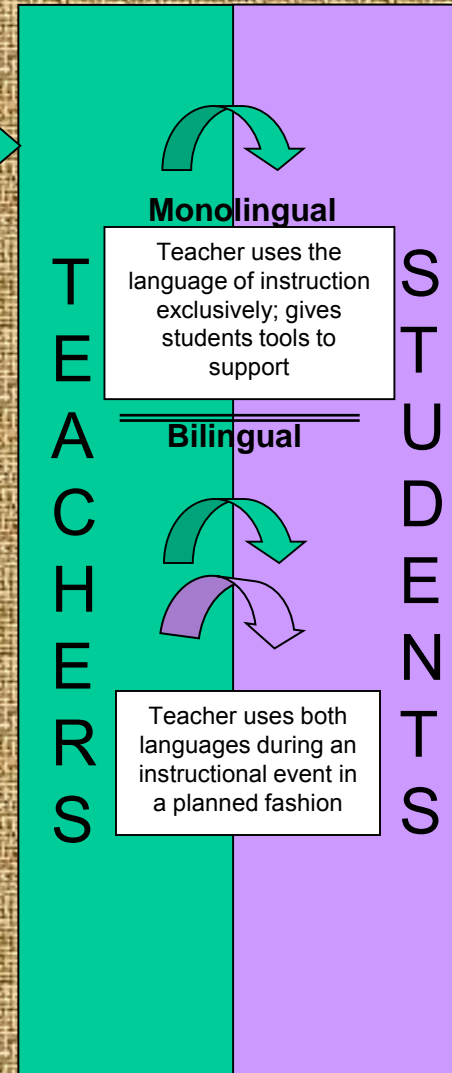
alignment

alignment

Curricular Level



Instructional Level



LANGUAGE ALLOCATION

LANGUAGE USE

Language Use in Instruction

To maintain single language/target language only (*“como se dice” strategy and provide tools instead of switching when there are unknown words*)

- **Language to Time of Day**
- **Language to Day of the Week**
- **Language to Subject**
 - **Language by Unit**
 - **Language by Marking Period**



SPANISH; CHINESE;
HAITIAN CREOLE

ENGLISH

Alternating

*Heavy
Coordination
Demands*

AM-PM
PM-AM

ALTERNATE
DAY
(6-day cycle)

LANGUAGE ARTS

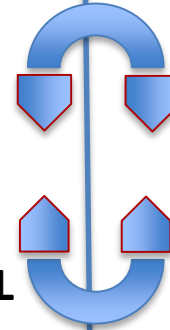
LANGUAGE ARTS

MATH

MATH

**SCIENCE/SOCIAL
STUDIES**

**SCIENCE/SOCIAL
STUDIES**



Fixed

*Limited
Coordination
Demands*

Language to
Subject
--by unit
--by marking
period
--by semester
--by year

LANGUAGE ARTS

LANGUAGE ARTS

BRIDGE

**SCIENCE/SOCIAL
STUDIES**

MATH

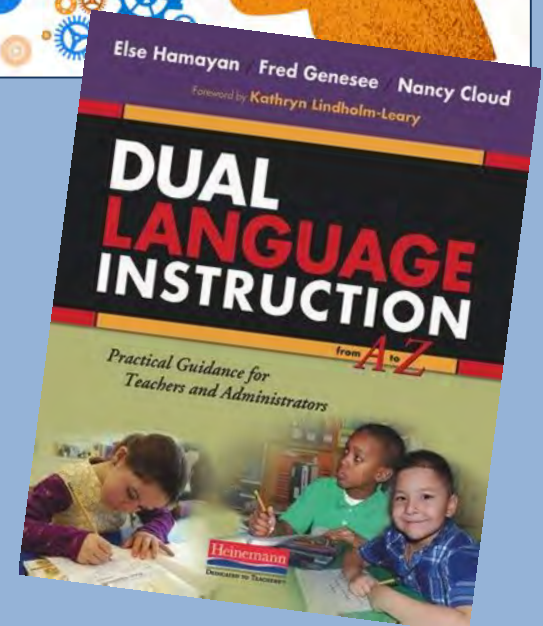
Opportunities for Language Development

- **Content Teaching/Thematic Units**
- **Learning Centers (PreK-2)/Research Projects (3-5)**
- **Literacy Instruction**
- **Recess**
- **Specials**
- **Lunch**
- **Special Activities/After-School Clubs**

Bilingual Partners/Pairs/Small Groups

**Make Sure Both
Languages Are
Developing**

**Maximizing
time *as well as*
rigor for the full
development of
the target
language**



engage^{ny}

Our Students. Their Moment.



Common Core Curriculum & Assessments



Teacher/Leader Effectiveness



Data Driven Instruction



Video Library



Professional Development & Network Teams



Parent & Family Resources

Common Core in the Bilingual Classroom

Home » [Common Core in the Bilingual Classroom](#)



Share this resource on:



Watch how first graders are learning about Common Core math at Harlem's P.S. 112 in a bilingual classroom, and why one student says he's learning a lot. The children are playing a game where pennies are hidden beneath a bowl, with more pennies placed on top. Can students use their counting, addition and subtraction skills to guess how many pennies are under the bowl, so that the total will equal ten?

Created on: Wednesday, May 7, 2014

Resource Type: Video

Topic: Common Core Learning Standards

<https://www.engage.org/resource/common-core-bilingual-classroom>

What language does this student prefer? How do you know? How will you help him stay in Spanish?

Problematic Student Language Use

- **Teachers allow English-speaking students to pose questions in English in the target language classroom-- they reply in target language**
- **Students interact socially with one another; perform group work in English during Spanish/Chinese/Haitian Creole time**
- **This results in communication asymmetry (L>S)**



Help! They're Using Too Much English!

<http://carla.umn.edu/immersion/acie/vol4/Bridge4.2.pdf>

Other Factors That Affect Asymmetry

**NUMBERS OF STAFF
WHO SPEAK EACH
LANGUAGE**

**SOCIETAL USE OF
BOTH LANGUAGES**

TEACHER BELIEFS

TESTING POLICIES

TEACHER GOALS



To Counteract:

Create a Classroom and School Context with Clear Expectations for Target Language Use

Establish Clear Separation of the Two Languages*

Set Language Learning Objectives with Students

Develop Non-Academic or Transactional Vocabulary

Organize Classroom Activities and Provide Opportunities that Maximize Students' Target Language Output

--Pair and Group Activities

--Plan for Creative Expression in the Target Language (songs, dance, role plays, video performances, etc.)

School

- **Majority of Visuals and Signs in Spanish/Haitian Creole/Chinese**
- **Morning announcements in both languages, favor partner (non-English) language**
- **Celebrating achievement in Spanish/Haitian Creole/Chinese**
- **Inviting Writers as Featured Authors to the School**
- **Have teachers use non-English language exclusively with each other in the hallways and on the playground**

Broader Community

- **Plan cultural events, such as cooking classes across the various native cuisines**
- **Hold song recitals in Spanish/Haitian Creole/Chinese**
- **Conduct other social and cultural events in the non-English language (exhibits, performances)**

Elevate the Status of Spanish, Haitian Creole, Chinese


- Provide the students with model sentences they can use when speaking (“scripts”). For instance, for formulating a hypothesis during a science experiment-- “If I add water to the solution, then.....(this will happen).” This kind of support will make the students feel more secure about how to say what they have in mind
- Provide second language learners with basic interactional phrases to keep the conversation going. This focus on social language is often overlooked. (I have another idea....)
- It can include phrases such as “¿Como se dice _____ en _____ (language) _____?,” “It’s my turn,” and “Can I have _____?”



language police

Use Rubrics & Checklists to Self-Monitor

Add a “language use” criteria: Staying In the Target Language—e.g. “We worked hard to do all of our work in Spanish (Haitian Creole, Chinese)”

	Very Good	Good	Developing
Research and collecting information 6	I collected <i>lots of</i> information from various places, such as books, the internet etc. 6 - 5	I collected <i>some</i> information from a few places. 4 - 3	I only collected <i>a little</i> information from few places. 2 - 1
Sharing 8	I <i>always</i> shared my information or ideas with <i>all</i> my team members. 8 - 7	I <i>sometimes</i> shared information or ideas with my team members. 6 - 5 - 4	I shared <i>little</i> information or ideas with my team members. 3 - 2 - 1
Completing tasks 8	I met <i>all</i> deadlines and I was not late for meetings or to complete work. 8 - 7	I met <i>most</i> deadlines and was only late for <i>some</i> meetings and to complete work. 6 - 5 - 4	I missed <i>many</i> deadlines and was <i>often</i> late for meetings or to complete work. 3 - 2 - 1
Contribution 8	I <i>always</i> helped <i>every</i> team member with all tasks, such as gathering information, editing work. 8 - 7	I helped <i>some</i> of my team members, but not all to gather information and edit work. 6 - 5 - 4	I <i>can't</i> help my team mates to gather information, edit work etc. 3 - 2 - 1
Listening to other group members 5	I <i>always</i> listened to the ideas and suggestions from my team. 5 - 4	I <i>sometimes</i> listened to ideas and suggestions from my team. 3 - 2	I <i>can't</i> listen to my other team members. I often did it my own way. 1
Co-operating with my team 5	I <i>never</i> argued with my team members. I <i>always</i> talked about ideas and got everyone's opinion. 5 - 4	I <i>sometimes</i> argued with my team. I <i>sometimes</i> talked about ideas and thought about some opinions. 3 - 2	I <i>often</i> argued with my team mates. I <i>never</i> listened to their ideas and didn't think about their opinions. 1



I was a star in my group today!

_____ I participated in my group with great interest.

_____ I was focused and always on task.

_____ I displayed empathy towards my group.

_____ I used academic vocabulary.

_____ I made three or more contributions to my group.

_____ I demonstrated leadership skills.

_____ My voice level was acceptable for group work.

Prepare the Students So They Can Succeed

Reglas de los Juegos

Supernova
Solo 7 personas sentadas
Para si alguien se cae
Aguantate con las manos

multi sea saw
3 personas de cada lado
todos deben estar sentadas
Para el juego si alguien quiere bajar

Minkar
Deslizate con cuidado
Usa tus dos manos
Baja despacio

play pod maze
Una persona a la vez
Baja con cuidado
Pasa de uno al otro despacio

spicas
Una persona sentada
Una persona girando el juego
Pies abajo

play orbs
Baja con cuidado
Cuida tus manos
Toma turnos

Minkar: thrones
una persona a la vez
baja con cuidado
baja despacio

cable ladders
Dos personas al mismo tiempo
Las dos personas deben estar del mismo lado
Cuida tus pies al moverlos

sky game

Minkar: climbing wall 1
una persona a la vez
Sube con cuidado
Agarrate fuerte

Minkar: climbing wall 2

overhead ladder

rocking tube with play pods
Max fila para tomar turno
Una persona a la vez
Mantente en la parte de abajo

wave ladder
Agarrate fuerte
Cuida donde pises si alguien mas esta cerca
Baja con cuidado

Reglas del Recreo

1. Toma **TORNOS**.
2. Sigue las **REGLAS** en todos los juegos.
3. Siempre **MIRA** adonde vas.
4. Cuando la maestra te llama: **PONTE EN LA FILA EN ORDEN.**

Offer Tools-Spanish

<https://velazquezpress.com>

Franklin BES1940 Speaking Spanish-English Dictionary



Apps for phone Voice Translators

<https://www.imore.com/best-translation-apps-iphone-itranslate-voice-voice-google-translate-and-more>



[Online Dictionary Spanish/English
http://www.elmundo.es/diccionarios/](http://www.elmundo.es/diccionarios/)

Offer Tools-Chinese; Haitian Creole

GD390 Electronic English
Chinese Talking Dictionary
Translator - For Chinese
Speakers



Haitian [Creole] Camera [Picture & Photo] Translator

Smart Phone 4.5'

over 30.000.000 Translations

Special Price:

OFFLINE [No Need Internet] - Translator / Dictionary



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English-English Dictionaries, Grammar, Verbs..

169.85 USD

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Powerful Language Learning Product - OFFLINE / ONLINE
Best Language Learning APPS selection [22+]

<http://languageteacher.com/Haitian-Creole-English-dictionary-speaking-translator-electronic-talking-digital-pocket-portable-language-teacher.html>

Velazquez Press

- <https://velazquezpress.com/products/language/haitian-creole>
 - Dictionaries; Academic Vocabulary Lists (including science, math, language arts-specific lists)
- <https://velazquezpress.com/products/language/chinese>
 - same offerings in Chinese



NYU RBE-RN Glossaries

Instructional Materials and Glossaries

https://steinhardt.nyu.edu/metrocenter/resources/glossaries

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Resources

Instructional Materials and Glossaries

INSTRUCTIONAL MATERIALS

These instructional materials are to help teachers who are working with ELLs. They are only for instructions, not for ELL accommodation.

- [Literary Terms & Devices for Language Arts - Arabic, Bengali, Chinese \(simplified\), Chinese \(traditional\), French, German, Haitian, Hindi, Italian, Japanese, Karen, Khmer, Korean, Nepali, Portuguese, Punjabi, Russian, Somali, Spanish, Ukrainian, Urdu, Vietnamese](#)
- [Key Terms Used to Describe Practices Related to the Education of ELLs in New York - English/Spanish](#)

GLOSSARIES

Bilingual glossaries are an essential and expected test accommodation for English Language Learners in the State of New York. This website presents glossaries for at least the top 10 state languages at the state level, but it is updated with new languages based on requests from schools and updates in state data. **Glossaries are for**

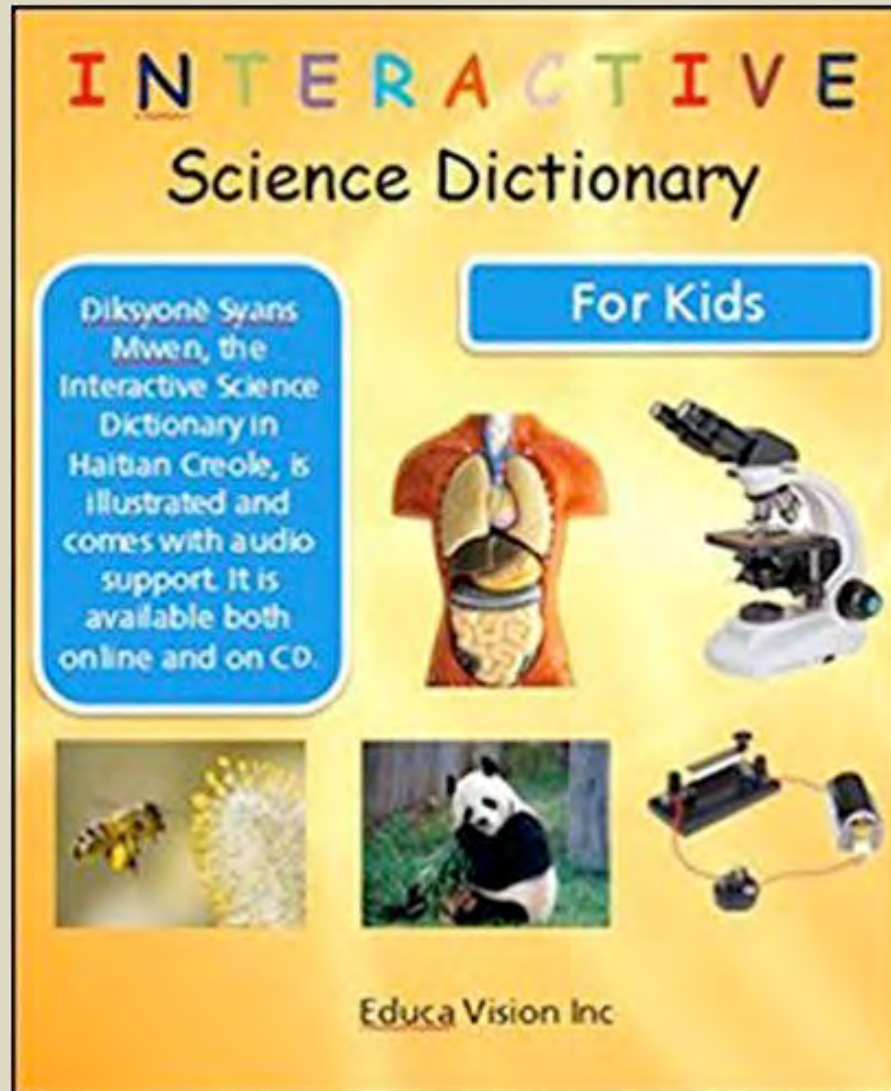
SCIENCE GLOSSARIES

- [Elementary School Science](#)
[Albanian, Arabic, Bengali, Burmese, Chinese \(simplified\), Chinese \(traditional\), Dutch, Farsi, French, Fulani, Greek, Haitian, Hindi, Italian, Japanese, Karen, Kinyarwanda, Korean, Malay, Mandinka, Nepali, Polish, Portuguese, Punjabi, Russian, Slovak, Spanish, Swahili, Tagalog, Thai, Tibetan, Turkish, Twi, Ukrainian, Urdu, Uzbek, Vietnamese, Wolof](#)

Interactive Science Dictionary in Haitian Creole

Multimedia CD – August 6, 2012


by Educa Vision Inc. (Author, Editor)



All entries are illustrated and accompanied by read along voice-over to support Haitian Creole speakers in science classroom.

<http://educavision.com/dictionaries>

← → ↻ 🏠 www.spanishacademic.com/directories/spanish-dictionary.aspx 📄 ⋮ ⌵ ☆ 📄 🗑️ 📄 ⏪ ⏩ ☰



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Spanish Dictionaries Online

Below you will find links to some of the best online dictionaries found on the Internet. These resources are good for academic use, and they have no or minimal advertising.

Diccionario de la Real Academia Española

Considered by many to be the ultimate authority in dictionaries, *el Diccionario de la Real Academia Española* provides simple dictionary lookups.

You can also consult the *Diccionario panhispánico de dudas* on the same web page. In this dictionary, the Royal Spanish Academies in Spanish-speaking countries collaborate to answer questions regarding the most widely-accepted word usage within and between different countries and regions.


Los diccionarios del periódico El Mundo

These dictionaries include simple word definitions with examples, synonyms, antonyms, English to Spanish translations, Spanish to English translations, Spanish to French translations, French to Spanish translations, and a special [dictionary for medical terms](#).

Los diccionarios del periódico El País

These dictionaries provide definitions along with word usage in example sentences, Spanish to English and English to Spanish translations, as well as Spanish synonyms and antonyms.

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Our Mission

Spanish Online Dictionaries

<http://www.spanishacademic.com/directories/spanish-dictionary.aspx>

A Framework for Double Planning to Account for the Needs of Each Group Enrolled in Our Dual Language Program



Table 6.10 Instructional Planning Guide

THEME/TOPIC:

Planning

STUDENTS LEARNING THROUGH L₁ STUDENTS LEARNING THROUGH L₂

A. BACKGROUND KNOWLEDGE OF LEARNERS

B. SPECIFIC CONTENT OBJECTIVES

- Knowledge, Concepts
- Skills
- Dispositions

C. LANGUAGE OBJECTIVES

- Content Obligatory
- Content Compatible

D. CLASSROOM DISCOURSE

E. GENERAL SKILL OBJECTIVES

Planning for Both Groups of Students

Teaching

F. ACTIVITIES BY PHASE

- *Preview Phase*
(Experiential/Conceptual Review/Initial Learning)
- *Focused Learning Phase*
- *Extension Phase*
(Transfer/Expansion; Learner Action)

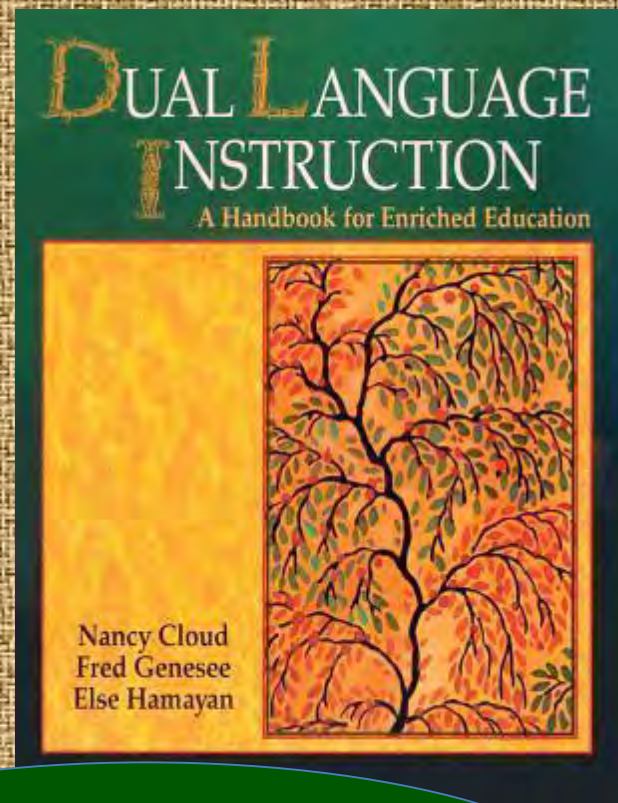
G. MATERIALS

(Adapt as Necessary)

H. GROUPING ARRANGEMENTS

I. EVALUATION

J. EXTENDING LEARNING THROUGH FAMILY AND COMMUNITY OUTREACH



Planning form from our 2000 Book

Planning Form 1

Unit:		
Content Standards:		
Teaching Objectives:		
<u>Content:</u>		
Knowledge:		
Skills:		
Dispositions:		
<u>Cross-Cultural:</u>		
<u>Language Objectives:</u>	Students Learning Through L1	Students Learning Through L2
Differentiated Language Objectives by Group	Accentuation rules; vocabulary enrichment	Article agreement; verb conjugation
Academic Language		
Differentiated Learning Resources (Print/Non-print)		
Shared Learning Resources:		
Scaffolding/Grouping:		
Bridging Activities:		
Outreach to Families:		


We will be Teaching a Science Unit Through Chinese or Haitian Creole or Spanish-- Followed by a Bridge lesson to English



What the Same?
What's Different?

To Ensure Rigor
Plan for Native Speakers First;
Then scaffold the instruction for L2 speakers

A Model Unit on Hurricanes; Typhoons, Cyclones

An aerial satellite photograph of a large hurricane or typhoon over the ocean. The storm is characterized by a dense, swirling cloud structure with a distinct eye in the center. The surrounding clouds are thick and white, contrasting sharply with the deep blue of the ocean below. The overall scene is captured from a high altitude, providing a clear view of the storm's circular structure and its extent over the water.

**Hurricanes: Taught In Chinese,
Haitian Creole, Spanish
Integrating the Teaching of
Language and Content**

with a Bridge to English

Plan Standards for the Unit (Next Generation Science Standards)

“Double” Planning Tool

**Planning
Form 1**

Unit:

Content Standards:



New York City
K-5

2015–2016

**Science
Scope & Sequence**



NYC Science Standards: Earth Science

GRADE 1: Weather and Seasons (Grade 1, Unit 3)

Grade | Unit
1 | **3** Weather and Seasons

RECOMMENDED TIME: MARCH – JUNE (14 WEEKS)

Unit Overview:

Weather involves interactions among air, water, and land. Students should observe and describe weather conditions that occur during each season. They can observe, measure, record and compare data throughout the year by using science tools.

Students should compare temperatures in different locations and compare day and night temperature. Students should illustrate and describe how the sun appears to move during the day. Illustrate and describe how the moon changes appearance over time. Describe the 24-hour day/night cycle. Students should understand that energy exists in a variety of forms. Students should observe and record the changes in the sun's and other star's position, and the moon's appearance relative to time of day and month, and note the pattern of this change. Recognize that the sun's energy warms the air.

Essential Question:

How does seasonal change affect temperature and weather conditions over a period of time?

GRADE 4: Interactions of Air, Water, Land (Grade 4, Unit 4)

Grade **4** | Unit **4**

Interactions of Air, Water, and Land



RECOMMENDED TIME: APRIL – JUNE (11 WEEKS)

Unit Overview:

The water cycle, weather, erosion, deposition, and extreme natural events involve interactions among air, water, and land.

Essential Question:
How do natural events affect our world?

Key Ideas:

PE. Key Idea 2: Many of the phenomena that we observe on Earth involve interactions among components of air, water, and land.

NYS SCIENCE STANDARDS

<http://www.p12.nysed.gov/ciai/mst/pub/elecoresci.pdf>

MST STANDARDS

<http://www.p12.nysed.gov/ciai/mst/pub/elecoresci.pdf>

NGSS CROSS-CUTTING CONCEPTS

<http://www.nextgenscience.org/sites/ngss/files/Appendix%20G%20-%20Crosscutting%20Concepts%20FINAL%20edited%204.10.13.pdf>

MAJOR UNDERSTANDINGS:

Quoted from New York State Performance Indicators (PE: 2.1c-e)

- Erosion and deposition result from the interaction among air, water, and land. **(2.1d)**
 - Interaction between air and water breaks down Earth materials.
 - Pieces of Earth material may be moved by air, water, wind, and gravity.
 - Pieces of Earth material will settle or deposit on land or in the water in different places.
 - Soil is composed of broken-down pieces of living and nonliving Earth material.
- Water is recycled by natural processes on Earth. **(2.1c)**
 - Evaporation: changing of water (liquid) into water vapor (gas)
 - Condensation: changing of water vapor (gas) into water (liquid).

continued

Standard 6: Interconnectedness: Common Themes

- Key Idea 1:** Through systems thinking, people can recognize the commonalities that exist among all systems and how parts of a system interrelate and combine to perform specific functions.
- Key Idea 2:** Models are simplified representations of objects, structures, or systems used in analysis, explanation, interpretation, or design.
- Key Idea 3:** The grouping of magnitudes of size, time, frequency, and pressures or other units of measurement into a series of relative order provides a useful way to deal with the immense range and the changes in scale that affect the behavior and design of systems.
- Key Idea 4:** Equilibrium is a state of stability due either to a lack of change (static equilibrium) or a balance between opposing forces (dynamic equilibrium).
- Key Idea 5:** Identifying patterns of change is necessary for making predictions about future behavior and conditions.

continued

Patterns:

- Observed patterns in nature guide organization and classification and prompt questions about relationships and causes underlying them.
- Similarities and differences in patterns can be used to sort, classify, communicate and analyze simple rates of change for natural phenomena and designed products.
 - Patterns of change can be used to make predictions.
 - Patterns can be used as evidence to support an explanation.
- Cause and Effect: Mechanism and Prediction:**
- Events have causes, sometimes simple, sometimes multifaceted. Deciphering causal relationships, and the mechanisms by which they are mediated, is a major activity of science and engineering.
- Cause and effect relationships are routinely identified, tested, and used to explain change.
 - Events that occur together with regularity might or might not be a cause and effect relationship.


continued



NYS SCIENCE STANDARDS

<http://www.p12.nysed.gov/ciai/mst/pub/elecoresci.pdf>

- precipitation: rain, sleet, snow, hail
- runoff: water flowing on Earth's surface
- groundwater: water that moves downward into the ground

- Extreme natural events (floods, fires, earthquakes, volcanic eruptions, hurricanes, tornadoes, and other severe storms) may have positive or negative impacts on living things. **(2.1e)** 

MST STANDARDS

<http://www.p12.nysed.gov/ciai/mst/pub/elecoresci.pdf>

Key Idea 6: In order to arrive at the best solution that meets criteria within constraints, it is often necessary to make trade-offs.

Standard 7: Interdisciplinary Problem Solving

Key Idea 1: The knowledge and skills of mathematics, science, and technology are used together to make informed decisions and solve problems, especially those relating to issues of science/technology/society, consumer decision making, design, and inquiry into phenomena.

Key Idea 2: Solving interdisciplinary problems involves a variety of skills and strategies, including effective work habits; gathering and processing information; generating and analyzing ideas; realizing ideas; making connections among the common themes of mathematics, science, and technology; and presenting results.

Stability and Change:

For both designed and natural systems, conditions that affect stability and factors that control rates of change are critical elements to consider and understand.

- Change is measured in terms of differences over time and may occur at different rates.
- Some systems appear stable, but over long periods of time will eventually change.

NGSS CROSS-CUTTING CONCEPTS

<http://www.nextgenscience.org/sites/ngss/files/Appendix%20G%20-%20Crosscutting%20Concepts%20FINAL%20edited%204.10.13.pdf>

Scale, Proportion, and Quantity:

In considering phenomena, it is critical to recognize what is relevant at different size, time, and energy scales, and to recognize proportional relationships between different quantities as scales change.

- Natural objects and/or observable phenomena exist from the very small to the immensely large or from very short to very long time periods.
- Standard units are used to measure and describe physical quantities such as weight, time, temperature, and volume.

Systems and System Models:

A system is an organized group of related objects or components; models can be used for understanding and predicting the behavior of systems.

- A system is a group of related parts that make up a whole and can carry out functions its individual parts cannot.
- A system can be described in terms of its components and their interactions.

Energy and Matter: Flows, Cycles, and Conservation:

Tracking energy and matter flows into, out of, and within systems helps one understand their system's behavior.

- Matter is made of particles.
- Matter flows and cycles can be tracked in terms of the weight of the substances before and after a process occurs. The total weight of the substances does not change. This is what is meant by conservation of matter. Matter is transported into, out of, and within systems.
- Energy can be transferred in various ways and between objects.



Plan Content Objectives: Knowledge, Skills and Dispositions

Plan Cross-Cultural Objectives for Unit (Values, Norms, Practices)

Teaching Objectives:

Content:

Knowledge:

Use models (understand how to read diagrams, make diagrams),

Skills: read/compare/record measurement tools (wind velocity, water vapor concentration, temperature), etc.

Dispositions: Be systematic, observe carefully, prepare tools before starting experiments

Cross-Cultural:

Dual Language Education Guiding Principles

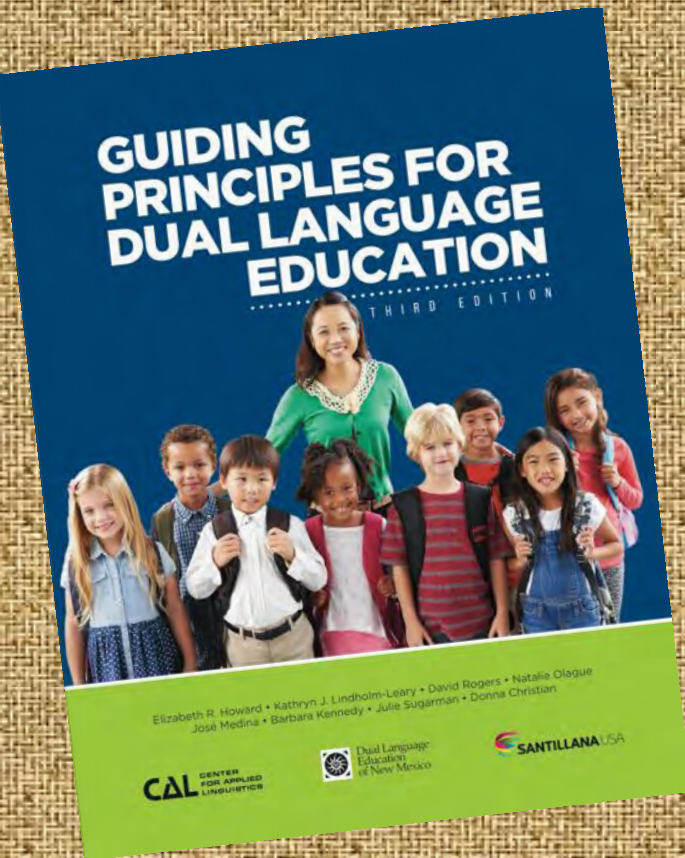
Strand 2: Effective Features of Curriculum

Reflects and values students' cultures

Strand 3: Instruction:


Principle 4: Teachers create a multilingual and multicultural learning environment

Instructional materials reflect the various subgroups of the student population and incorporate materials and themes that address respect and appreciation for all cultures.



How can teachers promote positive cross-cultural attitudes and behaviors among students:

Teachers should concentrate as much on values, norms, and perspectives of the partner language culture as they do on visible cultural practices, such as holidays, foods, music, and dance.



The Two-Way Immersion Toolkit

Elizabeth Howard, Julie Sugarman,
Marleny Perdomo, and Carolyn Temple Adger

Becoming bicultural is as important as becoming bilingual, and it has to be actively fostered; it doesn't happen on its own. By having cross-cultural objectives in each lesson and unit, teachers ensure that they are paying adequate attention to this important goal of the program.



CAL

THE
EDUCATION
ALLIANCE
BROWN UNIVERSITY

Plan Content Objectives: Knowledge, Skills and Dispositions

Plan Cross-Cultural Objectives for Unit (Values, Norms, Practices)



Promoting Cross-Cultural Competence: A Goal of DL Programs

Cross-Cultural:

Values, Norms, Practices, World Views, Ways of Thinking

Cuando hay **tormenta**, con Dios se cuenta.

La vida no es esperar a que pase la **tormenta**, es aprender a bailar bajo la lluvia.

Si hay **tormenta** habrá arco iris.

Después de la **tormenta**, siempre viene la calma.

Dichos

Plan Differentiated Language Objectives for Each Group

Identify Academic Language

Language Objectives:	Students Learning Through L1	Students Learning Through L2
Differentiated Language Objectives by Group	Advancing sentence complexity; Vocabulary Expansion , enrichment	Assistance with forms of the language; agreement; core vocabulary El clima
Academic Language	<i>Exceptions</i>	

- Teach Transition Words Needed to Talk About a Sequence of Events (Basic or Advanced)
- Notice Words That Express Size, Scale, Time Frames
- Identify Grammar Points to Highlight for Each Group
- Identify Phonics/Decoding Points You Can Stress
- Note Conventions that Differ Across Languages

ACADEMIC VOCABULARY

A hand with a ring on the ring finger points to a question mark drawn on a green chalkboard. The chalkboard also features other faint drawings, including an arrow and a diagram of a microscope.

**IDENTIFYING ACADEMIC LANGUAGE TO
TEACH ALL STUDENTS; THEN GIVE
PLENTIFUL PRACTICE**



Academic Vocabulary Lists

Corpus of Contemporary American English

IDENTIFY WORDS
TO TEACH TO
BUILD WORD
POWER



[http://
www.wordandphrase.info/
academic/](http://www.wordandphrase.info/academic/)

Word-Family Possibilities

accept (v), **acceptance** (n), **acceptable** (j), **accept**
unacceptable (j), **acceptability** (n), **unacceptably** (r),
acceptably (r), **acceptor** (n), **unacceptability** (n)

human (j), **human** (n), **humanity** (n), **humanist** (j),
humanist (j), **humanism** (n), **humanistic** (j), **inhuman** (j),
humanly (r), **inhumanity** (n), **humanness** (n)

Teach High
Frequency
Academic Words

AVL

For ENL Teachers or if you have no academic vocabulary list in your target language, use English AVL words as a rough guide

Creating the Academic Vocabulary List (for English)

High Frequency (All Genres)	Core Academic (AVL)	Technical Academic (e.g. Law, Business, Science)
<ul style="list-style-type: none"> • High frequency across all major genres • Spoken • Fiction • Magazines • Newspapers • Academic 	<ul style="list-style-type: none"> • At least 50% more common (per million words) in COCA academic than in COCA non-academic) • Range: 20% expected frequency in 7/9 academic disciplines • Dispersion (Juilland "d"): 0.80 • No one discipline more than 3x expected value 	<ul style="list-style-type: none"> • 3X the expected value in a particular discipline of academic <p style="text-align: center;">http://www.wordandphrase.info/academic/</p> <p style="text-align: right; font-size: small;">Dee Gardner, RITELL Conference, Fall 2015</p>
<p>noun: way, part verb: take, know adj: good, small adv: never, very</p>	<p>noun: process, analysis verb: indicate, establish adj: significant, critical adv: highly, moreover</p>	<p>noun: assessment, regime verb: democratize, oscillate adj: rhetorical, lunar adv: semantically, hereinafter</p>

Academic Vocabulary Levels (New Approach)

Academic Core (AVL)	Discipline Core	Discipline Technical
Cross-Discipline	Discipline-Specific from General Core	Discipline-Specific
<p>Multi-Disciplinary Words</p> <p>study (n) group (n) system (n) social (j) provide (v) however (r) research (n) level (n) result (n) include (v) important (j) process (n) use (n) development (n) data (n) information (n) effect (n) change (n) table (n) policy (n) university (n) model (n)</p>	<p>Science*</p> <p>star (n) species (n) plant (n) scientist (n) surface (n) earth (n) software (n) forest (n) sun (n) fish (n) planet (n) temperature (n) soil (n) camera (n) fuel (n) speed (n) universe (n) sky (n) file (n) drive (n) engine (n) moon (n)</p>	<p>Science</p> <p>genome (n) gravitational (j) reactor (n) extinction (n) watershed (n) supernova (n) aquatic (j) photon (n) terrestrial (j) latitude (n) polar (j) composting (j) larva (n) stellar (j) biomass (n) neutron (n) light-year (n) geometry (n) neutrino (n) chromosome (n) geological (j) semiconductor (n)</p>

For ENL Teachers or If you have no academic vocabulary list in your target language, then use English AVL words as a rough guide

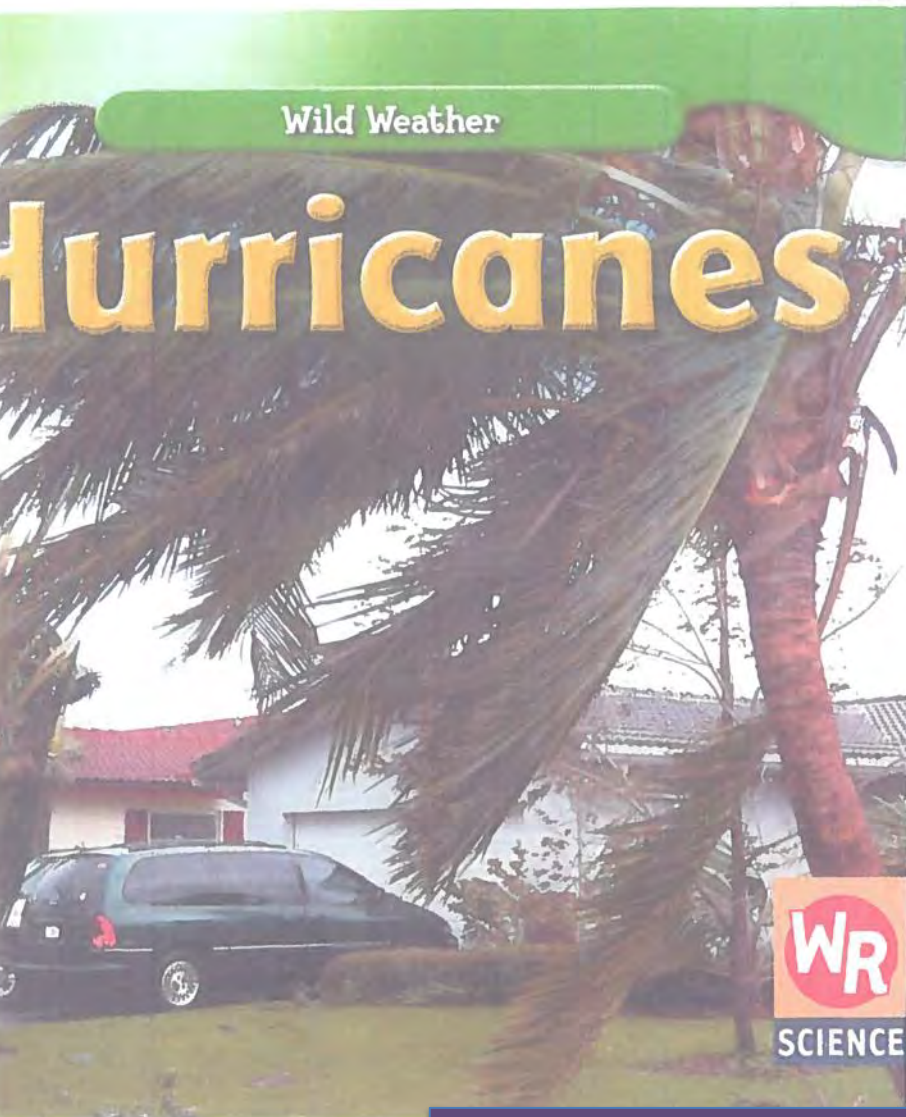


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Chapter 2 Hurricanes in Action	8
Chapter 3 Deadly Hurricanes.	14
Chapter 4 Hurricane Safety	18
Glossary	22
For More Information	23
Index	24

Words in **boldface** are defined in the glossary.

This book is available in both languages

CHAPTER 2

Hurricanes in Action

The Sun heats the water in warm oceans and seas. Some of the water turns into a **gas** called **water vapor**.

Warm air and water vapor rise. High in the sky, the vapor cools. It turns into drops of water. The drops form rain clouds.



Warm air and water vapor rise. Clouds form when vapor cools and turns into water drops.

Strong winds begin blowing. They spin in a circle. Heavy rains fall. A hurricane is born!


A satellite image of Hurricane Katrina, showing a large, well-defined eye in the center of the storm. An arrow points from the word "eye" to the center of the hurricane.

eye

This is Hurricane Katrina, as seen from space.

10

The center of a hurricane is called the **eye**. It has few clouds and little wind. Sometimes, people are fooled by the eye. They think the hurricane is over.

A circular inset image showing a small airplane flying directly into the eye of a hurricane. The eye is a bright, clear area in the center of the storm, contrasting with the dark, stormy clouds surrounding it.

Special pilots fly planes into the eye of a hurricane. They get information about the size and strength of the storm.

//

Soon the wind and rain are back.
Rings of rain clouds circle the eye.
The winds are strongest in the ring
closest to the eye.



When a hurricane reaches land, it starts
to get weaker. Soon, the storm ends.



Gareth Stevens
PUBLISHING

STORMS

HURRICANES



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Cover and title page: Hurricane Katrina blows the roof off a restaurant. The hurricane was one of the worst storms of 2005.

CHAPTER 2

Hurricanes in Action

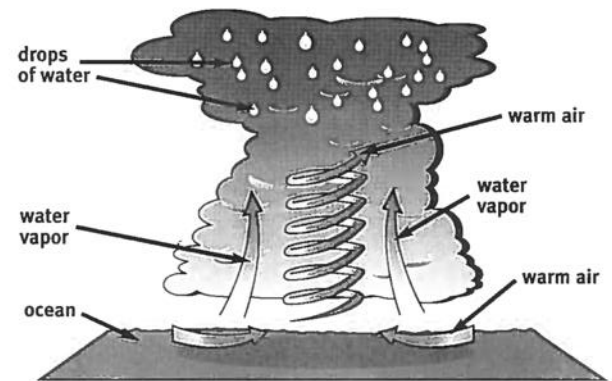
Hurricanes form above warm oceans or seas. The Sun heats the water. Then the warm water heats the air above it. When water is heated, some of it turns from a liquid into a **gas**. This gas is called **water vapor**.

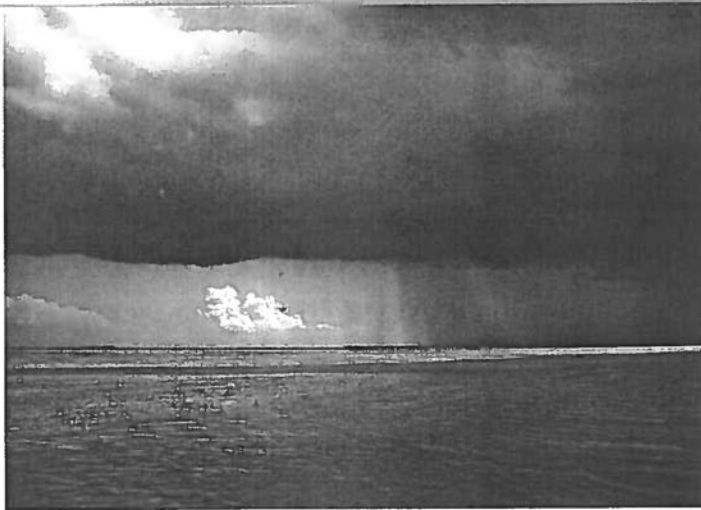
8

Warm air always rises. The water vapor rises with the air. Higher up, the air and water vapor cool. The vapor turns into drops of water. These drops form rain clouds.

As the warm air rises, colder air moves in and takes its place. This air warms up and rises, too. As even more air moves in, strong winds begin blowing. They spin around in a circle.

Warm air (*red*) and water vapor (*blue*) rise over warm ocean waters. A cloud forms when the vapor turns into drops of water.





A thunderstorm forms over the ocean near Florida's coast.

The storm keeps spinning. More air is pulled toward its center. The clouds grow. **Thunderstorms** form and bring heavy rain. They also heat the air. The warm air keeps rising and spinning. A hurricane is born!

The center of a hurricane is called the **eye**. It is sunny and calm. It has few clouds and hardly any wind. In the eye, cool air is falling. When rising air cools, it falls back to the ocean's surface.

Sometimes, people are fooled by the eye. They think the hurricane is over. But the storm keeps moving, and so does its eye. Soon, the wind and rain are back. The storm is worse than ever.

Scientists fly a plane through the eye of a hurricane. The eye has only a few clouds.



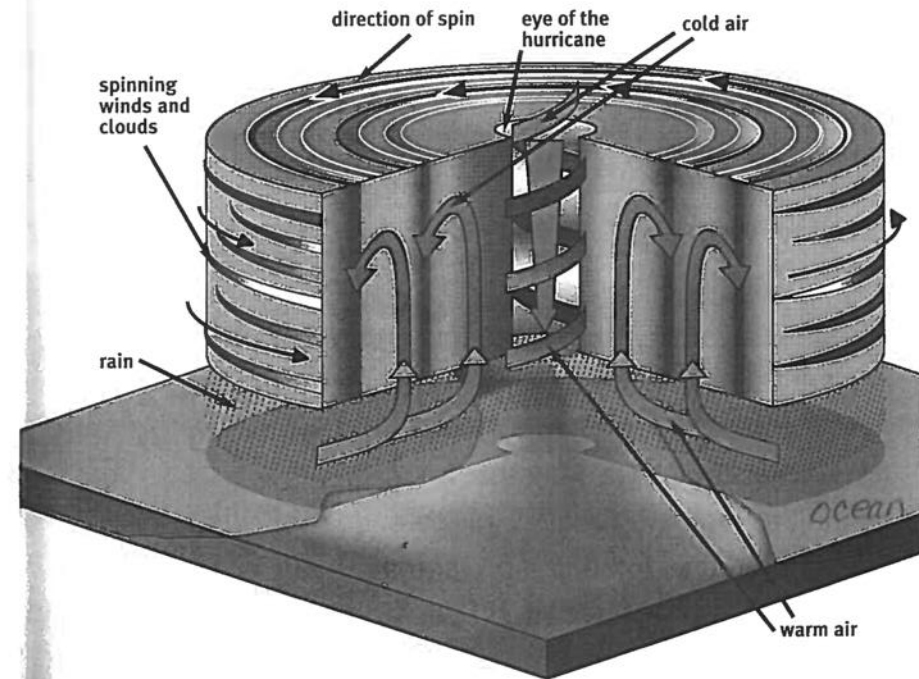


A ring of thick clouds circles the eye in the center of Hurricane Katrina.

Rings of high clouds surround the eye. Heavy rain falls from them. The winds are strongest in the ring closest to the eye. They can reach almost 200 miles (320 km) per hour. The winds are weakest at the hurricane's outside edge.

When a hurricane reaches land, it starts to get weaker. Soon, the storm ends.

The rings of clouds in a hurricane can be 9 miles (15 km) tall! Inside each ring, warm air (*red arrows*) rises. In between the rings and in the eye, cool air (*blue arrows*) falls. The warm winds and the clouds in a hurricane spin from right to left.



Academic Vocabulary List (AVL) Words in Ch. 1 & 2

- **Strong** (463)
 - **Land** (1627)
 - **Powerful** (1178)
 - **Form** (24)
 - **Last** (1338)
 - **Move** (135)
 - **Part** (528)
 - **Information** (21)
 - **Strength** (516)
 - **Weak** (654)
- (higher book)-----
- **Cause** (1471)
 - **Imaginary** (1172)
 - **Strike** (737)
 - **Center** (128)

Notice Word
Frequencies

Topic-related Vocabulary

- Hurricane
- Storm
- Wind(s)
- Ocean(s)/Seas
- Wave(s)
- Water
- Sun
- Clouds
- Gas
- Water Vapor
- Land
- Place(s)
- Rings
- Speed
- Equator
- Earth
- pinwheel
- Crash
- Fall
- Form
- Stay over
- Move onto
- Hit
- Rise
- Cools
- Turns into
- Blow
- Spin
- Is born
- Is called...
- Circle
- Reach (land)
- Gets (weaker/stro
- Ends
- Pick up
- Push
- Tear apart
- Rip
- Strike
- Pound
- Stay over
- Start in
- Heats
- Warm up
- Begin blowing
- Spin around
- Pulled toward
- Strong(est)
- Giant
- Heavy
- Large(-est)
- Powerful
- Warm
- Few
- Little
- High (speed)
- Huge
- Small
- xxx miles wide
- Weak(-er; -est)

Spanish Vocabulary Online Profiler



Spanish Vocabulary Online Profiler

The word "Español" is rendered in a large, stylized font where each letter is filled with a different cultural illustration. The 'E' shows a person in a red and yellow outfit. The 'S' features a map of Spain. The 'p' depicts a person in a white and black outfit. The 'a' shows a person in a red and white outfit. The 'ñ' features a person in a white and black outfit. The 'o' shows a person in a red and white outfit. The 'l' features a person in a red and white outfit. The background of the letters is a mix of red, yellow, and orange, reminiscent of the Spanish flag.

SVOP Article is
Posted on NYU
Website

Spanish Vocabulary Online Profiler (SVOP)

<http://jur.byu.edu/?p=1728>

1. K-1: a list of the 1000 most frequent word families.
2. K-2: a list with the second most frequent 1000 words families.
3. PNA: a list of common proper nouns and adjectives of origin (e.g. Pedro, Mexico, americano).
4. AWL: the Academic Word and Vocabulary List, which is composed of the word families included in the most common 20,000 words in the Spanish corpus (except those included in other categories: K1, K2, PNA).
5. OFF List: any given word that does not appear on other lists (K1, K2, PNA, AWL).



Los huracanes

Cómo se forma un huracán



1 Aparece una tormenta tropical.

4 Los vientos soplan hacia afuera, por encima de la tormenta. El aire caliente y húmedo se eleva.

3 Se encuentran vientos de diferentes direcciones.

5 Los vientos que se encuentran afuera de la tormenta la empujan. Desplazan la tormenta y la ayudan a crecer.

Receta para un huracán
¿Qué hace falta para que haya un huracán? Los ingredientes básicos son agua caliente, aire húmedo y el encuentro de vientos fuertes provenientes de distintas direcciones.

2 El agua caliente del océano se evapora y se incorpora al aire, lo que da como resultado aire caliente y húmedo.

Los huracanes se forman en los trópicos de los océanos. Los trópicos son las zonas cálidas que se encuentran cerca del Ecuador terrestre. Los huracanes comienzan como ondas tropicales. Estas pueden crecer hasta convertirse en depresiones tropicales primero, tormentas tropicales después y finalmente huracanes. Comienzan en áreas en las que el agua del océano se encuentra a, por lo menos, 27°C (80°F). De allí sacan su calor y energía.

La tormenta tropical se desplaza sobre un área de aire cálido y húmedo ascendente. El agua caliente del océano se evapora, se eleva y expande. Esto genera fuertes vientos. La rotación de la Tierra hace que los vientos giren. Éste es el comienzo de un huracán.



Las partes más claras en el mapa muestran la zona intertropical de la Tierra.

Los Huracanes por William B. Rice

Teacher Created Materials

Reading Level 3.0, GRL = K/P; Lexile 660

Como se forma un huracan.

Los huracanes se forman en los tropicos de los oceanos. Los tropicos son las zonas calidas que se encuentran cerca del Ecuador terrestre. Los huracanes comienzan como ondas tropicales. Estas pueden crecer hasta convertirse en depresiones tropicales primero, tormentas tropicales despues y finalmente huracanes.

Comienzan en areas en las que el agua del oceano se encuentra a, por lo menos, 27 C (80F). De alli sacan su calor y energia.

Aparece una tormenta tropical. El agua caliente del oceano se evapora y se incorpora al aire, lo que da como resultado aire caliente y humedo. Se encuentran vientos de diferentes direcciones. Los vientos soplan hacia afuera, por encima de la tormenta. El aire caliente y humedo se eleva. Los vientos que se encuentran afuera de la tormenta la empujan. Desplazan la tormenta y la ayudan a crecer.

142 words

<https://www.wordandphrase.info/span/x.asp>

WordAndPhrase - Spanish

ENTER TEXT ANALYZE TEXT SEE ENTRY ACCOUNT

-SAMPLES- MY TEXTS

tropicales. Estas pueden crecer hasta convertirse en depresiones tropicales primero, tormentas tropicales después y finalmente huracanes. Comienzan en áreas en las que el agua del océano se encuentra a, por lo menos, 27 C (80F). De allí sacan su calor y energía.

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SEARCH CLEAR HELP

From this page, you can analyze texts to see the frequency of each word and to find keywords in a text. Most importantly, you can click on any word in the text to see a wealth of information -- the definition, synonyms, collocates (nearby words), and sample concordance lines for that word. You can also click on a phrase in the text to find related phrases in the [Corpus del Español](#).

There are several ways to input or find a text:

1. Just copy and paste the text from anywhere else (e.g. a web page or a Word file) into the box at the left.
2. Click on SAMPLES, and it will insert a sample text for the country that you choose. You can then click on MORE to see more sample texts from that country.
3. Click on MY TEXTS to retrieve a text that you've already input and saved (if you're logged in).

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ENTER TEXT

ANALYZE TEXT

SEE ENTRY

ACCOUNT

SAVE TEXT	FREQ RANGE	1-500	501-3000	> 3000
		144 WORDS	58 %	10 %
				32 %

Como se forma un **huracan** .

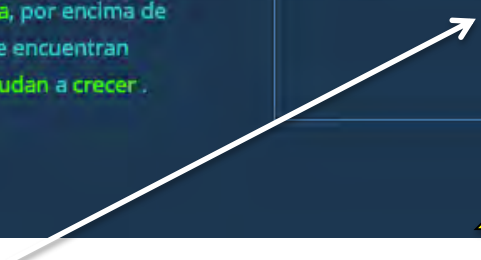
Los **huracanes** se forman en los **tropicos** de los **oceanos**. Los **tropicos** son las **zonas calidas** que se encuentran cerca del Ecuador **terrestre**. Los **huracanes comienzan** como **ondas tropicales**. Estas pueden **crecer** hasta **convertirse** en **depresiones tropicales** primero, **tormentas tropicales** despues y finalmente **huracanes**. **Comienzan** en **areas** en las que el agua del **oceanos** se encuentra a, por lo menos, 27 C (80F). De **alli sacan** su **calor** y **energia** .

Aparece una **tormenta tropical**. El agua **caliente** del **oceanos** se **evapora** y se **incorpora** al **aire**, lo que da como resultado **aire caliente** y **humedo**. Se encuentran **vientos** de diferentes **direcciones**. Los **vientos soplan** hacia **afuera**, por encima de la **tormenta**. El **aire caliente** y **humedo** se **eleva**. Los **vientos** que se encuentran **afuera** de la **tormenta** la **empujan**. **Desplazan** la **tormenta** y la **ayudan** a **crecer** .

WORD		PHRASE	
(CLICK TO SEE WORD SKETCH)			
LOW FREQ	MID FREQ	HIGH FREQ	
4: tormenta 3: huracanes, tropicales, vientos 2: comienzan, humedo, oceanos, tropicos 1: alli, areas, calidas, convertirse, depresiones, desplazan, direcciones, eleva, empujan, energia, evapora, huracan, incorpora, oceanos, ondas, sacan, soplan, terrestre, tormentas, tropical	3: caliente 2: afuera, crecer 1: aparece, ayudan, calor, despues, forman, zonas	9: se 7: los 6: y 5: de, la 4: en, que 3: aire, como, del, el, encuentran 2: a, agua, las, lo, por 1: al, cerca, da, diferentes, encima, encuentra, estas, finalmente, forma, hacia, hasta, menos, primero, pueden, resultado, son, su, un, una	

Numbers refer to the number of times listed words appear

Likely Content Terms



S V O P Results

[Profile another text](#)

Lista Académica
de Alta
Frecuencia
(LAAF)
Forthcoming

Profile

Category	Frequency	Cumulative
K1-Function	46.48%	46.48%
K1-Content	25.35%	71.83%
K2	5.63%	77.46%
K3	7.04%	84.51%
PNA	0.7%	85.21%
Off List LF	14.79%	100%

Proper Nouns/Adjectives

Profiled Text

como se forma un huracan

los huracanes se forman en los tropicos de los oceanos los tropicos son las zonas calidas que se encuentran cerca del ecuador terrestre los huracanes comienzan como ondas tropicales estas pueden crecer hasta convertirse en depresiones tropicales primero tormentas tropicales despues y finalmente huracanes comienzan en areas en las que el agua del oceano se encuentra a por lo menos [numero] c [numero]f de alli sacan su calor y energia

aparece una tormenta tropical el agua caliente del oceano se evapora y se incorpora al aire lo que da como resultado aire caliente y humedo se encuentran vientos de diferentes direcciones los vientos soplan hacia afuera por encima de la tormenta el aire caliente y humedo se eleva los vientos que se encuentran afuera de la tormenta la empujan desplazan la tormenta y la ayudan a crecer

<http://corpus.rae.es/lfrecuencias.html>

Word and Phrase List- Spanish

<https://www.wordandphrase.info/span/>

WordAndPhrase - Spanish

BROWSE LIST

LIST OF WORDS

SEE ENTRY

RESULTADO *n* (RANK 264, FREQ 611710)

DEFINITIONS (click for more)

result score (look)

Corrections / problems

SPOK FIC NEWS ACAD

SYNONYMS (click to see word)

adición *n* (bill) total, operación, cuenta, suma,
calificación *n* grade puntuación, valoración, evaluación, nota,
conclusión *n* ending desenlace, fin, solución,
consecución *n* achievement obtención, conquista, ganancia, consecuencia
consecuencia *n* consistency resolución, deducción, corolario, conclusión
derivación *n* branch consecuencia, producto, secuela, efecto, emanación
desenlace *n* outcome fin, término, remate, coronamiento, conclusión,
fruto *n* result creación, producto, producción, obtención, escrito, obra,
logro *n* attainment obtención, alcance, adquisición, satisfacción, conquista, ganancia, consecución,
marca *n* brand prueba, hazaña, récord, plusmarca,
obra *n* play trabajo, labor, producción, producto, composición,
producto *n* result suma, secuela, consecuencia, efecto, conclusión,
razón *n* ratio relación, fracción, producto, cociente,
secuela *n* (result) consecuencia, derivación, dependencia,
substracción *n* (-----) resta, diferencia, disminución, operación, separación, sustracción,
suma *n* addition resumen, monta, adición, cuenta, (todo), integridad, total.

COLLOCATES

new word with RESULTADO

TOPICS (click to see)

(NOUN) investigación, búsqueda, encuesta, evaluación, examen, experimento,

paciente *n* evaluación *n* voto *n* búsqueda *n* electoral *n* variable *n* tratamiento *n* clínico

BROWSE LIST

LIST OF WORDS

SEE ENTRY

FORMAR *v* (RANK 314, FREQ 500438)

DEFINITIONS (click for more)

form, train, educate, make, make up, (create)

Corrections / problems

SPOK FIC NEWS ACAD

SYNONYMS (click to see word)

acuar *v* mint moldear, (troquelar),
adiestrar *v* (lead) entrenar, practicar, ejercitar,
causar *v* make originar, ocasionar, hacer, promover, motivar,
componer *v* compose establecer, ordenar, crear, organizar, fi
conformar *v* authorize delinear, modelar, configurar, plasmar
constituir *v* become integrar, componer, entrar,
crear *v* make engendrar, propagar, difundir, producir, hacer, i
disponer *v* order distribuir, conformar, proporcionar, alinear,
educar *v* educate adiestrar, criar, ejercitar, enseñar, alecciona
ejecutar *v* run elaborar, construir, producir, armar, confecciona
enseñar *v* show educar, adiestrar, divulgar, cultivar, alecciona
establecer *v* settle crear, producir, hacer, fundar, coordinar, c
forjar *v* shape trabajar, moldear, golpear, percutir, fraguar,
fraguar *v* set moldear, golpear, percutir, forjar,
fundar *v* base establecer, crear, patrocinar, instaurar, instituir
idear *v* design inventar, crear, engendrar, concebir, hacer, ing
instituir *v* institute crear, establecer, fundar, organizar, situar,
instruir *v* instruct educar, cultivar, enseñar, adiestrar, prepara
inventar *v* devise engendrar, hacer, concebir, producir, origin
labrar *v* carve trabajar, redondear, (pulimentar), pulir, confecciona

COLLOCATES

new word with FORMAR

TOPICS (click to see)

(NOUN) investigación, búsqueda, encuesta, evaluación, examen, experimento,

paciente *n* evaluación *n* voto *n* búsqueda *n* electoral *n* variable *n* tratamiento *n* clínico

WordAndPhrase - Spanish

BROWSE LIST

LIST OF WORDS

SEE ENTRY

HELP

TORMENTA *n* (RANK 3101, FREQ 43918)

DEFINITIONS (click for more)

storm (turmoil)

Corrections / problems

SPOK FIC NEWS ACAD

SYNONYMS (click to see word)

aguanieve *n* sleet llovizna, ventisca, (aguaviento), (mollizna) chubasco, chaparrón, tormenta, (cellisca),
chaparrón *n* shower (turbonada) chubasco, aguacero, tormenta, (nubada),
chubasco *n* squall aguacero, tromba, diluvio, (nubarrada), borrasca, temporal, tormenta, chaparrón,
galerna *n* (-----) tormenta, temporal, tempestad, huracán, borrasca,
granizada *n* shower pedrisco, pedrea, precipitación, lluvia, tormenta, aguacero, granizo,
granizo *n* hail granizada, precipitación, tormenta, pedrisco,
riña *n* quarrel pelea, pugna, discusión, tormenta,
tempestad *n* tempest (nubarrada) borrasca, chubasco, aguacero, tormenta, (rayos), (truenos) tronada,
temporal *n* (time) (galerna) tempestad, turbión, tromba, borrasca, inclemencia, cerrazón, tormenta,
tormenta *n* (turmoil) tormenta, temporal,

COLLOCATES

new word with TORMENTA

TOPICS (click to see)

(NOUN) lluvia, huracán, viento, nieve, nube, arena, calma, tormenta, inundación, rayo
(ADJ) tropical, eléctrico, solar, fuerte, perfecto, intenso, geomagnético, severo, terrible, violento

(MISC) afectar, desatar, provocar, fuerte, azotar, avecinar, atravesar, impactar, amenazar, desencadenar

lluvia *n* viento *n* tropical *n* huracán *n* solar *n* eléctrico *n* nube *n* temperatura *n* kilómetro
norte *n* rayo *n* inundación *n* ción *n* fenómeno *n* atmósfera *n* precipitación *n* costa
magnético *n* detenido *n* post *n* aire *n* tornado *n* meteorológico *n* atmosférico *n* fuerte
oeste *n* climático *n* nieve *n* cálido *n* planeta *n*

WordAndPhrase - Spanish

BROWSE LIST

LIST OF WORDS

SEE ENTRY

HELP

VIENTO *n* (RANK 1561, FREQ 108355)

DEFINITIONS (click for more)

wind breeze guy draught sense of smell to prosper (course)

Corrections / problems

SPOK FIC NEWS ACAD

SYNONYMS (click to see word)

aura *n* (popularity) brisa, céfiro, (airecillo),
brisa *n* (air) aire, ráfaga, (vientecillo), (airecillo) céfiro, aura,
céfiro *n* (breeze) (vientecillo) (airecillo) corriente, soplo, ventisca, brisa,
corriente *n* running aire, tiro, flujo, (aflujo), soplo, ventilación,
exhalación *n* (breath) bufido, soplido, resoplido, rebufo, aire, soplo,
gases *n* (-----) aire, ventosidad, vapor, cuesco, eructo, flatulencia,
precipitación *n* rainfall lluvia, rayo, meteoro,
sur *n* south (ostro) (noto) austro,
ventolera *n* (blast) ventarrón, (galerna), ventisca, ráfaga, vendaval,

COLLOCATES

new word with VIENTO

TOPICS (click to see)

(NOUN) lluvia, velocidad, viento, sol, molino, dirección, popá, ráfaga, norte, mar

(ADJ) fuerte, solar, frío, máximo, fresco, huracanado, alisio, sur, intenso, favorable

(MISC) soplar, marear, gritar, mover, arrastrar, azotar, volar, empujar, agitar, cosechar

tormenta *n* lluvia *n* temperatura *n* solar *n* tropical *n* nube *n* aire *n* huracán *n* mar *n*
atmósfera *n* energía *n* superficie *n* kilómetro *n* norte *n* precipitación *n* costa *n* eólico
nieve *n* ola *n* velocidad *n* km *n* árbol *n* humedad *n* atmosférico *n* frío *n* clima *n* cálido
poema *n* oeste *n* eléctrico *n*

Cognates Online

<http://spanishcognates.org/cognate/academic-acad%C3%A9mico>



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result-resultado

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Learn Spanish with Cognates

Word in Spanish

expresión general

Translation

[Learn a New Cognate](#)

English/Haitian Cognates

https://steinhardt.nyu.edu/scmsAdmin/media/users/atn293/english_haitian_cognates.pdf

Glossary

Glossary of Cognates

English / Haitian Creole



The use of cognates allows English language learners to use their home language as a resource for learning new academic words in English. It is particularly helpful for students who speak Latin-based languages, including Haitian Creole. Cognates are words that have a similar spelling, pronunciation, and meaning across two languages. When students recognize words as cognates, they can access unfamiliar English words and better understand what they read.



THE STATE EDUCATION DEPARTMENT
THE UNIVERSITY OF THE STATE OF NEW YORK / ALBANY, NY 12234

Updated March 2018

Chinese Loan Words in English

- <https://www.yellowbridge.com/chinese/chineseloan.php>
- <https://www.grammarly.com/blog/chinese-words/>
- <https://files.eric.ed.gov/fulltext/EJ1082278.pdf>

Table 1. Words borrowed from Chinese


Word	Meaning	Notes
char	tea	Used in UK slang as in "a cup of char".
China	middle country	Asian country. Also used for porcelain in UK.
ginseng	image of man	Root of medicinal plant which is forked.
Japan	rising sun	Asian country.
kowtow	bump head	Showing respect.
kung fu	merit master	A martial art.
sampan	three sails	A three sailed boat.
shanghai	on the sea	In the old days men would be "shanghaied" - forced to serve in the navy.
tofu	spoilt bean	A soya bean extract. From "dou fu".
typhoon	big wind	Violent Asian storm. The Atlantic Ocean version is called a "hurricane".
yin and yang		Opposite characteristics.

Planning Form 2

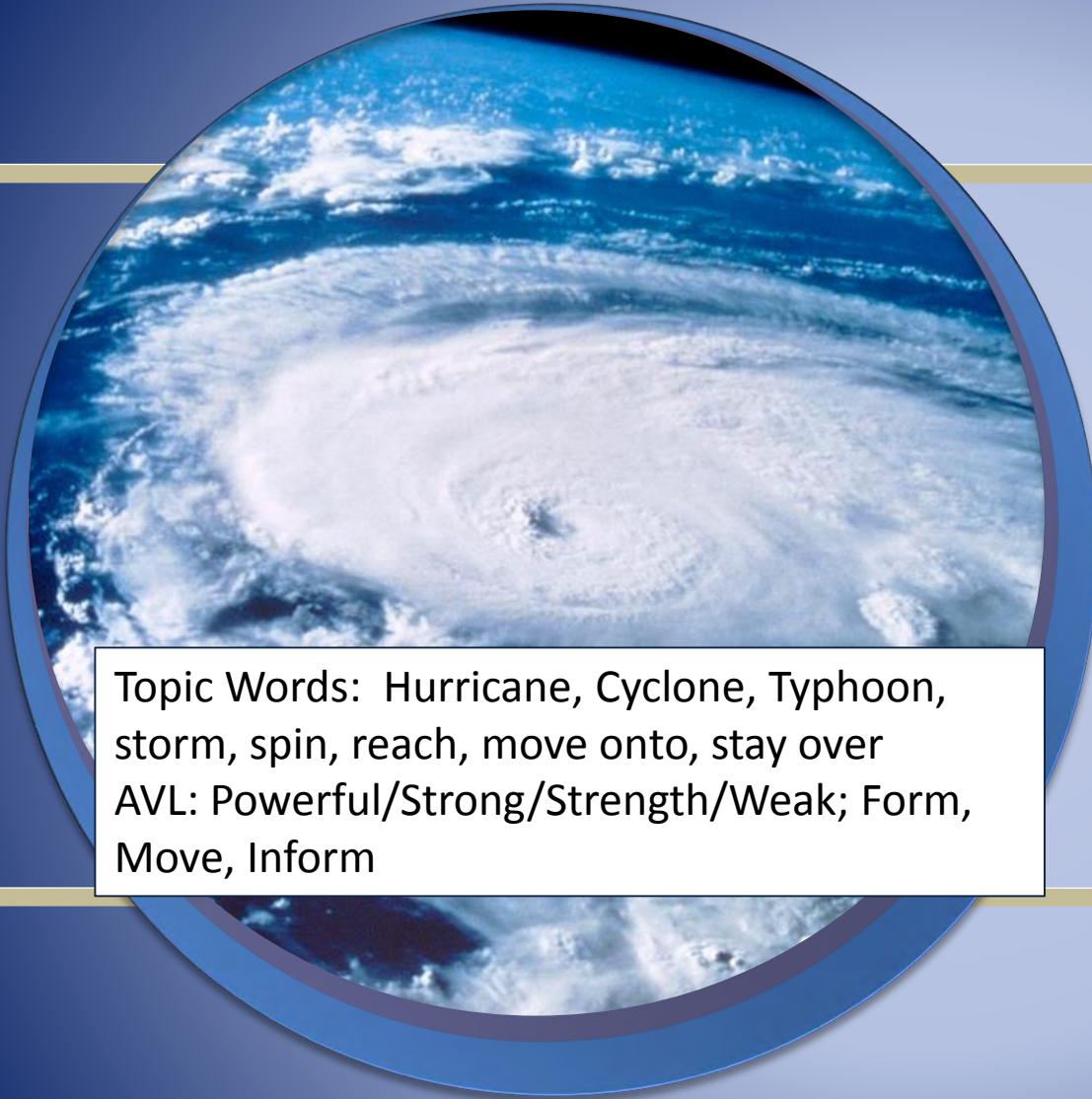
Working on the
Building Blocks of
Advanced Language

Zeroing In on
the Language
to Develop
for Both
Groups of
Students

Working on the Building Blocks of Advanced Language

Academic Vocabulary to Highlight:		
		
Topic Related Language: Mark Words© for Cognate		
Nouns:	Verbs:	Modifiers:
Other Types of Words (prepositions, articles, conjunctions, pronouns, etc.):		
Forms of Words (roots, prefixes, suffixes; compound words, etc.) with Cross-lingual Comparisons as applies:		
Expanding Sentence Complexity (Home Language Speakers):	Scripts/Sentence Patterns (Second Language Speakers):	
Varying Connectors/Transitions (Home language speakers):	Building Connectors/Transitions (Second Language Speakers):	
Text Structure(s) of Focus: (enumeration/definition, description, sequential/chronological, cause/effect, problem/solution, comparison/contrast):		

ACADEMIC VOCABULARY TO HIGHLIGHT



Topic Words: Hurricane, Cyclone, Typhoon, storm, spin, reach, move onto, stay over
AVL: Powerful/Strong/Strength/Weak; Form, Move, Inform

Choose 6-8 topic words; Choose several AVL words

Individualize your vocabulary work!

Make sure students speak, read and write these words—spontaneously!

Verbos VÍvidos: Capítulo 1

- Acercarse
- Soplar
- Impulsar
- Producir
- Destrozar
- Arrancar
- Formarse
- Girar
- Durar
- Recorrer
- Quedarse
- Alcanzar
- Golpear
- Afectar



Estudio de palabras

- Velocidad, cantidad,
- Gigantescas, poderosas
- Inundaciones, embarcaciones
- Altura
- Subiendo, Girando;
Descendiendo



Inflection vs.
derivation:
What's the
Difference?

Los Sufijos

Morfología → Morfemas → Sufijos

<http://www.gramaticas.net/2011/02/listado-completo-de-sufijos-en-espanol.html>

Listado Completo de Sufijos:

A continuación se muestra un listado con los sufijos más importantes en el español

-able (verbo a adj.): bailar → **bailable**
-áceo (semejanza): grisáceo
-acho (despectivo): populacho
-achón (aumentativo): ricachón
-aco (perteneciente a): policíaco
-ado: puñalada, bobada, puñado
-aico (perteneciente a): incaico
-aje (verbo a sust.): anclar → **anclaje**
-ajo (diminutivo): pequeñajo
-al (pertenencia, lugar): labial, arenal
-ales (vulgar): rubiales
-algia (dolor): lumbalgia, neuralgia
-amen (conjunto): pelamen, velamen
-ancia (cualidad): elegancia
-ando (gerundio): estudiando
-andria (varón): misandria
-ano, -ana (gentilicio): mexicana
-ante (verbo a sust.): amar → **amante**
-ántropo (hombre): filántropo
-anza (acción, resultado): confianza
-arca (mando, poder): monarca
-ar (conjunto, lugar): costillar, palomar
-ario, -aria (oficio, lugar, relación, grupo)
-arquía (gobierno): monarquía
-ato, -ata (efecto): retrato, caminata
-atra, -atria (medicina): pediatría
-astenia (debilidad): neurastenia
-avo, -ava (fracción): onceavo
-azgo (cargo, condición): almirantazgo
-azo, -aza (aumentativo): balonazo
-bilidad (cualidad): amabilidad
-bio (vida): anfibio, microbio
-ble (susceptible de): negociable
-bundo (verbo a adj.): vagabundo
-cardio (corazón): miocardio
-castro (despectivo): comicastró
-céfalo (cabeza): bicéfalo
-cele (hernia): cistocele
-centesis (pinchazo): homeocentesis
-cete (diminutivo): palacete
-ciclo (rueda, círculo): triciclo
-cico (diminutivo): calorcico
-cida (que mata): homicida
-cidio (matar): homicidio, magnicidio
-cion (verbo a sust.): votar → **votación**
-cito, -cita (diminutivo): mujercita
-coco (redondo): estreptococo

-ía (formador de sust.): alegría
-ible (verbo a adj.): temible
-icio, -icia (relativo a): alimenticio
-ico, -ica (sust. a adjetivo): heroico
-iego (perteneciente): veraniego
-ificar (acción): pacificar, dignificar
-ífico (que produce): terrorífico
-il (relacionado con): juvenil, infantil
-illo (diminutivo): cigarrillo, perrillo
-in (diminutivo): saltarín
-ino, -ina (gentilicio): argentino
-io (cualidad, aumentativo): poderío
-isa (dignidad femenina): sacerdotisa
-ísimo, -ísima (superlativo): bellísima
-ismo (sistema, doctrina): platonismo
-ista (partidario, oficio): capitalista, taxis
-ístico, -ística (relacionado con): artístic
-itis (inflamación): bronquitis, sinusitis
-ito, -ita (diminutivo): perrito, sillita
-ivo, -iva (verbo a adj.): combativo
-izar (sust. a verbo): legalizar
-izo, -iza (propenso a): enfermizo
-látero (lado): cuadrilátero
-latra, -latría (adoración): ególatra
-lisis (separación): electrólisis
-lito, -lítico (piedra): monolito, neolítico
-logo (experto en ciencia): biólogo
-logía (ciencia): biología, psicología
-malacia (ablandamiento): osteomalacia
-mancia (adivinación): quiromancia
-mano, -manía (obsesión): toxicomanía
-megalia (excesivo): acromegalia
-menta (conjunto): cornamenta, osamer
-mestral (relativo a mes): trimestral
-mestre (múltiplos de mes): trimestre
-metro (instrumento de medida): altímetro
-metría (medida): calorimetría
-miento, -mento (acción): desplazamiento
-morfo (forma): antropomorfo
-nauta (navegante): astronauta
-nte (verbo a sust o adj.): oxidante
-oide, -oidal, oideo (semejante): androide
-oma (tumor): sarcoma
-ón, -ona (aumentativo): manchón
-ónimo, -onimia (nombre): anónimo
-opsia (visión, examen visual): autopsia
-or (cualidad): dulzor, clamor

-cola (cultivo, cría): agrícola, avícola
-cosmo (universo): microcosmo
-cracia (gobierno): democracia
-crata (partidario): demócrata
-crono (tiempo): sincrono
-cultor, -cultura (cultivar): agricultor
-dad, -edad, -idad (cualidad): maldad
-demia (pueblo): epidemia
-dero, -dera (oficio, lugar): panadero
-dizo, -diza (propenso a): asustadizo
-dor, -dora (instrumento, oficio, lugar)
-doxo (opinión): ortodoxo
-dromo (carrera): hipódromo
-dura (efecto): quemadura
-ear (sust. a verbos): golear
-edal (abundancia): rosedal
-edro (base, cara): poliedro
-ecer (verbo): flor → **florece**
-ectasia (dilatación): bronquiectasia
-ectomía (extirpar): mastectomía
-edo, -eda (conjunto): arboleda
-ejo, -eja (despectivo): libejo
-encia (cualidad): benevolencia
-endo (gerundio): hirviendo, saliendo
-engo (perteneciente): realengo
-ense (gentilicio): nicaragüense
-eno (gentilicio): chileno
-ente (verbo a sust.): dirigir → **dirigente**
-eño, -eña (gentilicio): caribeño
-ería (relativo a, tienda): heladería
-ero, -era (profesión): ganadero
-érrimo (superlativo): paupérrimo
-és, -esa (gentilicio): francés, francesa
-esco, esca (relativo a): novelesco
-ete (diminutivo): amiguete
-exia (trastorno): anorexia, dislexia
-ez (cualidad de): madurez
-eza (cualidad de): belleza
-ezno (cría): oseznó, lobezno
-fago, -fagia (comer): disfagia
-filio, -filia (amor, afición): anglofilia
-fito, -fita (planta, vegetal): micrófito
-fobo, -fobia (temor): claustrofobia
-fono, -fonía (sonido): sinfonía, micrófono
-foro, -fora, -fero (que contiene): acuífero
-frasis (expresión): perifrasis
-fugo (huir): ignífugo
-gamia (matrimonio): monogamia
-genia, -génesis (origen): biogénesis
-geo (Tierra): apogeo
-gono (ángulo): hexágono, pentágono
-grafo, -grafía (escritura): taquígrafo
-grama (escritura): telegrama
-í (gentilicio): ceutí, iraní

-orrea (flujo, secreción): menorrea
-orro, -orra (despectivo): vidorra, tintorro
-osis (enfermedad): psicosis
-oso, -osa (cualidad, semejanza)
-ote, -ota (apreciativo): islote, amigote
-otomía (corte): lobotomía
-paro, -para (parir): vivíparo, ovíparo
-pata, -patía (enfermedad): cardiopatía
-pedia (conocimiento): enciclopedia
-pedo (pie): cuadrúpedo
-pirético (fiebre): antipirético
-plasma (sustancia): citoplasma
-plasia (formación): displasia
-plastia (cirugía plástica): rinoplastia
-plejia (parálisis): paraplejia
-pnea (respiración): apnea
-podo (pie): cefalópodo, octópodo
-ptero (ala): helicóptero
-polis (ciudad): metrópolis, necrópolis
-rragia (derramamiento): hemorragia
-scopia/o (examen): colonoscopia
-séptico (infección): antiséptico
-sis, -iasis, -osis (enfermedad): micosis
-sofia (sabiduría): filosofía
-soma (cuerpo): liposoma
-sor (agente): invasor, ascensor
-tafio (tumba): epitafio
-teca (colección): biblioteca
-tecnia (técnica): pirotecnia
-teo, -teísmo (dios): ateo, monoteísmo
-terapia (tratamiento): radioterapia
-terio (lugar): monasterio, bautisterio
-termo/ico/ía (calor): isotérmico
-tesis (colocar, concluir): prótesis, síntesis
-tico, -ático (relativo a): dramático
-tipo (impresión): logotipo
-tomo, -tomía (corte): átomo, dicotomía
-tor, -tora (agente): escultor, inspectora
-torio (lugar): ambulatorio, observatorio
-triz (femenino): actriz, institutriz
-trofia, -trófico (desarrollo): atrofia, atrófico
-tropo (giro): isótropo
-tud, -itud (cualidad): altitud, juventud
-ucho, -ucha (despectivo): papelucho
-udo, -uda (aumentativo): cabezudo
-ulento, ulenta (abundancia): corpulento
-uno, -una (propio de): gatuno, perruno
-ura (cualidad): locura, diablura
-uzo (despectivo): gentuza
-voro (alimentarse): hervívoro
-zoico (animal): paleozoico
-zón (acción y efecto): picazón
-zuelo (diminutivo): jovenzuelo



Haitian- Creole— Prefiks; Sifiks

<http://sweetcoconuts.blogspot.com/2012/02/prefix-and-suffix.html>

Prefixes and Suffixes in Chinese

-们 (men): -s

This one is pretty straightforward. It functions exactly like the English suffix *-s* or *-es*. It also covers what would be irregular plurals in English. The only thing to note is that it can only be used with people and some animate nouns (such as animals).

Examples:

- 鸭子们 (yāzimen): ducks
- 孩子们 (háizimen): children
- 他们 (tāmen): they

-地 (de): -ly

This is an adverb marker in Mandarin, exactly like *-ly* in English. It can turn the majority of adjectives into adverbs.

Examples:

- 快地 (kuàide): quickly
- 慢地 (mànde): slowly
- 高兴地 (gāoxìngde): happily

<https://keatschinese.com/en/knowledge/lesson-8-elementary-common-prefixes-and-suffixes-chinese>

<https://eastasiastudent.net/china/mandarin/suffixes-prefixes/>

<https://quizlet.com/86967986/chinese-suffixes-and-prefixes-flash-cards/>

Cálido/a(s)

Suave(s)

Chico/a(s)

Gigante(s)

Rosado/a(s)

Rojo/a(s)

Dorado/a(s)

Tropical(es)

Caliente(s)

Pequeño/a(s)

Negro/a(s)

Circular(es)

Grande(s)

Potente(s)

Oscuro/a(s)

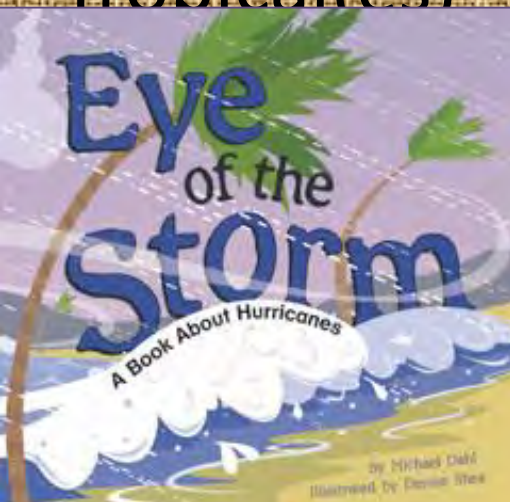
Rápido/a(s)

Profundo/a(s)

Fuerte(s)

Enorme(s)

Mojado/a(s)



Estudio de
Adjetivos

Soplar

Llegar

Cubrir

Formarse

Llenar

Calentar

Subir

Bajar

Dispersar

Crecer

Alimentarse

Chocar

Agrupar

Volverse

Empujar

Girar

Alejar

Cruzar

Aumentar

Golpear

Avisar

Perder (fuerza)

Mover

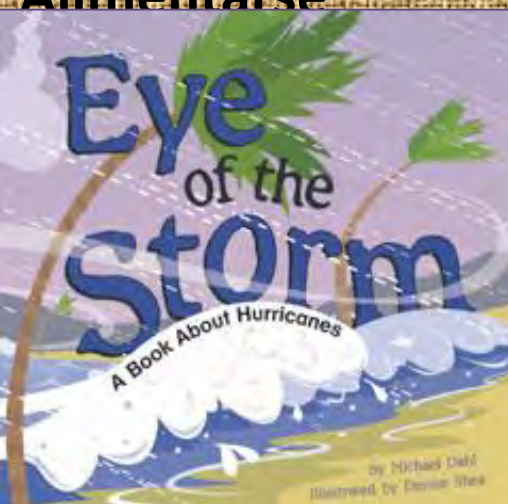
Pasar

Durar

Causar

Tapar

Acabar



Estudio
de
Verbos

Look at your reading

What will you choose to focus on?



Planning Form 2



Academic Vocabulary to Highlight:		
Topic Related Language: <i>Mark Words</i> ® for Cognate		
Nouns:	Verbs:	Modifiers:
Other Types of Words (prepositions, articles, conjunctions, pronouns, etc.):		
Forms of Words (roots, prefixes, suffixes; compound words, etc.) with Cross-lingual Comparisons as applies:		
Expanding Sentence Complexity (Home Language Speakers):		Scripts/Sentence Patterns (Second Language Speakers):
Varying Connectors/Transitions (Home language speakers):	Building Connectors/Transitions (Second Language Speakers):	
Text Structure(s) of Focus: (enumeration/definition, description, sequential/chronological, cause/effect, problem/solution, comparison/contrast):		



Tromba Marina es el equivalente de un tornado sobre el mar o un lago grande. Aunque de menor intensidad que un tornado, puede ocasionar daños considerables a las embarcaciones que encuentre a su paso.

Marea es el aumento y descenso alternado de la superficie del océano, o de cualquier cuerpo de agua asociado a éste, debido a la atracción gravitacional del Sol y la Luna. Ocurre dos veces al día en la Tierra. Se conocen como la marea alta y la marea baja.

Oleaje ondulaciones en la superficie del mar debido al viento local.

Marejada oleaje generado por el viento el cual viaja desde el área en que se genera. Exhibe una apariencia uniforme y frecuencia regular.

Resaca es la acción que resulta por marejadas altas las cuales producen gran erosión y daños en las costas.

Boletines del Servicio Nacional de Meteorología

Advertencia de Ciclones Tropicales comunicado informativo expedido por el Centro Nacional de Huracanes sobre el progreso de una depresión, tormenta o huracán. La **ADVERTENCIA** contiene detalles sobre la localización, intensidad y dirección del movimiento del ciclón; también puede contener en su texto una **VIGILANCIA y/o AVISO** para ciertas áreas. Las **ADVERTENCIAS** son numeradas y se expiden regularmente cada seis horas (a las 5:00 a.m., 11:00 a.m., 5:00 p.m. y 11:00 p.m.).

Vigilancia significa que hay que estar en alerta, pues en la atmósfera se está dando una situación con potencial de peligro.

Aviso significa que una situación de peligro asociado a un fenómeno atmosférico está ocurriendo o es inminente el que ocurra.

Vigilancia de Huracán o de Tormenta Tropical un anuncio expedido a determinada área cuando un huracán o tormenta tropical (que puede convertirse en huracán) amenaza en las próximas 24 a 36 horas. El estado de **VIGILANCIA** indica que el huracán está acercándose en una trayectoria peligrosa y el público debe mantenerse alerta a la situación, listo para tomar acción rápida en caso que se expida un **AVISO DE**

HURACÁN.

Aviso de Tormenta Tropical un llamado a la población pidiendo acción inmediata de protección contra vientos fuertes entre 55 y 73 mph. Este **AVISO** se expide cuando se espera que una tormenta tropical azote un área indicada. También se expide a veces para áreas adyacentes a las que han recibido **AVISOS DE HURACÁN**.

Aviso de Huracán un llamado a la población pidiendo acción inmediata de protección contra vientos huracanados (de 74 millas por hora o más). Este **AVISO** puede ser expedido también en caso de una tormenta tropical acompañada de mar gruesa y marejadas altas peligrosas. Es de rigor tomar medidas de precaución tan pronto se expida el **AVISO DE HURACÁN**, tales como asegurar puertas y ventanas. Este es siempre un aviso de peligro para el área amenazada.

Vigilancia de Inundaciones repentinas significa que existe la posibilidad de que se produzcan inundaciones repentinas en un área. Debe estar alerta a los boletines del Servicio Nacional de Meteorología.

Aviso de Inundaciones Repentinas significa que una inundación repentina es inminente o que está ocurriendo. Debe tomar acción inmediata.

Advertencia a los Operadores de Embarcaciones Pequeñas significa que las condiciones marítimas son peligrosas para el manejo de las embarcaciones pequeñas ya sea por que el mar está picado debido a vientos fuertes (18 a 33 nudos) o porque existen marejadas es altas.

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GOBIERNO DE PUERTO RICO
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EMERGENCIAS Y ADMINISTRACION DE
DESASTRES

Find or Make a Pamphlet of Key Terms GLOSARIO DE HURACANES



Terminología usada por el Servicio Nacional de Meteorología

En su labor informativa el Servicio Nacional de **Meteorología** emite distintos tipos de comunicados o boletines y usa ciertos **términos** especializados, algunos de los cuales se definen a **continuación**:

Perturbación o Disturbio Tropical sistema de nubosidad de tipo convectivo (nubes **cúmulo** o **cúmulo-nimbus**) de 100-300 millas de **diámetro** que se mueve en la zona tropical con **carácter** definido y mantiene su identidad por **más** de un **día**. A veces **está** asociado a una **perturbación** en el flujo de los vientos. Es el grado inicial del sistema que si adquiere mejor **organización** e intensidad crece a la **categoría** de onda tropical, **depresión**, tormenta o **huracán**.

Onda Tropical sistema de **circulación** de vientos de tipo ondulatorio **ciclónico** en la corriente de los vientos alisios. No tiene movimiento circulatorio cerrado. Puede tener amplitud mayor en los niveles cercanos a la superficie o puede ser el reflejo de un **ciclón** en las capas altas. **Está acompañada** de nubosidad y mal tiempo. Una onda tropical puede intensificarse y convertirse en una **depresión** tropical. La **producción** normal de lluvia en Puerto Rico entre junio y octubre se debe al paso de ondas tropicales.

Vaguada sistemas de vientos en que el aire se mueve horizontalmente con **carácter ciclónico** en forma ondulatoria o de onda (no tiene **circulación** cerrada). Se observan principalmente en los niveles de altura. Se habla **así** de vaguada en los niveles bajos de la **atmósfera**, 0-20,000 pies; vaguada en los niveles superiores, 20-40,000 pies; "vaguada polar" observada en la corriente oeste de las latitudes medias.

Frente Frío sistema de origen polar que se desplaza hacia el ecuador trayendo aire **frío** a su paso; **está acompañado** de actividad de aguaceros y a veces vientos fuertes en **ráfagas**. Se origina en las latitudes medias y ocurre principalmente en invierno. Muchos de ellos se desplazan hacia el sureste a **través** de las Islas Bahamas hasta llegar a las islas del Caribe. El frente es la **línea de demarcación** entre el aire **frío** polar y aire **cálido** de origen tropical. Nuestras generaciones pasadas se **referían** a estos sistemas como un "norte". La lluvia normal en Puerto Rico en los meses de noviembre hasta abril es producida por frentes **fríos**, por vaguadas en los niveles superiores o la **combinación** de ambos sistemas.

Ciclón Tropical **ciclón** que se origina en los mares tropicales, generalmente en las latitudes **10-30°** norte y sur del Ecuador. El **ciclón** tropical se caracteriza por tener una **organización** de vientos bastante concentrada en un anillo alrededor del centro u "**ojo**" el cual es **más** caliente que los alrededores. En su fase de mayor intensidad es uno de los sistemas **atmosféricos más** temidos por su **carácter** destructivo.

Por acuerdo internacional, se reconocen tres **categorías** de intensidad del **ciclón** tropical: **depresión** tropical, tormenta tropical y **huracán ó tifón**.

Depresión Tropical **ciclón** tropical en su fase formativa de intensidad **mínima** en que los vientos **máximos** en la superficie son 38 mph o menos.

Tormenta Tropical **ciclón** tropical que ha adquirido buena **organización** con centro termal caliente y cuyos vientos **máximos** alcanzan entre 39 y 73 mph.

Huracán (**Tifón** en el **Océano Pacífico Oeste**) **ciclón** tropical que ha adquirido **organización** e intensidad **máxima**, tiene un centro caliente y una **presión** baja en su centro. Sus vientos **máximos** son mayores de 74 mph o **más**. Vientos de alrededor de 200 mph se han medido en los huracanes **más** intensos. Su fuerza destructora por la **acción** del viento y la lluvia torrencial es legendaria y ha sido causante de **pérdidas** humanas que se cuentan en millares.

Ojo del Huracán el **área** de calma relativa en el centro de una tormenta tropical u "**ojo**" **típico** se observa generalmente cuando el sistema ha adquirido por lo menos intensidad de **huracán**. Mientras mayor sea la intensidad, menor y mejor organizado es el "**ojo**" o centro del mismo. Cuando el sistema entra a tierra el **ojo** se desorganiza y puede desaparecer, debido a la **fricción** contra la tierra y la falta de humedad.

Marejada Ciclónica **cúpula** de agua que se genera en la superficie del mar, la cual en **combinación** con el oleaje, arrasa con las **áreas** costeras, particularmente por donde el **huracán** entra a tierra. Puede medir de 20 a 50 millas de **diámetro** y de 5 hasta **más** de 20 pies de altura y es generada por la baja **presión** en el ojo. Gran parte de las muertes asociadas a un **huracán** son debido a este **fenómeno**.

Escala SAFFIR-SIMPSON es una escala usada por el Servicio Nacional de **Meteorología** para relacionar la intensidad de los huracanes con el **daño** potencial que

podrían ocasionar. Esta escala se divide en cinco **categorías**. La **categoría** 1 es de un huracán menor y la **categoría** 5 es bien intenso.

Escala de Huracanes Saffir-Simpson

Escala	Presión Central		Vientos MPH	Vientos Nudos	Daños
	milibares	pulgadas			
1	980	>28.94	74-95	64-83	mínimo
2	965-979	28.50-28.91	96-110	84-96	moderado
3	945-964	27.50-28.47	111-130	97-113	extensivo
4	920-944	27.17-27.88	131-155	114-135	extremo
5	920	<27.17	>155	>135	catástrofico

Inundaciones las inundaciones son una **acumulación** gradual de agua cuando el suelo y la **vegetación** no pueden absorber el agua de la lluvia y cuando no puede ser retenida por los canales normales de los **ríos**, quebradas, estanques naturales o artificiales.

Inundaciones Repentinas en ocasiones, la lluvia es muy fuerte en un corto **periodo** de tiempo que los niveles de los **ríos** aumentan **súbitamente** creando lo que se conoce **comúnmente** como el golpe de agua. Estos violentos torrentes de agua se mueven **río** abajo a altas velocidades. Pueden hacer rodar objetos, arrancar **árboles** de sus **raíces**, destruyen puentes y crean nuevos caminos por donde el agua puede correr.

Tronada o Tormenta Eléctrica son nubes gigantescas (conocidas como **cúmulo-nimbus**) las cuales producen lloviznas y vientos localmente fuertes, rayos y truenos, y en ocasiones, granizo y tornados.

Tronada Severa son tronadas donde los vientos son de 58 millas por hora o **más**, o donde se produce granizo de un **diámetro** de $\frac{3}{4}$ de pulgada o **más**.

Rayo es una descarga **eléctrica** que resulta por la **generación** y **separación** de cargas **eléctricas** dentro de la tronada. Un rayo siempre **está acompañado** de un trueno. Usted puede estimar la distancia hasta el punto de origen del rayo contando el **número** de segundos entre el rayo y trueno, dividiendo por 5.

Trueno un trueno es el ruido producido por el aire que se expande de forma explosiva debido al calor generado por el rayo.

Plan Learning Resources

Plan Scaffolding/Grouping

Planning Form 1

Differentiated Learning Resources (Print/Non-print)		
Shared Learning Resources:		
Scaffolding/Grouping:		

Account for Reading Levels but also Consider:

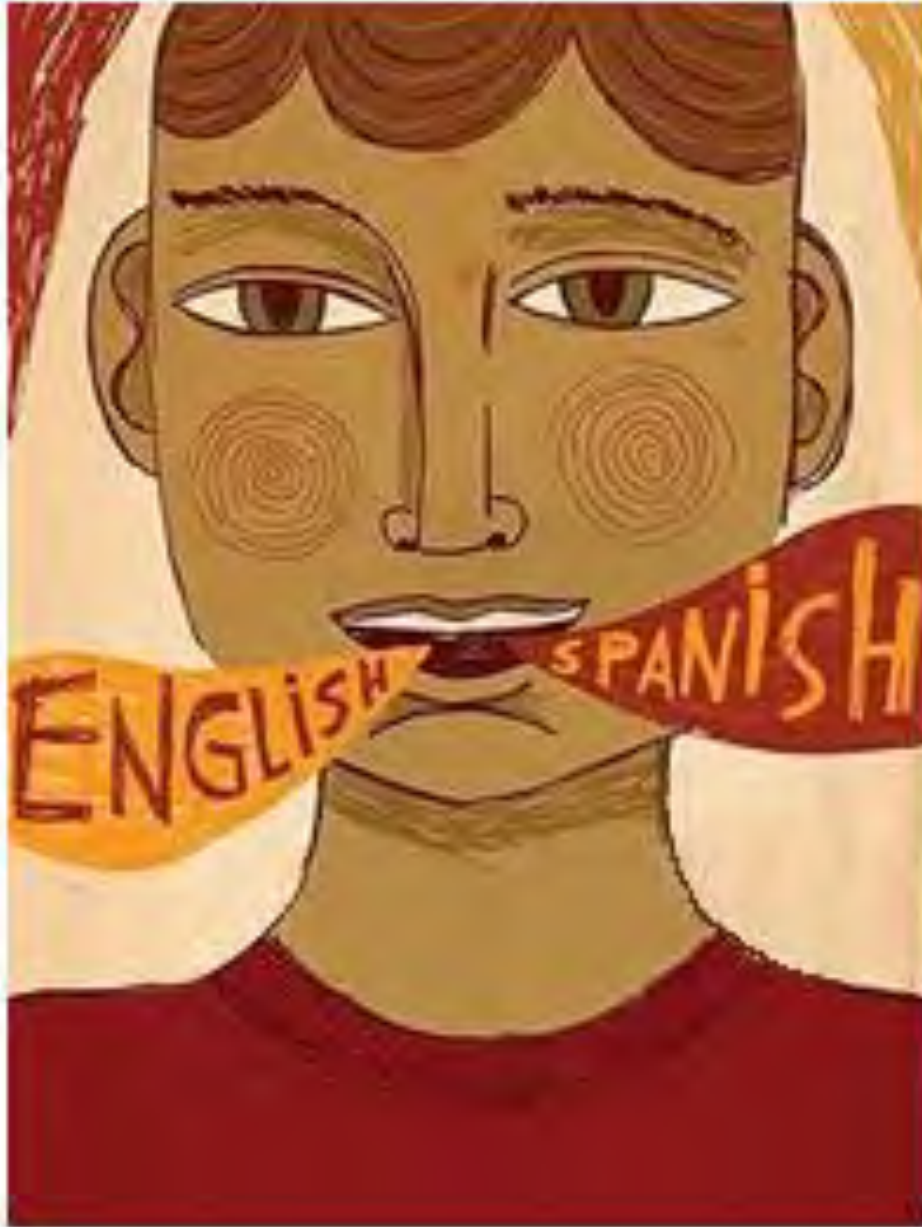
- Student's Interest
- Background Knowledge
- Supports Provided
- Complexity of ideas

Text Leveling Correlation Guide Grades K-6

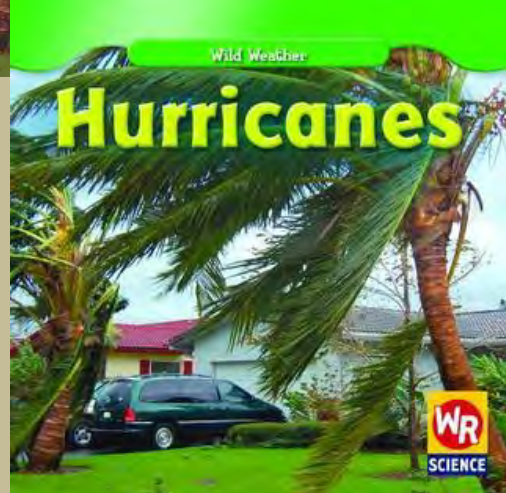
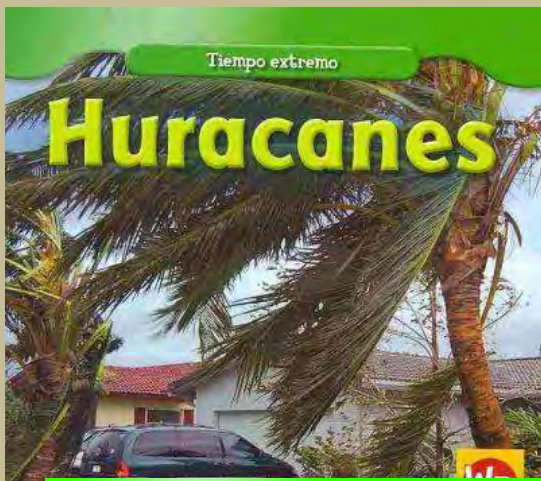


Because every reader is different, teachers often rely on a system of leveled books to match their students with just-right books. There are many systems, and methods for leveling books and leveling characteristics may differ among the various leveling systems. This chart approximates how these levels compare to each other and to school levels. This leveling correlation is presented for general purposes only. Teachers are encouraged to adjust this correlation according to their personal evaluation and professional judgment.

STAGES OF READING DEVELOPMENT	GRADE LEVEL	BASAL LEVEL	GUIDED READING LEVEL	RECOVERY RECOVERY LEVEL	DRA LEVEL	LEXILE* LEVEL	AR LEVEL (ATOS)	LEXILE* RANGES TO CCR
<i>Emergent</i>	K	Readiness Pre-Primer	A	1	A-2	190L-530L	0.2-0.4	N/A
			B	2	1-2		0.2-0.4	
			C	3	3		0.5-0.6	
			D	4	4		0.5-0.6	
			E	5	4		0.5-0.6	
<i>Early</i>	1	Pre-Primer Primer Grade 1	A	1	A-2	190L-530L	0.2-0.4	190L-530L
			B	2	1-2		0.2-0.4	
			C	3	3		0.5-0.6	
			D	4	4		0.5-0.6	
			E	5	4		0.5-0.6	
			F	6	6-8		0.7-0.9	
			G	7	6-8		0.7-0.9	
			H	8	10		0.7-0.9	
			I	9	10		0.7-0.9	
			J	10	10		1.0-1.2	
			K	11	12		1.0-1.2	
			L	12	12		1.3-1.5	
M	13	14	1.3-1.5					
N	14	14	1.6-1.9					
O	15	14	1.6-1.9					
P	16	16	2.0-2.4					
<i>Fluent</i>	2	Grade 2	E	7	6-8	420L-820L	0.7-0.9	420L-820L
			F	8	6-8		0.7-0.9	
			G	9	10		0.7-0.9	
			H	10	10		1.0-1.2	
			I	11	12		1.0-1.2	
			J	12	12		1.3-1.5	
			K	13	14		1.3-1.5	
			L	14	14		1.6-1.9	
			M	15	16		1.6-1.9	
			N	16	16		2.0-2.4	
			O	17	18-20		2.0-2.4	
			P	18	18-20		2.0-2.4	
Q	19	18-20	2.5-2.9					
R	20	18-20	2.5-2.9					
S	21	24-28	2.5-2.9					
T	22	24-28	2.5-2.9					
U	24-28	24-28	3.0-3.4					
V	30	30	3.4-3.9					
W	18-20	18-20	2.5-2.9					
X	18-20	18-20	2.5-2.9					
Y	24-28	24-28	2.5-2.9					
Z	24-28	24-28	2.5-2.9					
<i>Fluent</i>	3	Grade 3	J	7	6-8	420L-820L	0.7-0.9	420L-820L
			K	8	6-8		0.7-0.9	
			L	9	10		1.0-1.2	
			M	10	10		1.0-1.2	
			N	11	12		1.3-1.5	
			O	12	12		1.3-1.5	
			P	13	14		1.3-1.5	
			Q	14	14		1.6-1.9	
			R	15	16		1.6-1.9	
			S	16	16		2.0-2.4	
			T	17	18-20		2.0-2.4	
			U	18	18-20		2.5-2.9	
V	19	18-20	2.5-2.9					
W	20	18-20	2.5-2.9					
X	21	24-28	2.5-2.9					
Y	22	24-28	3.0-3.4					
Z	24-28	24-28	3.0-3.4					
<i>Fluent</i>	4	Grade 4	M	7	6-8	740L-1010L	0.7-0.9	740L-1010L
			N	8	6-8		0.7-0.9	
			O	9	10		1.0-1.2	
			P	10	10		1.0-1.2	
			Q	11	12		1.3-1.5	
			R	12	12		1.3-1.5	
			S	13	14		1.3-1.5	
			T	14	14		1.6-1.9	
			U	15	16		1.6-1.9	
			V	16	16		2.0-2.4	
			W	17	18-20		2.0-2.4	
			X	18	18-20		2.5-2.9	
Y	19	18-20	2.5-2.9					
Z	20	18-20	2.5-2.9					
<i>Fluent</i>	5	Grade 5	M	7	6-8	740L-1010L	0.7-0.9	740L-1010L
			N	8	6-8		0.7-0.9	
			O	9	10		1.0-1.2	
			P	10	10		1.0-1.2	
			Q	11	12		1.3-1.5	
			R	12	12		1.3-1.5	
			S	13	14		1.3-1.5	
			T	14	14		1.6-1.9	
			U	15	16		1.6-1.9	
			V	16	16		2.0-2.4	
			W	17	18-20		2.0-2.4	
			X	18	18-20		2.5-2.9	
Y	19	18-20	2.5-2.9					
Z	20	18-20	2.5-2.9					
<i>Fluent</i>	6	Grade 6	M	7	6-8	925L-1185L	0.7-0.9	925L-1185L
			N	8	6-8		0.7-0.9	
			O	9	10		1.0-1.2	
			P	10	10		1.0-1.2	
			Q	11	12		1.3-1.5	
			R	12	12		1.3-1.5	
			S	13	14		1.3-1.5	
			T	14	14		1.6-1.9	
			U	15	16		1.6-1.9	
			V	16	16		2.0-2.4	
			W	17	18-20		2.0-2.4	
			X	18	18-20		2.5-2.9	
Y	19	18-20	2.5-2.9					
Z	20	18-20	2.5-2.9					



**Single or Dual
Language Version?**



Spanish Reading Level
3.8; English 2.7; Lexile
480, GRL = L

Spanish Reading Level
4.2; English 3.3, GRL = N

Spanish Reading Level ;
English 3.0, GRL = K;
GRL = S; Lexile 660

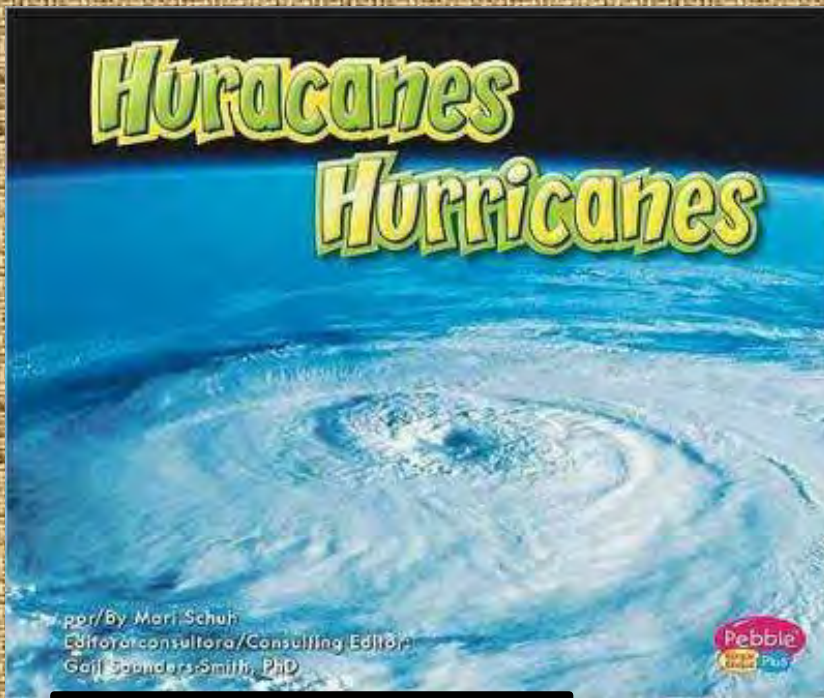
Select a Range of Texts

Single Language Texts

Reading

- Read the same text in both languages in order to practice cross-linguistic transfer
- Use one language to make guesses about the meanings of words in the other language
- Discuss a book read in one language in the other language or use the two languages flexibly to discuss author's craft or the tone and impact of particular words used (close reading)
- Respond to a text in English and in the home language or in one language only





**Grade level = 2.2;
Lexile 450**

Dual Language Books

**Use Dual Language
Books to Compare:**

Vocabulary

**Sentence structure;
word order**

Transition words

Use of conventions

Also Notice Cognates!

If Dual Language Version: Does It Reflect an Equal Status of Both Languages/Cultures?

- **Location of the two languages on the page**
 - **Top/bottom**
 - **Left/right**
- **Which comes first?**
- **Which culture is reflected in the characters, events, settings?**
- **What about the art/illustrations?**
- **Is bilingualism valued?**
- **Is the bilingual/bicultural experience reflected?**

