# THE LINCS STRATEGY TRAINING GUIDE

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## LINCS Strategy Overhead Sequence and Transparency Masters

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- OH #2: The Package of LINCS Memory Devices
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## THE LINCS STRATEGY

## **Pertinent Setting Demand:**

Students' success in mainstream content classes depends on their ability to:

understand what they hear and read,

- speak about the content, and
- answer test questions about the content.

## **Purposes of This Strategy:**

■ To make students active in learning the basic vocabulary needed to acquire and express content.

■ To enable students to use a package of memory strategies for learning vocabulary.

■ To enable students to use a self-test process to master new vocabulary.

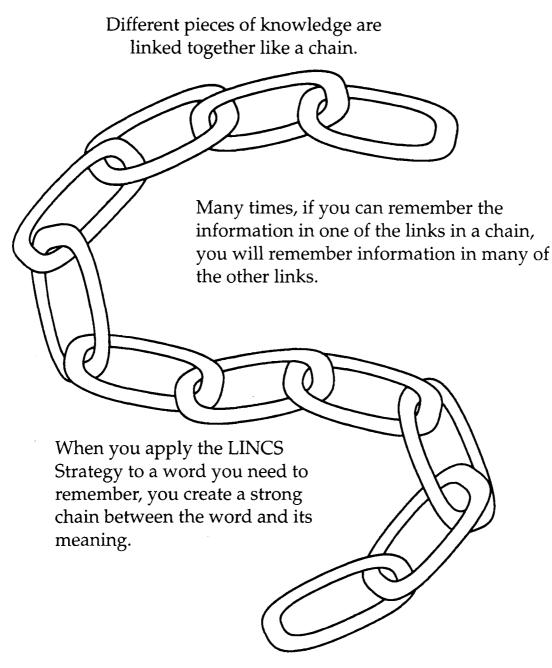
## THE PACKAGE OF LINCS MEMORY DEVICES

IMAGERY ("LINCing Pictures")

KEY WORDS ("Reminding Words")

STORIES ("LINCing Stories")

## CHAIN ANALOGY



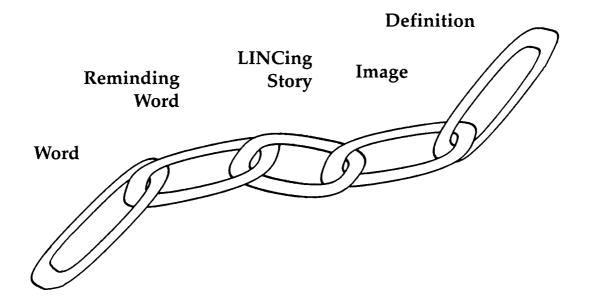
The stronger the links between pieces of information, the easier you can remember them. The weaker the links, the more difficulty you'll have remembering them.

## AN OVERVIEW OF THE LINCS STRATEGY

- Step 1: List the parts
- Step 2: Indicate a Reminding Word
- Step 3: Note a LINCing Story
- Step 4: Construct a LINCing Picture

# Step 5: Self-test

## THE LINCS MEMORY CHAIN



Using the LINCS Strategy transforms a potentially weak link between a word and its definition into a chain of very strong links.

## RATIONALES BEHIND THE LINCS STRATEGY

■ Students often exhibit deficits in the area of vocabulary learning. This strategy enables them to become active vocabulary learners.

■ Students often exhibit memory deficits. This strategy gives them a package of memory devices to aid their memories.

Students often do not connect new learning to current knowledge. This strategy facilitates their memories by making these connections.

Students often do poorly on tests where the mastery of vocabulary is emphasized. This strategy enables students to perform well on such tests.

## LINCS STRATEGY RESULTS

TABLE 1: Mean Percentage Correct on Social Studies Vocabulary Tests*				
	<b>Test 1</b> (Before LINCS)	<b>Test 2</b> (After LINCS taught in Class A)		
LD students in Class A	53%	77%		
NLD students in Class A	84%	92%		
All students in Class B	86%	85%		

\* These results are by M. Wedel, D.D. Deshler, J.B. Schumaker, & E.S. Ellis, in prep., *Effects of Instruction of a Vocabulary Strategy in a Mainstream Class*, Lawrence, KS: Center for Research in Learning. Some of the LD students in this study received additional instructional time outside of the mainstream class when they needed it to complete the practice activities.

## SELECTING STUDENTS FOR THE LINCS STRATEGY

Students who are required to master new vocabulary.

Students who take tests on which definitions are emphasized.

Students who take tests on which the meaning or importance of items are emphasized.

## LINCS STRATEGY MANUAL

### Introduction

## **Instructional Stages**

Stage 1: Pretest
Stage 2: Describe
Stage 3: Model
Stage 4: Verbal Practice
Stage 5: Controlled Practice & Feedback
Stage 6: Advanced Practice & Feedback
Stage 7: Posttest & Make Commitments
Stage 8: Generalization

Appendix A: Quick-Start Reference Guide Appendix B: Progress Charts Appendix C: Cue Cards Appendix D: Student Materials Appendix E: Modeling Script Appendix F: Example LINCS Devices

## LINCS STRATEGY STUDENT FOLDER CONTENTS

Front Cover: Progress Chart

Back Cover: Envelope

**Contents:** 

Cue Cards Pretest Controlled Practice (Envelope) Advanced Practice (Envelope) Posttest Generalization (Envelope)

## PRETEST WORD LIST

steenbok	small prehistoric deer-like animal who lived in Africa
scandium	rare mineral found in upper-most regions of the northern hemisphere
pinna	type of feather from a bird's wing
recreant	unfaithful to a cause or pledge
toman	a Persian gold coin of varying value
landau	a four-wheeled carriage with a top divided into two sections
morganatic	marriage between a member of a royal family and a person of lower social rank
melton	a heavy smooth fabric made of wool
fellmonger	a person who removes hair from hides in order to make leather
incondite	something that is badly put together

## LINCS PRETEST

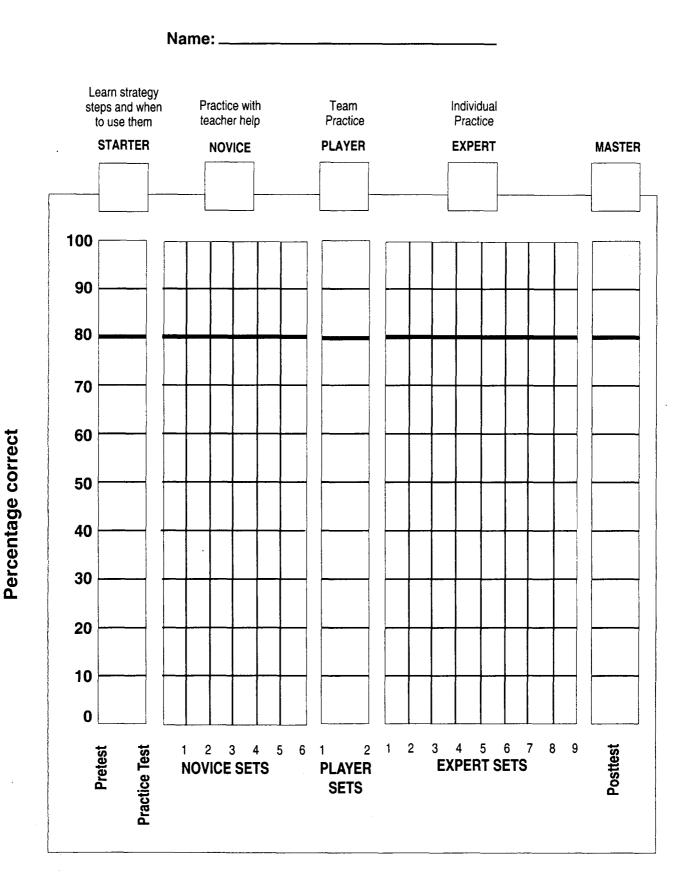
Part 1 Instructions: Write the definitions for the following words.

1. landau	
2. scandium	
3. fellmonger	
4. pinna	
5. toman	

# Part 2 Instructions: Identify the words for the following definitions.

6. Something poorly made:	
7. Unfaithful to a promise:	
8. Material made of wool:	
9. Very small animal that once lived in Africa:	
10. When a princess marries a common worker:	5

## LINCS PROGRESS CHART



The Vocabulary Strategy Trainer's Guide, revised edition, 2000

OH #13

## AN EFFECTIVE LEARNING STRATEGY

A plan for learning that includes "thinking smart" and using a powerful set of thinking tactics

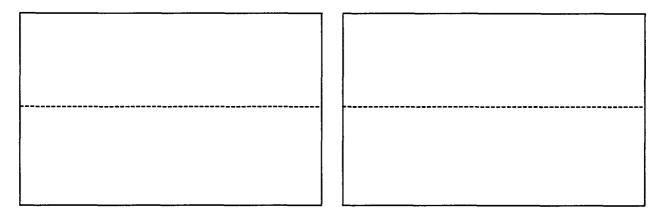
## **Example:**

Using the words "CAME FAR" to remember the names of the countries that fought with the United States during World War II:

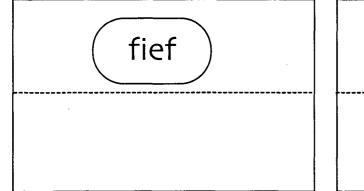
# Canada Australia Mexico England France America Russia

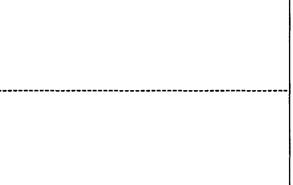
## **CREATING LINCS STUDY CARDS**

1. Take an index card and divide both sides in half by drawing lines across the middle of both sides.

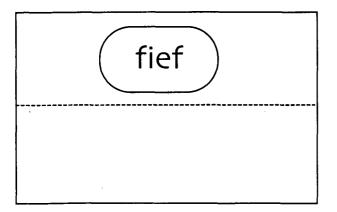


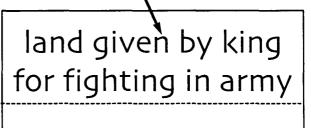
2. Write the word to be learned on the top half of one side. Then circle it.





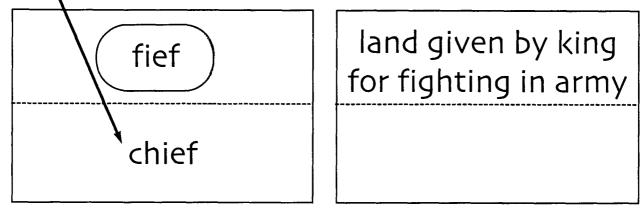
3. Write the parts of the definition you need to remember on the top of the other side.



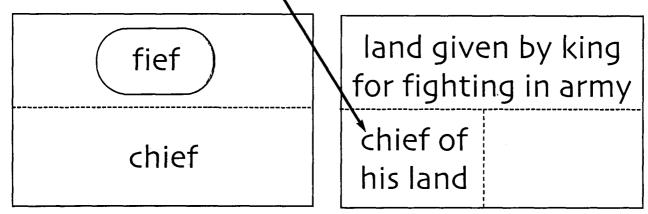


## CREATING LINCS STUDY CARDS (continued)

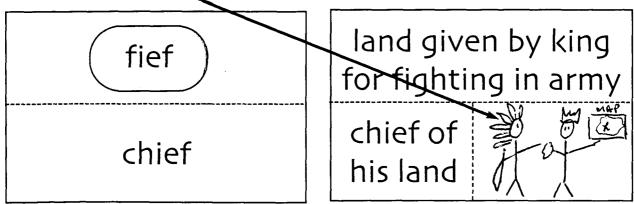
4. Write the Reminding Word on the bottom half of the first side.



5. Write the LINCing Story on the bottom half of the second side.



5. Draw the LINCing Picture on the bottom half of the second side.



## **CHARACTERISTICS OF STRATEGIC LEARNERS**

## Who they are:

They are active learners.

- They think carefully about what they are learning.
- They understand information better.
- They learn things easier.They learn more information.
- They remember better what they have studied.

## What they do:

- They set goals and work toward them.
- They ask questions to ensure understanding.
- They change and manipulate information to make understanding and remembering easier.
- They spend less time studying.
- They use effective strategies for learning and expressing information.

# ALL ABOUT THE LINCS STRATEGY

### A strategy for remembering the meaning of new words

## <u>ALWAYS</u>

■ Helps you remember the meaning of a new word.

■ Focuses your attention on the parts of the definition you need to remember.

■ Uses knowledge you already have to help you learn new knowledge (learning by association).

■ Involves testing yourself to check whether you can recall the meaning of the new word.

## **SOMETIMES**

■ Helps you remember the *meaning* of some words in a list of related words.

■ Is easy to apply to some words; is difficult to apply to other words.

■ Involves leaving out some steps because they are not needed.

### <u>NEVER</u>

■ Is used to memorize a series of items in a list or steps in a process.

■ Is used to memorize a passage or a poem.

■ Is used when you already know what the word means.

■ Is used when a different strategy is better for memorizing a particular word.

## Use LINCS to remember things like:

■ The *aorta* is the major artery taking blood out of the heart (*science*).

■ *Herbert Hoover* was President of the United States at the beginning of the Great Depression (*history*).

■ Onomatopoeia is a device in poetry that names a sound that sounds like its name (e.g., throb) (language arts).

■ A *preene valve* controls air intake in a carburetor (*vocational*).

## Don't use LINCS to remember things like:

■ The heart circulates blood throughout the body. (*Don't use the strategy when information is already known.*)

The five key events that started the Great Depression. (Don't use the strategy to memorize lists.)

■ Lines or phrases of a poem. (Don't use the strategy to memorize passages or poems.)

■ The steps to rebuilding a carburetor. (*Don't use the strategy to memorize the steps in a process.*)

## **STEP 1**

# List the parts

- List the word on the top half of the front of a study card.
- List the most important parts of the definition on the top half of the back of the study card.

## STEP 2

# Indicate a Reminding Word

- Think of a familiar word that sounds like the new word, or part of the new word.
- Write this word on the bottom half of the front of the study card.

## AN EFFECTIVE REMINDING WORD

An effective Reminding Word is a word that sounds similar to the new word and is used to remind you of the meaning of the new word.

### An Effective Reminding Word

#### **ALWAYS**

Sounds like part or all

Has a meaning that

Helps you remember

you already know.

what the new word

means.

of the new word.

 $\blacksquare$  Is a *real* word.

#### SOMETIMES

Sounds like the beginning of the new word.

■ Sounds like the *end* of the new word.

Rhymes with the new word or sounds like almost all of the new word.

Has a meaning that is very similar to the new word's meaning

Can be two or more words that sound like the new word.

#### NEVER

Sounds completely different from the new word.

Is a nonsense word.

Has a meaning that you don't know.

## **Examples and Nonexamples**

#### **EXAMPLES**

#### **EXAMPLES**

chief

servant pair of fins

shivaree paramecium crinoline

New word

EXAMPLE shiver parachute crinkle

New word
flourite
marsupium
fief
serf
paraffin

EXAMPLE floor opium

#### NONEXAMPLES

NONEXAMPLE NEW WORD shivaree paramecium

crinoline

celebration parapuse

crinium

## **STEP 3**

# Note a LINCing Story

- Make up a short story about the meaning of the new word that includes the Reminding Word.
- Write this story in the bottom left corner of the back of the study card.

## AN EFFECTIVE LINCING STORY

An effective LINCing Story is short and simple and helps you take advantage of what you already know by associating the meaning of the Reminding Word with the meaning of the new word.

#### An Effective LINCing Story **ALWAYS** SOMETIMES NEVER ■ Includes the ■ Includes *both* the Includes only the new Reminding Word or Reminding Word and word. some form of the the new word. ■ Is so complex that it Reminding Word. ■ Is funny and/or takes a lot of mental Links the Reminding bizarre. energy to remember it. Word to the meaning of ■ Is long like a the new word. paragraph. ■ Is short and simple. ■ Includes words you don't understand.

#### **EXAMPLES**

FLOURITE: a purple mineral used to make steel hard. Reminding Word: FLOOR. LINCing Story: "My knee turned purple when it hit the hard, steel floor." (*Story helps you think of steel and the color purple.*)

**DECREE: to make a decision and force it on others.** Reminding Word: DECIDE. LINCing Story: "The dictator decided to force everyone to pay higher taxes." (*Story helps you think of a decision being forced on others.*)

SHIVAREE: a noisy song sung to a newly married couple. Reminding word: SHIVER. LINCing story: "The married couple shivered when the guests sang the shivaree outside their window" (*Story reminds you of both a song and of a married couple.*)

### NONEXAMPLES

FLOURITE: a purple mineral used to make steel hard. Reminding Word: FLOOR. LINCing Story: "The floor was messy." (Story does not help you think of steel or the color purple.)

**DECREE: to make a decision and force it on others.** Reminding Word: DECIDE. LINCing Story: "He decided to go to town." (Story does not help you think of forcing a decision on others.)

SHIVAREE: a noisy song sung to a newly married couple. Reminding word: SHIVER. LINCing story: "They shivered." (Story does not help you think about a song or of a married couple.)

## **STEP 4**

# Construct a LINCing Picture

- Create an image in your mind of the definition and the LINCing Story.
- Describe the image to yourself.
- Draw a simple picture in the bottom right corner on the back of the card that will remind you of your image.

## **STEP 5**

# Self-test

## Self-test forwards:

- 1. Say the new word.
- 2. Say the Reminding Word.
- 3. Think of the LINCing Story.
- 4. Think of the image.
- 5. Say the meaning of the new word.
- 6. Check to see if you're correct.

## Self-test backwards:

- 1. Say the meaning of the new word.
- 2. Think of the image.
- 3. Think of the LINCing Story.
- 4. Think of the Reminding Word.
- 5. Say the new word.
- 6. Check to see if you're correct.

# SIMILARITIES BETWEEN A PLAY IN A BASKETBALL GAME AND THE LINCS STRATEGY

BASKETBALL PLAY		Shared Characteristics		LINCS Strategy
It is related to mastery over the other team and getting a high score in the game.		Its use is related to reaching a goal.	-	It is related to mastery over the information and getting a high score on tests.
It's one of many plays necessary to win the basketball game.		It's part of a total package.		It's one of many tactics used to prepare for scoring well on a test.
It helps you put together some familiar moves in a new order.		It uses what you know in a new way.		It involves using words and ideas you already know in a new way.
Picturing how the play looks as it takes place helps you remember what to do.	>	It involves using imagery.		Picturing what the word means helps you remember what it means.
To run the play well requires energy and effort.	>	It requires energy and effort.	◄	To use the strategy well requires energy and effort.
It has to be practiced many times before it's ready to be used in a real game.	<b>_</b>	THROUGH PRACTICE, ITS USE BECOMES PERFECTED.		It has to be practiced many times before it's ready to be used for a real test.

# HOW LEARNING THE LINCS STRATEGY IS LIKE LEARNING A NEW BASKETBALL PLAY

LEARNING A BASKETBALL PLAY	Shared Characteristics		LEARNING THE LINCS STRATEGY
Coach draws the play on chalkboard, tells players what is supposed to happen, & the advantages of using the play.	(DESCRIBE STAGE) AN EXPERT EXPLAINS WHAT TO DO.	◄	Teacher provides students with a copy of the strategy steps, tells what happens in each step, & the advantages of using them.
Coach demonstrates key parts of the play.	<ul> <li>( MODEL STAGE)</li> <li>MODELING BY AN EXPERT.</li> </ul>	•	Teacher demonstrates what to do for each step.
Players discuss the play and then memorize what they are supposed to do.	→ (VERBAL PRACTICE) UNDERSTAND & MEMORIZE.	-	Students explain the strategy steps to each other and then memorize them.
On the practice court, players walk through the play in slow motion; coach helps players do it correctly.	← (Controlled Practice) Learning how it feels to do it in simple situations.	-	Students practice performing the strategy on easy words; teacher helps them do it correctly.
Players practice on the court against other team members to see what it's going to be like in a real game; coach watches & gives feedback.	<ul> <li>(Advanced Practice)</li> <li>Learning how to do it in situations similar to the real thing.</li> </ul>	•	Students perform the strategy on real vocabulary words from school & take practice quizzes; teacher gives feedback.
Players run the play in real games.	→ (GENERALIZATION) Using it on real thing.	-	Students use the strategy to study for real tests.
Players watch films of the play after the game; change it or practice the play if necessary; create new plays by changing play in various ways.	► (GENERALIZATION) EVALUATING & ADAPTING		Students check to see how well the strategy helped; change it or practice it more if necessary; create new strategies based on this one.

## LOST CIVILIZATION WORD LIST

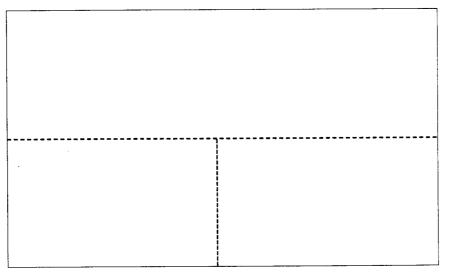
- **zibble** food made from grain and honey
- tamar a wild horse
- kiko shoes decorated with beads
- alster cooked fish
- **crosstex** a necklace worn to ward off evil spirits
- **lamber** a religious holiday
- **zemac** a tribal leader
- **bayshoo** a medicine man
- **dectrum** clay pottery used for eating and cooking
- **motosa** a spear-like weapon used for hunting

## PRACTICE STUDY CARD

### Front of the Card

		1
		1
		1
		I
		1
		1
		1

### Back of the Card



## NOVICE SET

- **rasple** a medicine made from wild berries
- **chower** a drum used in ceremonies
- velop to build a fire
- woffen a buffalo
- **shoff** a green plant with magical healing powers

## **PLAYER SET**

appeasement	to give up something or make concessions to avoid a war
coup	a sudden overthrow or takeover of a country's government
abdicate	to step down or resign as leader
excommunicate	to be expelled from a church
theocracy	a country's government under the rule of religious leaders

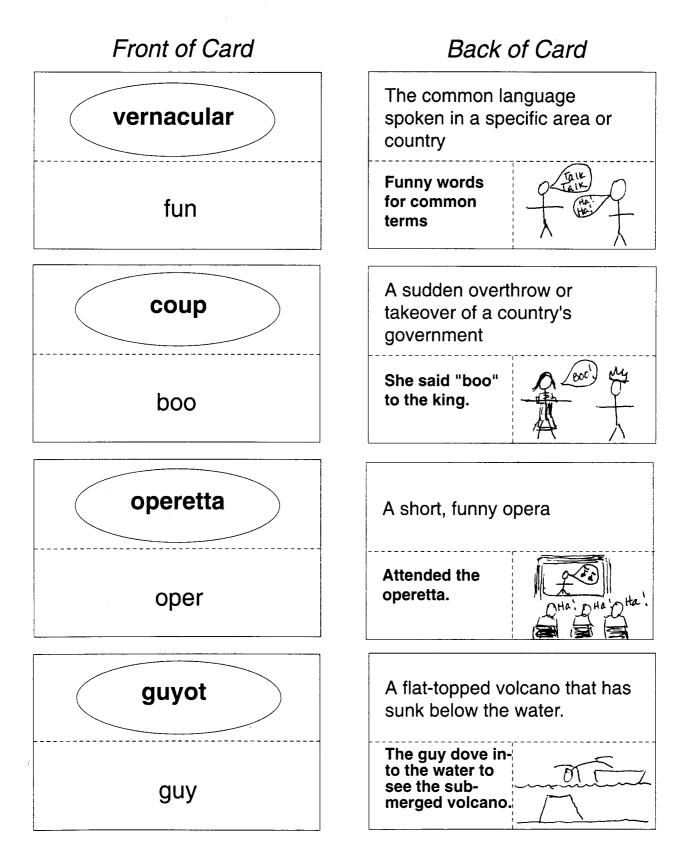
## EXPERT SET

rhubarb	a plant whose reddish stalks are used in making pies; the stalks taste sour
thistle	a prickly plant that has red or purple flowers; the flowers look furry
naught	zero or nothing
philodendron	a type of plant with shiny, heart shaped leaves; usually a house plant, but grows wild in tropical areas
narcissus	a type of plant that has long, thin leaves and white or yellow flowers; grown from bulbs

## WORKSHOP EXERCISE

A British fourpence piece used from the 14th to 17th century
skin diseases of humans and animals that result in shedding of flaky scales
having a woody stem or base
a yellowish brown to red mineral
having a mantle as in mollusks
A speech sound produced by stopping the breath and releasing it at articulation

## SCORING



## **EXAMPLE SCORE SHEET**

Name	 
Date	 ····

Card #1	Card #2	Card #3	Card #4
Word:	Word:	Word:	Word:
Def.:	Def.:	Def.:	Def.:
 Rem. Word:	Rem. Word:	Rem. Word:	Rem. Word:
Story:	Story:	Story:	Story:
Picture:	Picture:	Picture:	Picture:
Card #5	Card #6	Card #7	Card #8
Word:	Word:	Word:	Word:
Def.:	Def.:	Def.:	Def.:
Rem. Word:	Rem. Word:	Rem. Word:	Rem. Word:
Story:	Story:	Story:	Story:
Picture:	Picture:	Picture:	Picture:
Card #9	Card #10	Card #11	Card #12
Word:	Word:	Word:	Word:
Def.:	Def.:	Def.:	Def.:
Rem. Word:	Rem. Word:	Rem. Word:	Rem. Word:
Story:	Story:	Story:	Story:
Picture:	Picture:	Picture:	Picture:
Card #13	Card #14	Card #15	Card #16
Word:	Word:	Word:	Word:
Def.:	Def.:	Def.:	Def.:
 Rem. Word:	Rem. Word:	Rem. Word:	Rem. Word:
Story:	Story:	Story:	Story:
Picture:	Picture:	Picture:	Picture:

# CURRICULUM-BASED ASSESSMENT Scoring Criteria for LINCS Devices

# CARD

- **Circled**: new word has been circled
- Parts: parts of definition are listed; not entire definition
- **Reminding** Word: noted on card
- **Story:** key words of LINCing Story noted on card

## **REMINDING WORD**

- **Sounds** like new word
- Meaning is familiar to learner
- **Real** word

# LINCing STORY

- **Reminding Word** contained in story
- Short and simple story
- Links meaning of key parts of definition

## LINCing PICTURE

- Contains connection to definition
- Contains connection to **Reminding Word** and **Lincing Story**.

Card C□ P□ R□ S□	LINCing S RW S/S LM	Story	
Rem. Word S□ M□ R□	LINCing F D RW/LS	Picture	

## **CURRICULUM-BASED ASSESSMENT** Scoring Criteria for Student Performance

- Students can generate definition when given the new word.
- Students can generate new word when given definition.
- Students can explain how
   Reminding Word helps them
   remember the LINCing Story.
- Students can explain how their LINCing Story helps them remember definition of new word.

## Front of Study Card Back of Study Card

