

Visit to Peru: Teaching English Grammar

Problem

Students have been contracted by a private school in Peru; they are to teach English grammar including adjectives, pronouns and verb use to Spanish speaking students in Lima, Peru. They must bring an electronic device or robot which will serve to aid them in teaching such rules to the Spanish students.

Lesson Summary

Students will use the Hummingbird Robot Kit to create a learning tool. Students will be familiar with & utilize STEM terminology, and relevance while solving a problem dealing with teaching Spanish students English in a foreign country. Students will become aware of the importance of being exposed to engineering and technology approaches to problem solving and decision making.

Major Topic and SOL

The student will plan and conduct investigations in which

- components of a circuit system and software, CreateLab, are defined and utilized;
- instruments are selected and used to extend observations and measurements of LED light brilliance, motion, sound fields, and electric charge;
- information is recorded and presented in an organized format;
- metric units are used in all measurements and calculations;
- the limitations of the design are recognized; and
- appropriate technology including computers, software, and sensors is used for gathering and analyzing data and communicating results.

Length of Time

11- 50 minute class periods

Student Objectives

- Students have learned and should have a working understanding of the Spanish grammar concepts regarding specifically adjectives (masculine/ feminine), Spanish pronouns, verb conjugation of –ar verbs.
- Students will read short stories involving subject proper grammar uses so that they have extended knowledge of what Spanish students read.
- Students will learn to predict events in such stories by looking searching for familiar words and through pictures.
- Students will write summaries regarding stories read.
- Students will become aware of what teaching & traveling opportunities exist to teach English abroad.

- Students will learn what ESOL, TESOL, tax-exemption, tax deferred, “first world problems” and other related terminology means and use it in assignments.
- Students will explore, compare and contrast pedagogy in Latin America/ Spanish culture.
- Students will research and explain 3 things a TEFL teacher abroad faces abroad.
- Students will read short stories in Spanish which use the vocabulary in context.
- Students will discuss and summarize short stories read to reinforce understanding of content.
- Students will view tutorials of Hummingbird Robot kits.
- Students will recognize, understand and use STEM terminology to create Hummingbird Robot device
- Students will know, use and incorporate Spanish pronouns, adjectives and conjugation concepts to create Hummingbird Robot device.
- Students will demonstrate and present Hummingbird Robotic devices to class.

21st Century Skills

- Critical-Thinking and Problem Solving
- Communication
- Creativity and Innovation
- Collaboration
- Information and Media Literacy
- Learning Global/Multicultural
- Contextual Learning

Assessment Evidence

- Teacher directed questions through discussion on reading articles about teaching abroad, TESOL, first world problems using the [Think-Pair-Share](#) method
- Explain 3 issues a TESOL teacher faces when working abroad and provide resolutions
- Demonstrate understanding of Spanish grammar & sentence structure through class participation
- Assemble Hummingbird Robotics controller/ parts/ devices and use correct terminology and definitions (circuits, controller, LEDs, sensors, sound sensors, vibration motors, ports, sound ports, single/ color/tri-color LED, distance sensors, gear, motors, servo, expressions, visuals, etc.) through team participation and teacher observations
- Use the software to create robotic commands
- Understand how to teach second languages to foreign students
- Understand the basics about teaching abroad and its benefits.
- Final presentations of robot/electronic device

Supplies/Materials/Technology

- [Hummingbird Robot Tutorials](#)
- Computer/Tablet
- Reading material (not included)
- Hummingbird Robotic Kits
- Construction paper
- Cardboard
- Felt
- foam board
- assorted tape
- scissors
- glue guns
- glue sticks
- markers
- tissue paper
- ribbon
- nails
- tacks
- popsicle sticks
- pipe cleaners
- other craft supplies (optional)
- Vocabulary -Spanish pronouns; “yo,tu, usted, el, ella, nosotros(as), ellos, ellas, ustedes”;
Spanish adjectives: gender specific, bonito(a), atrevido(a), talentoso(a), perezoso(a),
estudioso(a), reservado(a), trabajador(dora) etc.
- Project Rubric (included)
- Assessment Reading Checklist

Lesson 1: (3-50 minute periods)

- Review/ Recall: Spanish vocabulary and sentence structures. Compare sentence structure to English.
- Making words plural in Spanish. Definite & Indefinite Articles.
- Anticipatory: Students predict, read and discuss “Teaching abroad” articles.
- View videos on teaching English as a Second language
- Round Table Discussion of TESOL, Requirements, Cultural Awareness, Benefits, Financing
- Compare and Contrast Cultural practices, expectations, teaching target languages.

Lesson 2: (3-50 minute periods)

- Presentation of STEM in the classroom (power-point)
- Distribution of tech equipment: computers, kits, supplies, craft materials
- Download & ensure that teams have Visual Programmer software.
- Present, Review and implement Step by Step: using software

Lesson Contributed by: Myrna Barr

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- Present use of Tutorials: Students view Hummingbird Robot tutorials as necessary.
- Team drafting of robotic device. Teacher review
- Instruct & Conduct Connect, Build & set up circuit/ expressions for LEDs/sensors/motors
- Clean up

Lesson 3: (3-50 minute periods)

- Continue evaluating teaching a second language to Spanish speaking students.
- Students continue to work with Visual Programmer to create device/robot.
- Teacher directed observations of expression and sequence reviews.
- Clean up

Lesson 4: (2-50 minute periods)

- Peer Presentation: Group share presenting their robotic projects to each other and report assessment to teacher
- Presentation of Robot device: Explain to class how and why this device is useful for teaching Spanish student English. How can you use a robotic device to help you teach English to Spanish speaking students you teach abroad? Why teach abroad? What are some benefits for teaching abroad? Why learn to create robotic device using the Hummingbird robot?
- Post Assessment: Class Meets with Farmville Herald reporter regarding project.

RUBRIC: STEM in SPANISH CLASS

CATEGORY	4	3	2	1
Preparedness	Student is completely prepared and has obviously rehearsed with group regarding robot project.	Student seems pretty prepared but might have needed a couple more rehearsals.	The student is somewhat prepared, but it is clear that rehearsal was lacking.	Student does not seem at all prepared to present.
Robot	Group created a robot that shows considerable work/creativity and which makes the presentation better.	Group created a robot that shows some work/creativity and which makes the presentation better.	Group created a robot which is not completely functional or does not appear well-made. It does not add to the presentation.	The group created a robot which does not function at all and is poorly made. It detracts from the presentation.
Collaboration with Peers	Almost always listens to, shares with, and supports the efforts of others in the group. Tries to keep people working well together.	Usually listens to, shares with, and supports the efforts of others in the group. Does not cause "waves" in the group.	Often listens to, shares with, and supports the efforts of others in the group but sometimes is not a good team member.	Rarely listens to, shares with, and supports the efforts of others in the group. Often is not a good team member.
Participation	All group members appear to have a presence in the presentation.	Most group members appear to have a presence in the presentation.	Some group members appear to have a presence in the presentation.	Only 1-2 members seem to have participated in the project.

Assessment Readings Checklist: Making Predictions & Resolutions using Short Stories/illustrations

STUDENT NAMES	
Reading Preview: Brainstorming prior knowledge Vocabulary check: TESOL, TEFL, First World Problems, Tax deferred, Definitions	
Preview & Prediction: Video on teaching in Costa Rica <i>Completed/reasonable responses</i>	
Scaffolding: Identifying Characters	
Sequence Retell Predict/Resolve Verbally share in group	
<i>Anticipated Guide Connection to Text:</i> Appropriate references to pages Follow instructions/rules	
Research Certification Requirements	
Illustrate Project Design/Implementation Cooperative: (partner sharing if applicable) <i>Quality of participation: Rubric</i>	
Group behavior for teaching techniques Following one, two, three steps	
Appropriate gestures/body language/facial expressions	
Followed group rules/roles	
Maintained eye contact when talking	

Ability to connect anticipation guide to text	
Correlation Chart: Resolutions to first world	
problems: Preparedness Project Design/Testing/Improved	
Short whole class discussion	
NOTES	