

## Academic Language Instruction for All Students: Effects of a Large-Scale Vocabulary Intervention

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### Language Diversity & Literacy Development Research Group

Seven-year Collaborative Partnership to:



- Identify Sources of Difficulties for Struggling Readers from Diverse Backgrounds
- Design Interventions that are Effective and Usable on a Large Scale
- Build Capacity to Improve Outcomes

## Today's Talk

- Highlights from Our Research
- Planning Rich & Systematic Vocabulary Instruction: Walk through a 9-Day Unit Cycle
- Supporting Teachers' Implementation

## Highlights from Research


- Two studies that demonstrated the importance of academic vocabulary
  - 5-year longitudinal study of ELLs in 4<sup>th</sup> - 8<sup>th</sup> grade
  - Comparative study of ELLs and native English speakers who struggle with reading in 6<sup>th</sup> grade
- Two evaluations of an approach to teach academic vocabulary
  - 2007-2008: Pilot year in 7 schools, rich data and feedback from teachers on implementation
  - 2008-2009: Randomized controlled trial in 14 schools

- 20 week curriculum, 45 minutes a day
- 9 two-week units built around focus words, 2 one-week review units
- Text-based, rich vocabulary instruction

## ALIAS Evaluation 07-08

- We compared the ALIAS approach to typical instruction in English-language arts in sixth grade linguistically diverse classrooms.
- In each urban middle schools, teachers volunteered to try ALIAS and were compared to other teachers using the standard district curriculum.



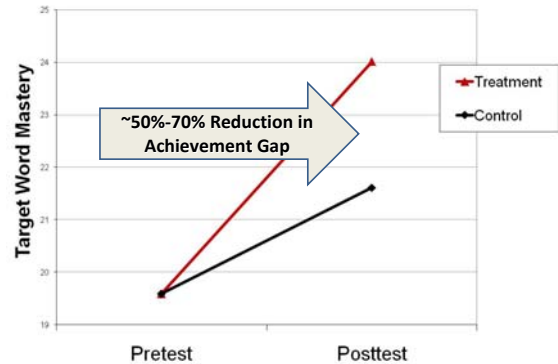
## ALIAS Evaluation 07-08

### Participants

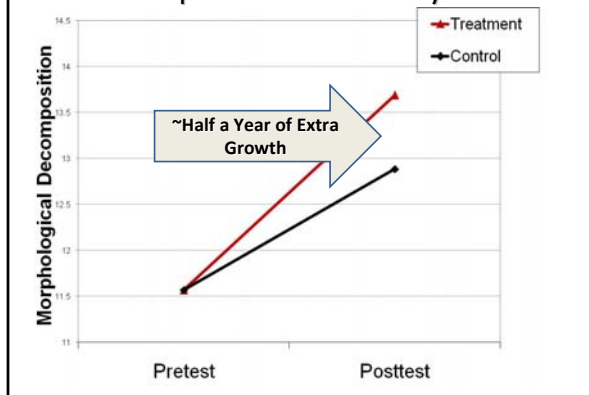
- 476 Students in Sixth Grade
  - 30% Native English speakers
  - 70% ELLs and former ELLs
  - Ethnically diverse
  - Primarily low-income
- 19 English-language arts Teachers
  - 12 ALIAS teachers, 7 control teachers
  - From first-year teachers to retiring veteran teachers
- 7 Urban Middle Schools
  - Similar to those in urban districts in the southwest



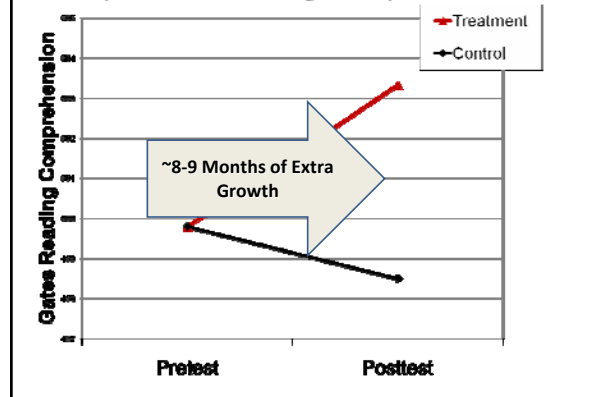
## Impact on Targeted Vocabulary



## Impact on Word Analysis



## Impact on Reading Comprehension



## Success of Implementation

- Reported fidelity = 87%
- Observed fidelity = 74%
- ALIAS teachers were better than control teachers at:
  - Providing multiple opportunities to use words
  - Posting visual resources for learning words
  - Affirming correct use of words
  - Using personal anecdotes to give examples for words
  - Supporting students' writing
  - Facilitating student talk



## What did typical ELA instruction look like?

- Much of the instructional time (40%) was focused on reading and analyzing **literature**.
- Less than 10% of time spent on **vocabulary**.
- When teaching vocabulary, teachers struggled to get beyond **superficial techniques**, such as providing a single definition or example.
- Teachers also struggled to find the most **important words** to teach.
  - Often taught ELA words ("subordinate clause") or colorful words ("cannibal," "bon voyage").

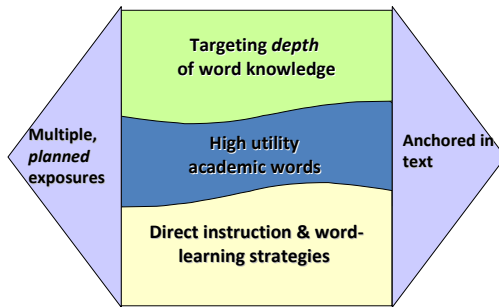
## Moving to a Larger Scale: Randomized Controlled Trial

- 14 participating middle schools
- 51 teachers randomly assigned to treatment or control
  - 26 Treatment (39 classes)
  - 25 Control (41 classes)
- approx. 2300 participating students
  - 70% ELLs, former ELLs
  - 30% native English speakers

## Preliminary Findings from Large-Scale Evaluation

- Fidelity of implementation was equally strong
- Significant impacts on student outcomes, similar to 07-08 study
- Slightly larger effects on depth of word knowledge and word analysis skills

So how do we make vocabulary instruction rich and systematic?



(e.g., Carlo et al., 2004; Graves, 2006; Hiebert & Kamil, 2005; Stahl & Nagy, 2006)

## ALIAS Elements



- Starting with texts
- Building depth of word knowledge over time
- Engaging students & encouraging word play
- Increasing *student talk* in class
- Gradually releasing responsibility to students

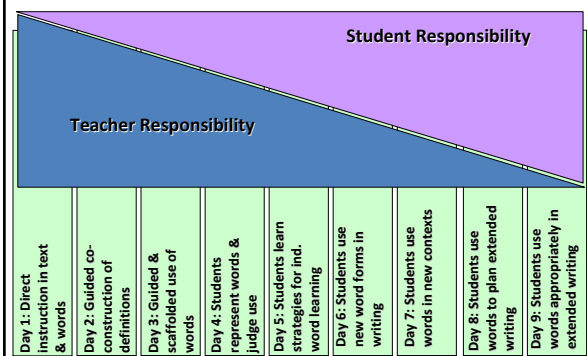


## A Systematic Approach: ALIAS Day-by-Day

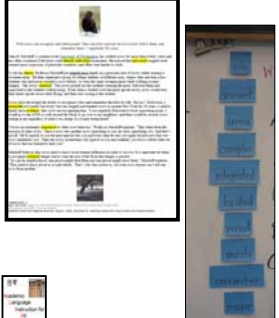
<b>Day 1</b>	Read article and discuss concepts. Read words ( <i>structured talk</i> )
<b>Day 2</b>	Define words ( <i>activating background knowledge</i> )
<b>Day 3</b>	Answer text-based questions using target words ( <i>Reader Response Questions</i> )
<b>Day 4</b>	Sketch target word, write related sentence. Teach multiple meanings ( <i>Graphic representations</i> )
<b>Day 5</b>	Morphology introduction ( <i>Word Form Chart, Find the Misfits, Opposite Day</i> )
<b>Day 6</b>	Morphology review and practice ( <i>Crazy Compounds, Caption It!, Suffix Stumpers</i> )
<b>Day 7</b>	Answer questions in new contexts ( <i>Mock Interview, Please Explain, Deep Processing</i> )
<b>Day 8</b>	Read supplemental article, plan writing ( <i>Planning Your Writing, Graphic Organizer</i> )
<b>Day 9</b>	Write paragraph, revise & edit ( <i>Working with transition words</i> )

See your handout for more detailed examples of each day's activities.

## Gradual Release of Responsibility




**Before Day 1:**  
Choose an article & words to teach



- Expository Texts
- Topics that stimulate conversation
- Select words that appear in the text & on the Academic Word List (Coxhead, 2000) <http://www.nottingham.ac.uk/~alzh3/acvocab/index.htm>

**Day 1:**  
Teacher Read-Aloud




**Teacher:**

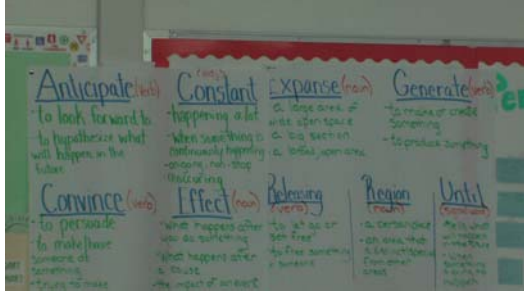
- Engages the students through personal connections
- Points out comprehension strategies
- Discusses key concepts
- Intermittently interjects short, clarifying comments while reading
- Stops to ask students about difficult words

**Day 2:**  
Create personal definitions

1. Brainstorm – What do you already know about the target word?
2. Share – Create a class list of ideas about the word's meaning
3. Compare list to dictionary definition
4. Write class definition
5. Record personal definition

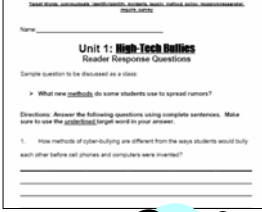



**Day 2:**  
Generate class definitions

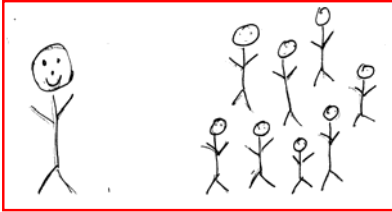


**Day 3:**  
Answer text-based thinking questions

- Teacher models how to answer questions about the article
- Students work together to come up with answers to remaining questions

**Day 4:**  
Sketch definitions



**individual**

**Day 4:**  
**Uncover multiple meanings**

**Individual – (noun)**  
A single person

**Individual – (adj.)**  
For the use of one person only

**Days 5 & 6:**  
**Morphology – Instruction & Practice**

Day 5: Introduce word parts  
Day 6: Practice identifying word parts

**Unit 9: Crows**  
Base word: Bonanza!

	Base word	Added letters at the beginning?	Added letters at the end?
researcher			
reactive			
responsive			
potentially			
advice/advice			
previously			
<b>Challenge words</b>			
Scientific			
misidentified			

**Unit 9: Crows**  
Base word: Bonanza!

	Base word	Added letters at the beginning?	Added letters at the end?
responsive			
reaction			
reactive			
potentially			
previously			
identification			
recognize			
survive			
theory			
researcher			

Unit 9: Crows  
Find the Words

Cut out words, and  
glue them on the  
task cards looking  
that share a base

**Day 7:**  
**Target words in new contexts--Deep Processing Questions**

Name \_\_\_\_\_ Famous Person \_\_\_\_\_

**Unit 9: Crows**  
Mock Interview Questions

Directions: Choose a famous person to act out during a mock interview. Then, with a partner, decide which 6 of the following questions you choose to answer. You will be asking your partner the 6 questions he chose, and he will be asking you the 6 questions you chose. Each response must include at least one of the underlined target words in the question.

Answer regarding all the top of the page with your name and the name of the famous person you have chosen. Then, put a check mark next to the 6 questions you want your partner to ask you and have appear with your partner.

- Have you ever hobnob with anyone when you were out of your house?
- Which gossamer do you think should be chosen as Time Magazine's Person of the Year?
- How do you regard all the requests for interviews and autographs?
- Do you think you have reached your full potential, or do you have other goals for your future?
- Can you tell some anecdotes that suggest that you are a positive role model for your fans and fans?
- What have you discovered that you can no longer do now that you are famous?
- Do you have any regrets on how you got to be so good at what you do?
- Some people think that you overreact when things go wrong for you. Do you agree that your anecdotes are over-the-top?

**Day 8 & Day 9:**  
**Writing with the words**

Scaffolded, Authentic, & Spiraling Opportunities to Use the Words

- Students read a second short text and discuss key concepts
- Teacher models the pre-writing process
  - pre-writing questions
  - a graphic organizer
- Students talk with partners to generate ideas
- Students plan their writing and draft a paragraph

**Building up Knowledge of a Word, Piece by Piece...**

Day 8 & 9: How to use the word precisely in extended writing

Day 7: The meaning of the word in different contexts; How to use the word to write & talk about other topics

Day 5 & 6: The different word parts inside the word & their meanings; The different forms of the word & how they are used

Day 4: Multiple meanings for the word; How to represent its meaning graphically

Day 3: Its meaning in the article; How to use it to talk about the article

Day 2: What I already know about its meaning; Its dictionary definition


Day 1: How to spell it; What it looks like; What it sounds like

**Supports for Teachers' Implementation**


- Program Materials  
"When it comes down to it, it's you, the classroom, and the curriculum"
- Other Teachers in the School  
Colleagues helped in "debugging" the program.
- Program Specialist  
Newer teachers and teachers with fewer colleagues using ALIAS found specialist especially helpful

## Program Materials: Multiple Levels of Support

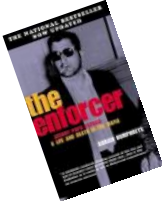


Framework



Instructional Model



## The Program Specialist: Walking a Fine Line

## Key Take-Aways

- With rich instruction, ELLs and their classmates can learn academic vocabulary deeply and tackle challenging texts.
- With support and planning, middle school teachers can implement systematic & engaging language instruction.
- With collaboration around shared goals, schools & districts can improve how they meet the needs of *all* of their learners.

## Acknowledgments

SDUSD

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- Curriculum & Instruction
- Literacy Department
- Standards, Assessment, and Accountability Division
- Research & Reporting Department

Funding Sources

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- Harvard Medical School
- William and Flora Hewlett Foundation
- WT Grant Foundation
- U.S. Department of Education

<b>Day 1</b>	<b>Read article and discuss concepts. Read target words</b> <i>(structured talk)</i>
<b>Day 2</b>	<b>Define words</b> <i>(activating background knowledge; discussing shades of meaning; creating class definitions )</i>
<b>Day 3</b>	<b>Answer text-based questions using target words</b> <i>(working with partners to find answers to text questions)</i>
<b>Day 4</b>	<b>Sketch target word, write related sentence. Teach multiple meanings</b> <i>(drawing graphic representations and sharing with class)</i>
<b>Day 5</b>	<b>Morphology introduction</b> <i>(opportunities to learn about how words work – word sorts, games matching words that share a base word, charts to organize words by word form)</i>
<b>Day 6</b>	<b>Morphology review and practice</b> <i>(practice manipulating words, including pulling words apart and recognizing words in a variety of forms; tasks that include finding words used in their incorrect forms, or activities that demand students alter the suffix or prefix)</i>
<b>Day 7</b>	<b>Answer questions in new contexts</b> <i>( asking questions that include target words and are related to students’ lives; Mock Interview)</i>
<b>Day 8</b>	<b>Read supplemental article, plan writing</b> <i>(planning writing step-by-step; incorporating ideas into a graphic organizer)</i>
<b>Day 9</b>	<b>Write paragraph, revise &amp; edit</b> <i>(Working with transition words)</i>

## The Face in the Crow-d

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Wild crows can recognize individual people. They can pick a person out of a crowd, follow him, and remember him — apparently for years.

John M. Marzluff, a scientist at the [University of Washington](#), has studied crows for more than twenty years and has often wondered if the birds could **identify individual** researchers. He noticed that **previously** trapped birds seemed more suspicious of particular scientists, and often were harder to catch.

To test his **theory**, Professor Marzluff put **identification** bands on a particular nest of crows while wearing a caveman mask. He then organized a group of college students of different sizes, shapes, hair and skin color-- students who had never touched a crow before-- to wear the same caveman mask while walking around campus. The crows' **reaction**? The crows picked out the students wearing the mask, followed them and squawked as the students walked along. Even when a student wore the mask upside down, crows would turn their heads upside down while flying, and then start cawing at the student.

Crows have developed the ability to recognize a face and remember that face for life. Kevin J. McGowan, a **researcher** at Cornell University who has trapped and banded crows in upstate New York for 20 years, is glad to finally have **evidence** that crows are recognizing him. "I was regularly followed by birds squawking at me. I would go to the ATM or walk around the block or go over to my neighbors, and there would be several crows yelling at me regardless of what I was doing. It is lonely being hated!"

"Crows are extremely **responsive** to other crow behavior," Professor Marzluff explains. "They learn from the reaction of other crows. Once a crow sees another crow squawking at you, he starts squawking, too. And that's not all. He'll squawk at you the next time he sees you and every time he sees you again because now that *new* crow remembers you. Then the crows around him will squawk at you and suddenly you have a whole other set of crows that has learned to hate you!"

Marzluff believes that crows need to know about human difference in order to survive. It is important for them to recognize **potential** danger and to warn the rest of the flock that danger is present.

"In a given neighborhood, one person might feed them and one person might shoot them," Marzluff explains. "They need to know about us as individuals. That's why they notice us, but even crow experts can't tell one crow from another."



(adapted from --)

New York Times, August 25, 2009, By MICHELLE NIJHUIS Friend or Foe: Crows Never Forget a Face  
NPR program, July 2009, The Crow Paradox

Allentown Health and Happiness Examiner, August 7, 2009. Emotional IQ: Learning a lesson from crows by Mary Ann Maxwell-Hebbert  
Language Diversity & Literacy Development Research Group  
Harvard Graduate School of Education

# Day 1 Read Aloud

(Sample using *Faces in a Crow-d* article)



- **Engage the students through personal narrative**

“This article is about crows. I don’t know why I chose it. I have never liked crows. My grandfather thought they were bad luck and they always used to make so much noise in the woods behind my house. They certainly don’t seem like very smart birds to me -- maybe that’s why I was so interested in the surprising information in this article.”

- **Point out reading strategies**

“The sentences at the top tell us a little bit about what the article will be describing. Can you see that the font is different and that it is sort of where the title should be? It says that wild crows – not pet birds, but wild birds that live freely -- can recognize people’s faces. The birds can tell the difference between my face and yours, or between yours and your friend’s.”

- **Discuss key concepts/vocabulary**

“So this article is going to tell us about how bird experts, scientists who spend their lives studying birds, did a study and figured out an interesting thing about crows. The scientist had a theory, or an idea about something, and he did a test to prove it. “

- **Give clear instructions** to students to read along

“Read along with me as I read this article aloud to you. After we finish, I want you to tell me if you have changed your feelings about crows at all.”

- **Intermittently interjects short, clarifying comments** while reading (within reason!)

--at end of par 1: *That’s funny. He noticed that birds that had been caught previously, caught once before, were harder to catch. Scientists put bands*

or tags on birds so they can identify or pick them out later, but apparently birds don't like that at all. Hmm...

--at end of par 3: *This professor McGowan must have felt like he was being followed by angry crows. I wonder if other people noticed that crows were squawking just at him. I think I would have been nervous to go out of the house!*

-- at end of par 4: *Wow! Those crows sure do respond to each others' needs! They really stick together! If one crow gets mad at you, all his friends will be mad at you, too!*

--at end of article: *So there is a reason why the crows act the way they do. Animal behaviors are learned because the behaviors help the animal to survive. Can someone tell me how the professor proved his theory that the crows can recognize faces? And why did the crows that weren't touched by the professor wearing the caveman mask end up feeling angry toward the caveman, too? I love the way he proved his theory! What a great experiment!*

- **Stops to ask students about difficult words (and clarify using examples)**

--**potential danger** – *that's danger that hasn't happened yet, but could happen at any time. Potential means something could happen or is more likely to happen. There is a potential that people might slip if there is ice on the stairs. We could potentially go outside at lunchtime if it doesn't rain and we get our work done.*

## Day 2: Word Meaning Discussion

- Students brainstorm on scrap paper for 1 minute per word.
- Class shares and creates a list of accurate word meanings.
- Class compares list to dictionary definitions
- Together students and teacher make a class definition for each target word



Target word example: **Identify**

### 1. **Brainstorm (each student)– What do you already know about the target word?**

identify: *On tv the police ask people if they can identify the bad guy.*

### 2. **Share– Create a class list of accurate ideas about the word’s meaning**

identify: *We identify types of plants in science class; I had to identify myself when I went on the plane; know what something is; on tv the police ask people if they can identify the bad guy.*

### 3. **Compare list to dictionary definition**

identify (verb) To recognize or tell what something is or who someone is.  
*When I noticed that the bush had flowers and thorns, I was able to identify it as a rose bush.*

### 4. **Write class definition**

identify: to be able to pick out who someone or something is.

### 5. **Record personal definition (In Academic Vocabulary Notebooks)**

**Day 3:** Students answer questions related to the text



**Part I:** Teacher models how to answer questions about the article.

*--Let's review the 5 steps you will be following as you answer each RRQ.*

**Take 5!**

1. Write a synonym or short definition above or below the target word in the question. (note: above target words below)
2. Reread the question using the synonym or short definition to help figure out what the question is asking.
3. Look for the answer to the question in the text. Start by looking near where you see the target word.
4. Write your answer using the target word.
5. Check your work and make sure that the answer is in a complete sentence and the target word is spelled correctly.

**Sample questions:**

1. Why was it important that Professor Marzluff chose students who were all

(idea)

different shapes and sizes to test his theory?

(pick out one crow's face from another)

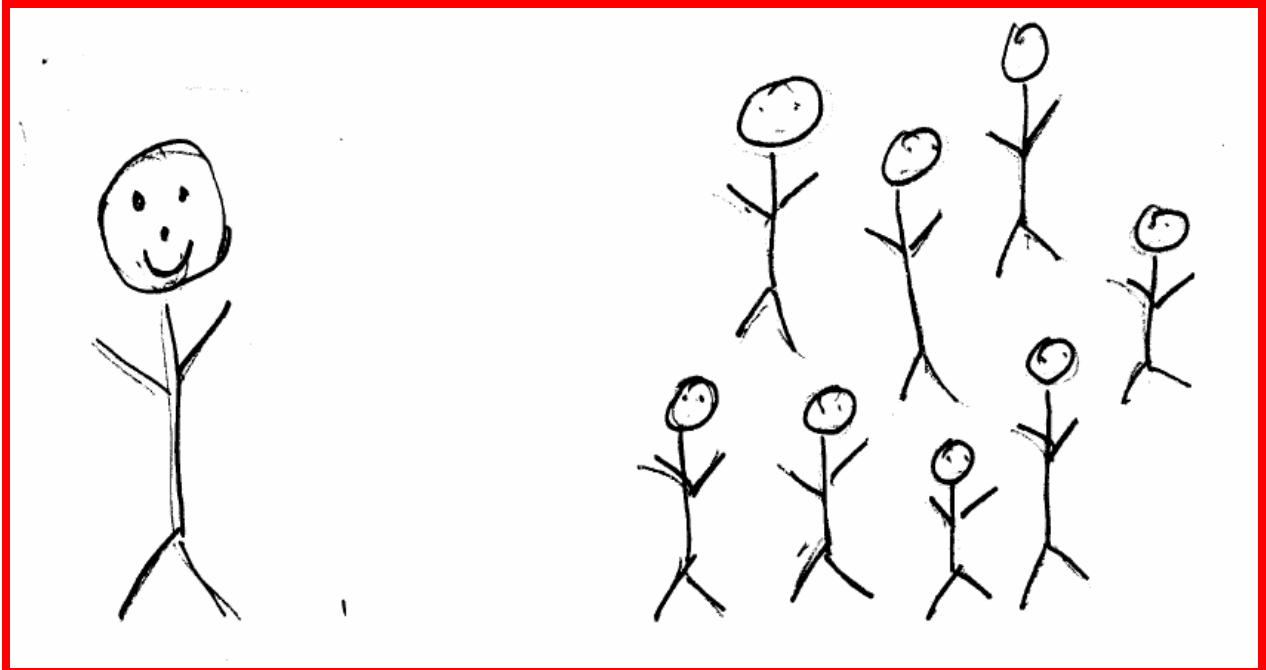
2. If people could identify crows' faces the way crows can identify people's

(people who study a subject)

faces, how would that help researchers?

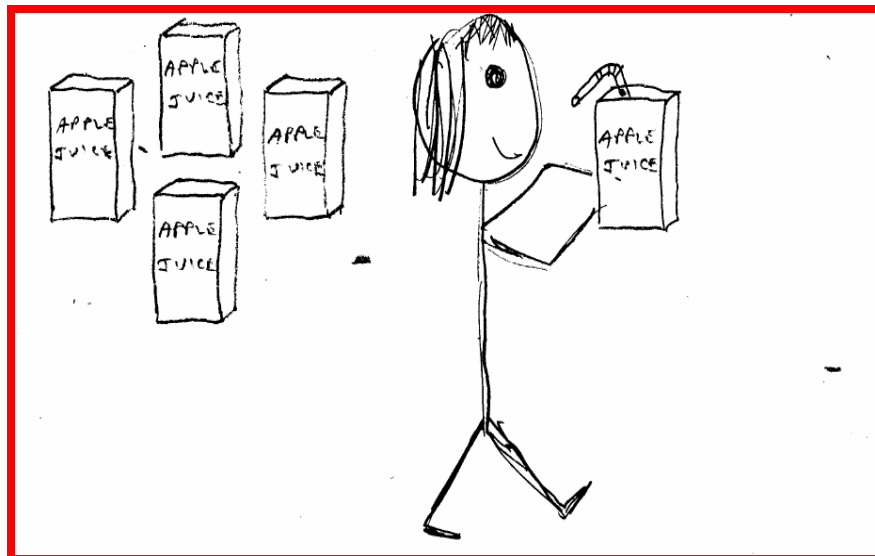
**Part II:** Students work together to come up with answers to remaining questions.

Day 4: Students draw sketches and work on multiple meanings



**Individual (noun) –a single person**

*Sal was the only individual in the class to complete his homework.*



**Individual – (adjective) for the use of one person only**

*Mehta brought an individual juice box for the field trip.*

**Day 5: Morphology** – Direct instruction on how words work, including how affixes change word forms.

(example exercise below)

**Directions:** Pull apart the target words listed by writing the word parts in each column. Be careful – the spelling sometimes changes!  
The first one is done for you.

	<b>Base word</b>	<b>Prefix?</b>	<b>Suffix?</b>
researcher	research		er
reaction			
responsive			
potentially			
individualize			
previously			
Challenge words			
theoretical			
misidentified			

**Day 6:** Morphology – Practice manipulating words in an effort to internalize how words work

(sample exercise #1 below)

## Base Word Memory Game

Directions: Cut out word cards below. Place words face down on a desk or table. In partner groups, students choose two cards at a time, searching for a base word, plus another word for that includes that base word.

(example: react, reaction)

responsive	reaction	theoretical	previously
potentially	previous	survive	theory
identification	recognize	individual	research
survival	response	potential	identify
individualistic	researcher	react	recognition

**Day 6:** Morphology – Practice manipulating words in an effort to internalize how words work  
(sample exercise #2 below)

## Find the Misfits

**Directions:** In this paragraph, there are 8 words used in an incorrect form. Find them and correct them by adding or removing a suffix. The first one is done for you as an example.

It wasn't really Tony's fault. He was just walking down the street, thinking about his afternoon soccer game, when he saw a crow lying in the middle of the street. At first he thought it was dead, but that <sup>theory</sup> **theoretical** proved wrong. The bird was struggling because of a hurt wing. "I don't need to be a crow research to know that the bird needs help," Tony thought to himself. The crow was responder, but did not have much strength left in him. Suddenly there were crows over his head, squawking at him, as if they were angry.

"I didn't hurt this crow," Tony said aloud to the birds flying near him." You are indentification me as the bad guy, but I am just trying to help him!"

Tony did not know what to do, so he ran to his friend Jose's house down the street to get Jose's father to come help.

Tony and Jose and Jose's dad came running toward the crow. When they got back to where the crow had been previous, the street was empty.

"Tony, were you dreaming? There's no sign of any hurt or angry birds here!" Jose's dad said.

"I'm sorry," Tony said. "I don't blame you for having that react. But you have to believe me! Even if the evidential is gone, I am telling the truth. There was a hurt crow on this street and I really did get yelled at by his crow friends!"

"Okay, okay!" Jose's dad replied. "Let's just celebrate the fact that this individualize crow was helped by his group of crow friends. Wherever he is now, he is being taken care and that's all that matters. How about if we go to the park and kick a soccer ball around before the big game?"

## Day 7: Using words in new contexts.

Name \_\_\_\_\_ Famous Person \_\_\_\_\_

### Mock Interview Questions

**Directions:** Choose a famous person to act out during a mock interview. Then, with a partner, decide which 4 of the following questions you choose to answer. You will be asking your partner the 4 questions he chose, and he will be asking you the 4 questions you chose. Each response must include *at least one* of the underlined target words in the question.

Before beginning, at the top of the page write your name and the name of the famous person you have chosen. Then, put a check mark next to the 4 questions you want your partner to ask you and trade papers with your partner.

1. Have you ever hidden your identity when you went out of your house?
2. Which individual do you think should be chosen as Time Magazine's Person of the Year?.
3. How do you respond to all the requests for interviews and autographs?
4. Do you think you have reached your full potential, or do you have other goals for your future?
5. Can you list some evidence that suggests that you are a positive role model for pre-teens and teenagers?
6. Was there anything that you did previously that you can no longer do now that you are famous?
7. Do you have any theories on how you got to be so good at what you do?
8. Some people think that you overreact when things go wrong for you. Do you agree that your reactions are sometimes extreme?

**Day 8: Preparing to Write  
using the target words.**

- 1) Students read a second short text and discuss key concepts
- 2) Teacher carefully models the pre-writing process, including –
  - reviewing writing prompt and *Planning Your Writing* steps
  - incorporating class ideas onto a graphic organizer
- 3) Students talk with partners to generate ideas
- 4) Students work independently to plan their writing and draft the paragraph

**Sample Writing Prompt** [personalizing a bigger issue]:

Crows learned to recognize human faces to help them survive; they needed to know which people were dangerous so they could stay out of their way. The fossil teeth article tells us that animals changed what they ate in order to survive during a period of much colder weather.

Think about a time in your life when a big change happened. (e.g., going to a new school, moving, having a baby brother or sister, learning a new language). Write a paragraph describing what happened in your life, and two things you did to help yourself adapt to the new situation. Conclude the paragraph with a sentence describing how your change helped you to “survive” the new situation.

## Planning Your Writing

A. There are three things you need to know to answer this question. Think about these things on your own before talking with your partner.

1. What change occurred in your life that you would like to write about?
2. How did you adapt? What two things did you do?
3. How did the things you did to adapt help you “survive” the new situation?

B. There are three things you need to discuss with your partner:

1. Tell your partner what change you are going to write about.
2. Explain what two things you did to adapt? How did those things help you “survive” the new situation?

3. Tell your partner which 4 target words you think you will use in your writing.

C. Once you have finished talking with your writing partner, create your topic sentence below and then start filling in your graphic organizer with the ideas you have talked about.

Topic sentence to start your paragraph: (State what change occurred in your life)

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**Topic Sentence:**



**1st thing you did to adapt:**

**A 2<sup>nd</sup> thing you did to adapt:**



**Conclusion:** (How the changes you made helped you “survive.”)

## Day 9: Writing a paragraph

1. Teacher carefully models moving information from graphic organizer to paragraph form, using class sample generated day 8
2. Students write paragraph using target words (3 -- 5)
3. Students revise paragraphs, including a final review using the Writing Checklist.

### Day 9 Writing Checklist

\_\_\_ I used at least 5 target words appropriately.

\_\_\_ I spelled the target words correctly.

\_\_\_ My writing answers the Writing Prompt question.

\_\_\_ My paragraph makes sense to me.

\_\_\_ My paragraph begins with a topic sentence.

\_\_\_ I used transition words to make my paragraph flow smoothly.

\_\_\_ My paragraph ends with a good conclusion.

\_\_\_ This is my best effort.