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La mágica de la migración de las mariposas monarcas

A unit for teachers on the cultural ecology of the
Monarch butterfly

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Beth McCammon Feldman taught middle and high school Spanish for 16 years. Previous to her teaching life she ran a goat cheese dairy, studied goats and taught animal science in Nicaragua, worked with people and their goats in Mexico and served in the Peace Corps in French West Africa. She brings to her classroom the approach of action, of doing something with the target language. For many years Feldman has taught a unit on Monarch butterflies, their biology and their interaction with people in the three countries they depend on for survival. Rich materials for this unit are all available online and lend themselves to novice level learners. The unit includes listening comprehension of videos from Mexico, simple science terminology in Spanish, authentic readings at several levels, an introduction to active citizen science, and a final service project. In this time of endangered pollinators it is a very relevant unit. Feldman and her husband raised four children on a farm in Upstate New York. Together they reared many monarch butterflies and planted thriving butterfly gardens.

The Cultural Ecology of the Monarch Butterfly

In this unit authentic materials from the Journey North and other internet websites are used to study the biology and culture of the monarch butterfly. Materials are in Spanish. The unit has the following objectives and learning outcomes:

1. Students will use Spanish to learn the biology, geography and culture of the monarch butterfly. They will be able to explain the life cycle and the yearly migration cycle of the monarch (in Spanish).
2. Students will be able to explain why monarchs are indicators of the health of our Earth, citing how climate, cultures and economics are impacting the monarch's migration and survival.
3. Students will formulate possible solutions to some of the above problems that demonstrate an understanding of the interconnectedness of Northamericans from Canada to Mexico.
4. Difficult to measure directly, but still an outcome of this unit is to increase the cultural competence of the students as they compare their lives to those of the people of Central Mexico.

Strategies for engagement in the unit:

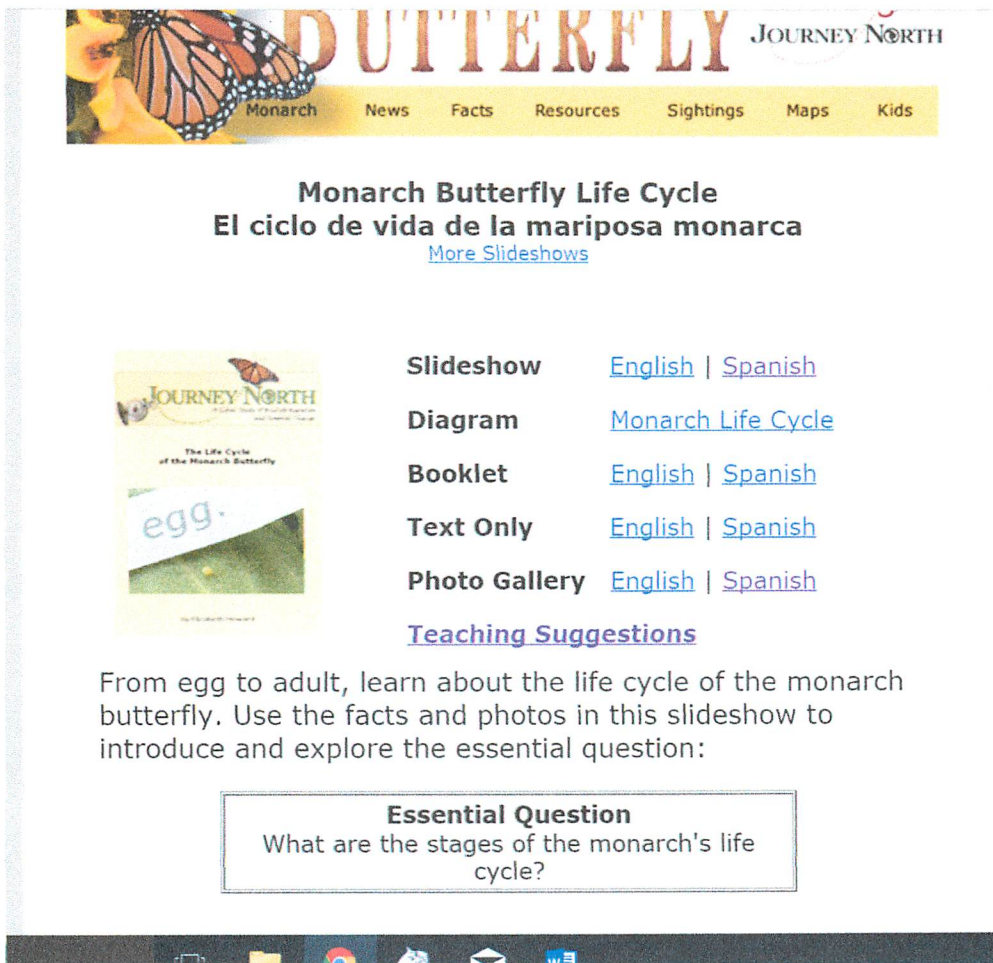
1. listening to popular songs about butterflies,
2. looking for monarchs in the field and reporting them via the Journey North citizen scientist internet map, tracking what students in other states and Mexico are seeing,
3. creating paper butterflies with messages in Spanish to send on a virtual migration to Mexican students,
4. studying biology, geography, sociology, and economics, all in Spanish
5. watching short movies about the sanctuaries
6. pair activities
7. formulating and carrying out a project to make a difference

Teaching with Journey North: La migración de la mariposa monarca, cruzando fronteras y conectando a personas

Journey North (<http://www.learner.org/jnorth/tm/monarch/Resources.html>) has excellent teaching materials but, particularly the Spanish ones, are well hidden in their website. If you have to google it you need to put in Journey North winter, culture, life in the sanctuary region and then “archives”.

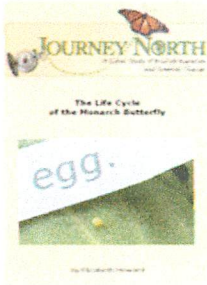
This is the URL of the Spanish materials:

http://www.learner.org/jnorth/tm/monarch/LifeSanctuaryRegion_archives.html



The screenshot shows the Journey North website interface. At the top, there is a navigation bar with a monarch butterfly image and the text "BUTTERFLY JOURNEY NORTH". Below this is a menu with links for "Monarch", "News", "Facts", "Resources", "Sightings", "Maps", and "Kids". The main heading is "Monarch Butterfly Life Cycle" with a Spanish translation "El ciclo de vida de la mariposa monarca" and a link for "More Slideshows". A list of resources is provided, including "Slideshow", "Diagram", "Booklet", "Text Only", and "Photo Gallery", each with links for "English" and "Spanish". A "Teaching Suggestions" section follows, containing an "Essential Question" box: "What are the stages of the monarch's life cycle?". The bottom of the page shows a Windows taskbar with various application icons.

Monarch Butterfly Life Cycle
El ciclo de vida de la mariposa monarca
[More Slideshows](#)

	Slideshow English Spanish
	Diagram Monarch Life Cycle
	Booklet English Spanish
	Text Only English Spanish
	Photo Gallery English Spanish

[Teaching Suggestions](#)

From egg to adult, learn about the life cycle of the monarch butterfly. Use the facts and photos in this slideshow to introduce and explore the essential question:

Essential Question
What are the stages of the monarch's life cycle?

Justification for Unit

Studies show that intercultural competence leads to cultural success. Our responsibility as language teachers is to prepare our students to be successful in the cultures that use the T2 language. Paul Sandrock, when speaking of the World Readiness Standards, states that there is a relationship between cultural perspectives and practices or products. “Students must be given the opportunity to **investigate**, to **explain** and to **reflect** on the practices and products of the target cultures.” I would add that they need to **act** based on their analyses in order to actually connect with the culture. Sandrock states that students need to immerse themselves in authentic resources, form hypotheses about the T2 culture from people’s response to situations and explore deeper through additional evidence, comparing their own and their own T1 culture’s reaction to a similar situation.

In order to meet the cultures Standards for intercultural competence we must teach our target language in the cultures that own it. I tell my students, we don’t “study” Spanish, we do it. Peoples’ language is who they are and it can’t be separated from them. In the classroom we must live Spanish. Some part of your class time could be the grammar of the language, and most of us do songs and games, but don’t forget science and math and geography and issues that young people care about.

The monarch butterfly migration spans three cultures in North America comprised of three languages. The survival of the migration is endangered and its continuance depends on people in all three cultures. It is an amazingly fertile arena for exploring and understanding these cultures. This unit on Monarch butterflies starts out as a science unit—the life cycle of the insect. Most students already know it. But where does this butterfly go in winter? (no one in the world knew until 1978) Why doesn’t it overwinter here like other butterflies? We love monarchs here, do people in Mexico love them? Why haven’t we seen many Monarchs the last two years? They’re endangered? Why? What can we do about it? Good, novice level authentic materials are available online through the Journey North website, but how do we use them to make an interesting and defensible unit for middle and high school Spanish students? This is what I will lead you through in this presentation. I call the unit “The Cultural Ecology of the Monarch Butterfly.

How to Construct the Unit

First, catalogue what authentic resources are available to you. I started with the Journey North website. It is a project funded by the Annenberg Foundation with the purpose of offering materials to classroom teachers to do scientific investigations with their students. In the fall the site is actually Journey South and uses Citizen Scientists, students of all ages guided by their teachers, to track migrations of everything from hummingbirds to milkweeds. Much of what we know about the Monarch butterflies’ migration was contributed by children. An excellent facet of these materials is that the student is always asked to think about, to analyze, to draw conclusions, about what they are observing. Since the butterflies complete their migration in Mexico, the Journey North people took their movie cameras to Angangueo in Michoacán and filmed vignettes of people talking about their daily life. They also made them into booklets that can be downloaded so there is listening and reading materials available on line. They set up a virtual butterfly migration where your students can make paper butterflies and write notes to Mexican students that they send off in the fall to Mexico like the real butterflies. In the Spring

they receive a different paper butterfly that another American student made and wrote a note on. Art and writing! Being basically a science site there is data relative to the butterflies that your students can analyze. Next I went to Google and found a few songs about butterflies, some more appropriate for younger students and some for older and YouTube had several excellent videos and news casts from Mexico on the migration.

Art – paper butterflies

Writing – letters to Mexican students, reports of investigations

Reading – booklets about life in Mexico

Listening – videos about life in Mexico, newscasts about migration, videos about migration

Speaking – with fellow students in research groups, make videos of reports

Songs – about butterflies

Observation – of butterflies in NY. Report to class

Data analysis – using data from Mexico

Make concept map of unit

Write daily lesson plans

Download materials needed

Unit Plan

Lesson 1: Mariposas—¿Por qué las estudiamos en esta clase? ¿Qué sabemos ya sobre la mariposa monarca? Movie without sound. Song “Mariposa en Havana” with cloze exercise and English translation. Watch for monarch butterflies around them. What are they doing?

Lesson 2: El ciclo de la vida: PowerPoint, vocabulary cards, make a display of life cycle, readings. Role of milk weed = biology in Spanish.

Lesson 3: mariposas tropicales. No pueden sobrevivir en el norte en el invierno. Viaje a México (“Down to Mexico” song). El ciclo anual de las mariposas monarcas powerpoint. Canadian video: French-English-Spanish. Virtual migration: make paper butterflies and write notes to students in Mexico.

Lesson 4: La migración. Rutas migratorias PowerPoint. Movie (in English) about migration. Papalotzin video (3 countries). Mariposa monarca movie (Spanish). Readings booklet on migration—or can be done as a PowerPoint.

Lesson 5: the sanctuaries in Mexico. PP of Sanctuaries close to Angangueo. Map work of where butterflies go. Video: televisive noticiero. Write in English what they understand. Mariposa traicionera song (cloze). Interesting discussion of what it means with older students.

Lesson 6: La gente. Reading: cartas de estudiantes or Santuarios de las mariposas monarcas. Noemi introduces herself (listening). Noemi introduces vocabulary (listening). First problem: cutting the trees down (problem of wood—listening)). Solutions: reforestation, alternate jobs, ecotourism (readings). Taking care of the forests: monitoring the sanctuaries--observaciones (data collection and analysis by students).

Lessons 7, 8, 9: School, problems of water, daily life, small businesses. Small groups could read and research and report back to the class. Study questions are included in the readings. Comparing life of Mexican student to their own lives.

Lessons 10-12: Monarch migration is endangered. Three videos explain problems and offer solutions. Final project is to do something to help—action.

Lessons 13-14: Oral presentation of projects to the class, interested parties.

Videos for use in Monarch Butterfly Unit

http://www.learner.org/jnorth/maps/monarch_all_fall2012.html map of sightings

<http://www.youtube.com/watch?v=WdfIuVcwcQs&feature=related&safe=active> metamorphosis
Good, English Incredible journey of monarchs ***

<http://www.youtube.com/watch?v=n-UTToBPmjk&safe=active> en español. Over-view

http://www.youtube.com/watch?v=yIFB9reAkWU&feature=player_embedded&safe=active#! Monarch migration

<http://www.youtube.com/watch?v=adB638SIE1k&feature=related&safe=active> Angangua, Mexico no talking some English text

<https://www.youtube.com/watch?v=zfmXJSDsuu8> mariposa monarca /Spanish, very fast

<https://www.youtube.com/watch?v=IWjNZvW0AkE> monarch watch 1 (English)

<https://www.youtube.com/watch?v=uqDwvuleRYc> excellent Google Earth in English

<https://www.youtube.com/watch?v=fLmiX-MbNsE> en español. Excellent over-view

<https://www.youtube.com/watch?v=a1C7sfsy0w> el viaje de la mariposa monarca

https://www.youtube.com/watch?v=mbZtukz2e_o español illegal logging, what is being done to stop it

Songs about butterflies

Monarch song (younger students) Canción de la mariposa monarca

<https://www.youtube.com/watch?v=Wqa8-kVwO4M>

Mariposa en Havana <https://www.youtube.com/watch?v=y2fiNUSAdh4>

Mariposa traicionera <https://www.youtube.com/watch?v=06w3rg-tnUQ>

Mariposa tecknicolor <https://www.youtube.com/watch?v=hB4YS9iui2E>

Mariposa en Havana Si*Sé

Cuando te miro, a ti
Lindos colores, oh si
Te mueves tan dulce
Solo por vivir

Cuando te miro, a ti
Lindos colores, Oh si
Te mueves tan dulce
Solo por vivir

Ah bailare
Hasta al amanecer, contigo
Oh dando vueltas
Bailare hasta al amanecer

Eres curiosa, lo sé
Como una gitana,
En el aire, belleza humilde
Lo haces sin saber, ah

Ah bailare
Hasta al amanecer, contigo
Oh dando vueltas oh
Bailare hasta al amanecer

Con tu energía
Puedes hacerme sentir tan libre
Me mueve contigo
Sin como ni porque

Con tu energía
Puedes hacerme sentir tan libre
Me mueve contigo
Sin como ni porque, ah

Ah bailare
Hasta al amanecer contigo
Oh dando vueltas
Bailare hasta al amanecer

Oh dando vueltas, dando vueltas
Contigo contigo contigo oh
Oh hasta el amanecer

Mariposa Traicionera *por desconocido*

Eres como una _____
vuelas y te posas vas de boca en boca
facil y ligera de quien te _____

Yo soy raton de tu ratonera
_____ que no mata pero no libera
vivo muriendo prisionero
Mariposa traicionera
todo se lo _____ el viento
Mariposa no regreso

Ay, mariposa de amor, mi mariposa de amor Ya no _____
contigo
Ay, mariposa de amor, mi mariposa de amor
Nunca jamas _____ a ti
_____ amor, _____ dolor
y no regreses a un _____
ya vete de flor en flor
seduciendo a los pistilos
y vuela _____ del sol
pa'que sientas lo que es dolor

Ay, _____ como haces daño
pasan los minutos cual si fueran años
mira estos _____ me estan matando

Ay, _____ que facil eres
abres tu alitas, muslos de _____
donde se posan tus amores
Mariposa traicionera
todo se lo lleva el _____
mariposa no regreso

Ay, mariposa de amor, mi mariposa de amor
Ya no regreso contigo
Ay, mariposa de amor, mi mariposa de amor
_____ jamas junto a ti
vuela amor, vuela dolor
que tengas _____ en tu vida
ay, ay, ay, ay, ay dolor
yo te llore _____ un rio
ay, ay, ay, ay, ay amor
tu te me _____ a volar