ELL Instructional Strategies

Flexible & Responsive Instruction

• Ask these questions while planning instruction

1. How will you vary what students will learn and the materials that represent the context?
2. How will you vary activities through which students make sense of key ideas using essential skills?
3. How will you vary the way students demonstrate and explain what they understand and can do as a result of learning?

Learning Environment

How will you vary the classroom conditions that set the climate, expectations for learning, and physical conditions?

SENTENCE STEMS
Sentence stems, such as “I think…” or “Today I learned…”, support students as they write expository text and use content-area vocabulary from the word wall or word chart. These stems provide support without dictating student writing and allow for the development of student voice in science writing, which promotes ownership of the material.

LABELING DIAGRAMS AND ILLUSTRATIONS
As students add diagrams and illustrations to their science notebooks, they should be encouraged to label each one with correct scientific vocabulary, using the word wall or word chart as a reference. Doing so provides another opportunity to build relational and contextual vocabulary development – not just among English language learners but among all students.

Considerations for ELLs in the STEM Classroom

Lindsay Crimmins - Christina Contento – Kara Capozzi

Research Proposal

Our research and curriculum planning team created, adapted, and modified K-12 science units with special consideration for English language learners.

Our curriculum attempted to bridge the gap between content and language instruction using “Best Practices” when teaching English Language Learners (ELLs), incorporating hands on materials, emphasizing vocabulary, reading and writing daily, focusing on oral language production, and incorporating technology when possible.

Plants & Living Environment Relationships

The following unit plan for plants and living environment relationships is designed for elementary level students. The following instructional strategies and leveled learning tasks are utilized to promote a high level of academic language acquisition while learning content.

Language and content objectives within this unit include:

• Define and use unit vocabulary.
• Identify and use science equipment.
• Match pictures to science vocabulary terms.
• Interpreting charts, and graphs.
• Participate in group discussion.
• Summarize/paraphrase what is heard, read, and viewed.
• Restate and carry out multi-step oral instructions.
• Interact with partners and small groups about content and skills.
• Ask relevant questions.

Unit Components

• High focus on vocabulary instruction through visuals
• Lessons and experiments based on questions from life experiences
• Planned activities to engage and encourage use of academic language

Plants & Living Environment Relationships

• What is a plant's life cycle?
• What are the parts of a plant, and how do they work together?
• How do plants adapt to survive?
• Where do you find plants?
• How do we use plants?
• What does a plant need to grow and live?

Essential Question(s)

• How do we interact with plants?
• How do we use plants?
• Where do you find plants?
• How do natural systems interact with one another?
• What does a plant need to grow and live?
• What is a plant's life cycle?

Diffusion & Osmosis Unit – High School

The following unit plan for diffusion and osmosis is for a high school Biology classroom. The following instructional techniques are utilized to promote a high level of academic language acquisition while learning content.

• Language and content objectives for each lesson
• Non-linguistic representation of information
• Access to science and academic vocabulary
• Teaching academic skills such as reading expository text and note-taking

Buffalo’s ESL populaion represents various high incidence languages, and is not only limited to Spanish speakers. These include many African and Asian languages, such as Karen, Somali, Arabic, Burmese, Nepali, Swahili, and Vietnamese.

References / Acknowledgements


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