

Toca Kitchen Science Lab – Lesson Plan

Standards Addressed

WIDA LANGUAGE PROFICIENCY STANDARDS

English Language Development Standard 4: The language of Science

English language learners communicate information, ideas and concepts necessary for academic success in the content area of Science

COMMON CORE STATE STANDARDS:

CCSS.ELA-Literacy.RST.6-8.3 Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.

CCSS.ELA-Literacy.SL.6.1d Review the key ideas expressed and demonstrate understanding of multiple perspectives through reflection and paraphrasing.

CCSS.ELA-Literacy.SL.6.4 Present claims and findings, sequencing ideas logically and using pertinent descriptions, facts, and details to accentuate main ideas or themes; use appropriate eye contact, adequate volume, and clear pronunciation.

NEXT GENERATION SCIENCE STANDARDS

Science and Engineering Practices

Planning and Carrying Out Investigations

- Collect data and generate evidence to answer scientific questions or test design solutions under a range of conditions. (a),(b)

Constructing Explanations and Designing Solutions

- Apply scientific reasoning to show why the data are adequate for the explanation or conclusion. (c),(e)
- Construct explanations from models or representations. (c)

WIDA Features of Academic Language

The Features of Academic Language operate within sociocultural contexts for language use.

	Performance Criteria	Features
Discourse Level	Linguistic Complexity <i>(Quantity and variety of oral and written text)</i>	Amount of speech/written text Structure of speech/written text Density of speech/written text Organization and cohesion of ideas Variety of sentence types
Sentence Level	Language Forms and Conventions <i>(Types, array, and use of language structures)</i>	Types and variety of grammatical structures Conventions, mechanics, and fluency Match of language forms to purpose/perspective
Word/Phrase Level	Vocabulary Usage <i>(Specificity of word or phrase choice)</i>	General, specific, and technical language Multiple meanings of words and phrases Formulaic and idiomatic expressions Nuances and shades of meaning Collocations

The sociocultural contexts for language use involve the interaction between the student and the language environment, encompassing the...

- Register
- Genre/Text type
- Topic
- Task/Situation
- Participants' identities and social roles



OBJECTIVES:

1. With a partner, use Toca Boca Kitchen to find out which dishes a character likes and does not like.
2. Use the language of science to label and describe each of the following:
 - Give an introduction
 - Tell your purpose
 - Tell a hypothesis about which one he/she/it will like and which he/she/it will not like
 - Tell your procedure for making and testing the food
 - Make observations about how the food changed and how the character reacted
 - Asked questions or gave wonderings
 - Summarized results
3. Use sentence frames to help you speak.
4. Self-assess and peer-assess using a speaking rubric.

PROCEDURES:

Whole Group / Partners:

- Describe the scientific and language purpose: Show students the characters and the foods available to choose in the Kitchen App. Explain that for this activity students must focus their discussion around a specific purpose: to choose one character and figure out which food she/he/it likes and which one she/he/it doesn't like. Explain that we will make this into an experiment and use the scientific process to do it. We must use the language of science to talk about our experiment.
- Preview vocabulary/scientific method, phase 1: Using the projector, show students how to fold the rubric handout so that just the labels for each criteria are showing. (Students should then have the blank column created by the folded back of the paper to write notes alongside each criteria term.) Students should then fold the bottom of the paper back so that only the first five criteria are showing. Discuss the two columns- the left column shows what the students should talk about and the right is where they should write the meanings in their own words. Model this with one criteria. Give students two minutes to write synonyms or meanings of any words that they already know. Ask students to pair and share for a few minutes. Select students to discuss any terms that the class has difficulty understanding and offer simpler language if needed. Also call attention to the synonym already given with the criteria (e.g. "Made a *hypothesis* or a *prediction*. . .").

- Introduce the rubric, phase 1: Students should refold their rubric papers so that they can now see the WIDA Level criteria descriptors 1-4 (or 1-3 for beginning and developing students), but still only for the first five criteria. As the teacher reads aloud criteria for level 3, students fill in the cloze blanks. The teacher may model using the projector. Talk about the key words that they are writing in as you go. Discuss with partners or the whole group how this is different from levels 2 and 4.
- Model the task: Teacher will now use the projector to show the iPad and model the task. Students may use their rubrics to assess the teacher. The teacher may wish to pause to allow students to read each criteria. Students can give feedback during and after the demonstration using their fingers to show the number of the teacher's level. Do this for only the first five criteria.

INDEPENDENT PRACTICE:

- Students will work with a partner to practice the task, trading roles of experimenter and assessor. Students should use the rubric to discuss how they are performing both during and after the “experiment.” Encourage students to try to add more in order to reach the next level up of their performance.
- Optional differentiation: give students the sentence frame overlay handout to use with their rubrics. Students should place the sheet next to the appropriate WIDA level and match the criteria to each set of sample sentence frames.

ASSESSMENT:

- This is a practice session for unit assessment with the speaking rubric.

EARLY FINISHERS:

Brainstorm a list of environments made by people. Use p. 148 for ideas. If time allows, use the library online catalog to look up and order books about these topics to be sent to the Decatur library. Write down call numbers for similar books.

Toca Kitchen “Cooking Lab” Your Name: _____ Partner’s Name: _____ Date: _____

Directions: Circle one box for each row. Write notes on the back. Total: _____ out of 36 / 32 / 27

WIDA Level	Expanding - 4	Developing - 3	Beginning- 2	Needs Work - 1
Introduction	Gave a creative introduction that made the audience want to learn from you! Also told your name.	Gave an introduction with your _____.	Said your name.	No introduction and did not include your name.
Purpose	Gave a clear purpose for your experiment that also explained why it is important.	Gave a _____ purpose for your experiment.	Gave a purpose, but it may have been difficult to understand.	Did not give a purpose.
Names of Materials & Tools	Named two or more foods you prepared and named three or more tools	Named at least ____ foods and ____ or ____ tools used to prepare them.	Named one food and one tool used to prepare it.	Named either one food or one tool or none.
Made a hypothesis or prediction using future tense	Using the future tense, told what you thought would happen with an explanation of why you made this hypothesis.	Using the _____ tense, told what you thought would happen.	Told what you thought would happen—may not have used future tense.	Did not tell what you thought would happen.
Gave procedure in the form of commands/ used verbs	Gave more than five commands using many different verbs to tell the audience how to prepare the food(s). Used verbs correctly.	Gave __ to __ commands using some _____ verbs to tell the audience how to prepare the food. Usually used verbs correctly.	Gave 2 to 3 commands using a few different verbs to tell the audience how to prepare the food. Used some verbs correctly.	Gave only one command using one verb to tell the audience how to prepare the food, or only showed, didn’t tell.
Made observations	Observed carefully and gave statements about how the food changed and the reaction of the diner. Used different kinds of sentences. Used some longer sentences with connecting words	Observed _____ and gave statements about how food _____ and how the _____ reacted. Used mostly short but some _____ sentences.	Observed and talked about changes in food and diner reaction. Used mostly short sentences.	Used words or phrases, not sentences to tell about observations.
Asked questions/ Gave wonderings	Asked many questions and/or gave “I wonder . . .” statements during and after the experiment.	Asked _____ and made “I wonder...” statements before _____ after experiment	Asked a question or made an “I wonder...” statement.	Did not ask a question or make a statement.
Summarized results	Summarized what happened and said whether or not your hypothesis was correct. Careful, complete answer.	Summarized what happened and said whether or not your hypothesis was _____.	Summarized what happened or said whether or not your hypothesis was correct.	Did not summarize results or say if hypothesis was right.
Style	Spoke loudly, clearly, confidently, and happily and looked your partner in the eye.	_____ made eye contact, spoke to be heard, tried to speak _____. Seemed happy.	More unsure – no eye contact, soft speech, hard to understand.	Did not seem confident and had many pauses. Really hard to understand.

Toca Kitchen “Cooking Lab”

Directions: Cut and use as an overlay with the rubric.

Example sentence starters. . .	Example sentence starters. . .
<i>write your own. . .</i>	<i>write your own. . .</i>
The purpose of this experiment is to _____.	The purpose of this experiment is to _____.
Take the _____ out of the _____. Put some _____ into the _____. Turn on the _____ using the _____.	Take the _____ out of the _____. Put some _____ into the _____. Turn on the _____ using the _____.
I think that the _____ will _____. The _____ will _____.	I think that the _____ will _____. The _____ will _____.
Take the _____ out of the _____. Put some _____ into the _____. Turn on the _____ using the _____.	Take the _____ out of the _____. Put some _____ into the _____. Turn on the _____ using the _____.
The _____ changed _____. The _____ turned _____ after _____. The _____ became _____ when _____. The _____ was _____.	The _____ changed _____. The _____ turned _____ after _____. The _____ became _____ when _____. The _____ was _____.
Why _____? When _____? What will happen when _____? How _____? I wonder _____.	Why _____? When _____? What will happen when _____? How _____? I wonder _____.
My hypothesis was _____. The results were _____.	My hypothesis was _____. The results were _____.