



# WHALIEN MATCH

## Teacher Manual

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# Goals/Objectives

## English Language Arts Standard(s)

Phonological Awareness: students will be able to demonstrate understanding of spoken words, syllables, and sounds (phonemes)

## Language/ Reading Skills

Students will be able to...

- discriminate between sounds and to correctly identify sounds and sound sequences (listening accuracy)
- understand and recall the order of sounds and words (auditory word recognition)
- recognize and manipulate units of sound in spoken language such as words, syllables, onset and rime, and phonemes (phonological/phonemic awareness)

## Cognitive Skills

Students will be able to...

- hold a sound sequence in working memory while recalling visual symbol-sound associations from long-term memory (memory)
- focus and sustain attention (attention)
- process tonal sweeps (processing)

## Social-Emotional/ Executive Function Skills

Students will be able to...

- selectively focus and sustain attention on a lesson or an activity
- enhance student agency through retention strategy building
- increase confidence in memory capacity training
- regulate emotional responses (e.g. excitement or frustration)

### Icon Key



Audio



Download



English Learner



Quick Check



Settings



Video

## Exercise Screen



### 1 Menu

Shows:

- Time Spent / Time Scheduled for the exercise.
- Network connection status.
- Exit: Returns student to the Assignments dashboard.
- Continue: Returns student to the exercise.

### 2 Time

Fills in from left to right to show the amount of time spent vs. the time scheduled for the exercise.

### 3 Click Counter

Shows the number of clicks allowed to find and confirm all of the matches. Any remaining clicks are awarded as bonus points.

### 4 Points

Shows total points awarded across all of a day's sessions.

- Bonus points:
  - Remaining "clicks" awarded for each screen cleared in fewer than the maximum number of clicks.
  - 10 points for each large screen cleared after the periscope creature has reached the ship (starting after 50% completion).
  - 30 points for each speech processing level completed.

### 5 Progress Meter

Tracks and celebrates every 10% of exercise content completion. Shows actual percent complete for the exercise.

### 6 Answer Buttons

Plays the sound of a syllable/word; if clicking another object plays the same syllable/word, clicking the first object again to confirm the match will clear the objects from the screen.

### 7 Highest Streak

Shows the highest number of consecutive correct screens passed in this session.

### 8 Feeder Meter


Tracks and celebrates every 1% of exercise content completion.


# Exercise Overview

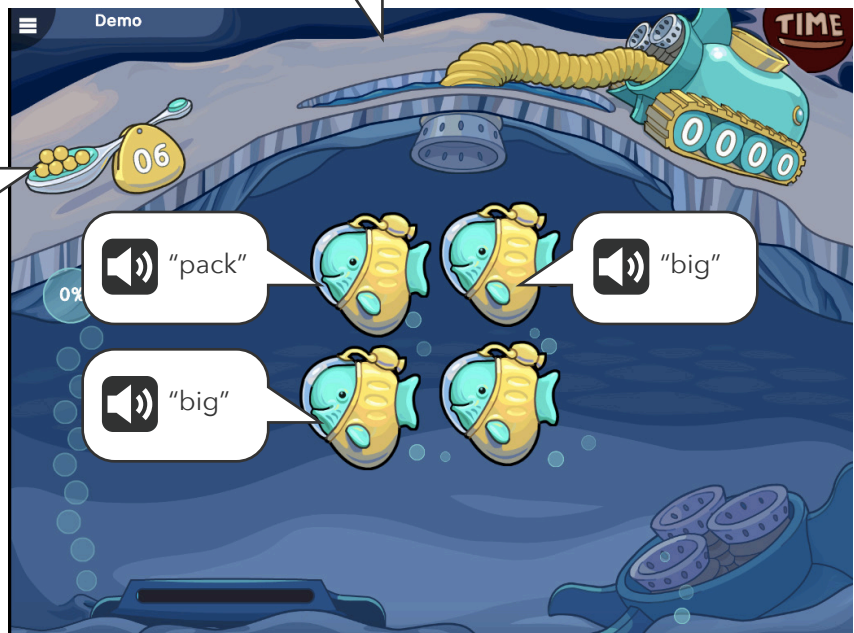
## Task

Whalien Match presents a pod of shipwrecked aliens (or Whalians) with 4, 8, or 16 identical objects organized on the screen in a grid pattern. Students use their listening and memory skills as they click objects, listen to each object's syllable/word, and then match them together to clear the screen using the fewest number of clicks and within the maximum number of clicks allowed.

1. Click an object to hear the syllable/word associated with that object.
2. Click another object to try to find the object with the matching syllable/word. If it plays the same syllable/word as the first object, you have found a match.
3. Click the first object again to confirm the match. If it is a match, the objects are removed. If it is not a match, the objects remain on the screen.

 First, click a Whalien and listen to the sound. Then click another Whalien and listen to the sound. When you find a match, click again on the object that first played the sound you heard.

 Look at the counter. Each time you click an object, the number goes down by one. To advance in Whalien Match, you must make all of the matches before the counter goes down to zero.



# Exercise Overview

## Content

### Progression

As students work through the exercise, it changes in a few ways:

- it begins with speech sounds that have been digitally altered; as students progress through the exercise it decreases the processing level, and eventually presents the the syllables/words using natural speech
- the syllables/words to match become more similar
- the screen pattern increases in size: 4, 8, and 16 objects

Introductory Set CVC Words
pack
big
tug
dip
gap
pit
cut
tick

### Introductory Level

Students begin by working through an introductory level that provides instructions, modeling, and supports (audio feedback and/or visual cues). It uses speech processing level 1, with a subset of highly differentiated words from the standard levels, and all three screen patterns. This level helps students learn the task and determine an effective strategy for making matches.

### Standard Levels

Syllables/words differ only by initial and/or final consonants. All four sets or syllables/words are repeated in all 5 speech processing levels and in increasingly larger screen sizes.

Set 1 CVC Words	Set 2 CVC Words	Set 3 CVC Words	Set 4 CV Syllables
big	buck	back	ba
bit	bud	bag	cha
dig	but	bat	da
dip	cup	cab	ga
kick	cut	cap	ka
kid	duck	cat	la
kit	dug	gap	pa
pick	pub	pack	ra
pig	pup	pat	sa
pit	tub	tack	sha
tick	tuck	tag	ta
tip	tug	tap	za

# Exercise Overview

## Targeted Practice

This exercise uses built-in, responsive technology to detect when a student is struggling and administer targeted, inline instruction—right when the student needs it—without any external resources or assistance required. This helps reduce frustration as it quickly gets the student back on track, so they can continue making progress.

Whalien Match provides a variety of targeted interventions, such as: coaching, strategy walk-throughs and modeling, and motivational comments. The student's progression in the exercise stops temporarily while working through an intervention, then resumes when the student returns to the regular exercise content.

One type of intervention, Alternate Stimuli, allows students to learn how to complete the task and discover strategies for clearing the screens using number names instead of syllables/words. It should be easier for students to distinguish between familiar number names and remember them. Students are provided immediate feedback as to whether their answer is correct or incorrect.



## Acoustically Modified Speech



Have you ever worked with a student who had modifications for additional think time, extra wait time, or for teachers to speak more slowly? All of these modifications provide the student with extra time to make sense of information, also known as processing time. For students who struggle with processing speed, and for those learning a new language, slowing down the rate of speech and emphasizing specific sounds can be very beneficial to develop accurate phonological representations, while increasing comprehension.

“Why does everything sound so strange?”

Fast ForWord’s acoustically modified speech technology (sometimes referred to as “glasses for the ears”) slows and emphasizes speech sounds so that students can hear all sounds in a word. This technology can even stretch out sounds that are physically impossible for human speakers to stretch on their own.

Some speech sounds, such as the /b/ sound in the word “bat,” have very fast transitional elements. When we say them aloud, these elements are easy to miss, but slowing them and emphasizing them (by presenting them at a higher volume) helps the brain to hear and respond to them more quickly.

The modified words and syllables in the Fast ForWord exercises may sound strange or mechanical to those who process sounds quickly. But for students who need a little extra time, the modified sounds and words will be easier to hear than natural speech. As students progress, the stretching and emphasis are reduced, pushing the brain to process at faster and faster rates until it can process natural speech.

-  Why Does Everything Sound So Strange? (Student) in [Student & Teacher Resources](#)
-  Why Fast ForWord Sounds the Way it Does (Teacher) in [Student & Teacher Resources](#)

## Did you know?

In Whalien Match students match objects representing different, but similar sounding syllables/words together. Why did we choose the syllables and words used in this exercise? Whalien Match is designed to challenge the brain to match syllables that represent common English language sound combinations that are very similar to one another—like *big*, *dig*, and *pig*. In order to do this, the brain has to be able to separate individual sounds like /b/, /i/, and /g/, that make up the word *big*.

Whalien Match exercises students’ auditory processing by helping their brains improve their ability to distinguish these individual sounds and differentiate them from one another in closely related combinations. The individual sounds in *big*, *dig*, and *pig* vary by only their initial consonant sounds—/b/, /d/, and /p/—but the words have entirely different things. Confusing similar sounding words impedes comprehension and can be very embarrassing.

Being able to hear and absorb information clearly is essential for rapid word recognition, helping the brain to accurately store and quickly recall content. The more accurately and precisely the sounds for each word are received and transmitted in the first place, the better able the brain will be able to record it and relate it to other experiences. When the brain makes an attempt to recall the information about each different word—*big*, *dig*, and *pig*—a clear image of each word, based on its distinct sounds, meanings, and other associations will enable the brain to access the information faster and more easily. The increased speed in word recognition in turn improves the ability to remember the words practiced and make generalizations towards other similar words that might be easily confused or misread.

# Facilitate and Encourage

## Introduce

### Engage

To introduce the exercise to your students, you can start by explaining to students that they will be playing a memory matching game with sounds. Say: *Have you ever been in a funny or embarrassing situation because you misheard a word? It happens to all of us—you've been singing along to a song in front of your friends when suddenly everyone looks at you funny and shakes their heads—you've got the words wrong. What's the funniest thing you know you misheard?* Ask students to share some of their stories or share some of your own examples of when this has happened to you. Say: *The Whalien Match exercise encourages good listening and memory skills to locate and pair matching sounds in syllables and words that sound very similar to one another.*

### Demo

1. Say: *Today, we're going to practice clicking on objects, listening to the syllable/word they make, and then matching them together to clear a screen. Together, we'll work on an exercise called Whalien Match. I'll get us started, and then I'd like for you to try.*
2. Project the Whalien Match Introduction (English or Spanish) demo.
3. Follow along with the demo, which explains how the exercise works.
4. Click the objects that match:
  - Correct answer: a "ding" plays and a pair of nets pop out from the edge of the screen and drag the matching objects off screen
  - Incorrect answer: no sound plays and the objects remain on the screen
5. Encourage students to share their strategies for working through the screen and remembering what they hear.
6. There are no keyboard shortcuts for this exercise.

Direct students to log in and work individually on the Whalien Match Demo for approximately 10 minutes. This time period mimics the timing of the exercise once it's assigned. Debrief with students to ensure they understand the task and objective of the exercise. Ask: *What did you notice?* Have students share anything that they have questions about.



Whalien Match includes instructional audio for the exercise introduction and instructions. By default, these are presented in English. You can, however, select Spanish instructions for all, some, or individual students on the Manage page in mySciLEARN.



# Facilitate and Encourage

## Monitor Student Progress

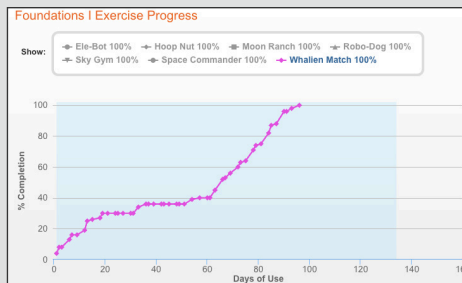
Review Whalien Match reports regularly to monitor student progress. Use the data to determine which students are succeeding and which students might be struggling to make progress.

### Where to look...

### What to look for... what it means

#### PROGRESS: Foundations I Exercise Progress - Whalien Match

The colored line shows student progress and their percent complete. Each dot indicates a day the student worked on the exercise.



#### Is the line going up?

The student is completing content accurately and making progress.

#### Is the line flat across several dots?

The student may be struggling and you need to find out why.

#### Are there long lapses between dots?

The student may be skipping this exercise.

#### USAGE: Usage Details - Schedule

Schedule		Minutes/Questions			Start Time		Time/Exercise		
Days of Use	Date	Ele-Bot	Hoop Nut	Moon Ranch	Robo-Dog	Sky Gym	Space Commander	Whalien Match	
122	07/03/2020		●	○					
121	07/02/2020			○					
120	07/01/2020		●	○					
119	06/30/2020	●	●						
118	06/29/2020			●					

**Schedule**

See if the student has met their daily schedule, and check what's planned for the next few days:

- Time completed
- Time not completed
- Exercise Skipped
- Planned for day

[More help >](#)

#### Do you see half-filled gray circles?

The student is working on this exercise, but not meeting the scheduled time. Make sure that they have time to complete their daily schedule. If fatigue is an issue, add some breaks to their schedule.

#### Do you see red circles?

The student is skipping this exercise. Provide support to help them re-engage.

#### USAGE: Usage Details - Minutes/Questions

Schedule		Minutes/Questions				Start Time				Time/Exercise					
Days of Use	Date	Ele-Bot		Hoop Nut		Moon Ranch		Robo-Dog		Sky Gym		Space Commander		Whalien Match	
		Min	Ques	Min	Ques	Min	Ques	Min	Ques	Min	Ques	Min	Ques	Min	Ques
56	04/13/2020	18	17	14	64	-	-	14	96	14	82	-	-	-	-
55	04/12/2020	-	-	-	-	6	41	-	-	-	-	0	-	0	-
54	04/09/2020	-	-	-	-	-	-	10	53	9	52	-	-	11	298
53	04/08/2020	12	15	10	26	-	-	-	-	8	53	-	-	-	-
52	04/07/2020	-	-	-	-	8	43	7	28	7	4	7	4	-	-

#### Are many days highlighted in red?

The student is not meeting their daily schedule. Check the Schedule tab in this report to investigate further.

#### Is the student answering fewer questions than usual?

They may be distracted or losing focus. In comparison to their previous activity, a low number of trials to minutes may indicate the student is not applying themselves to the task.

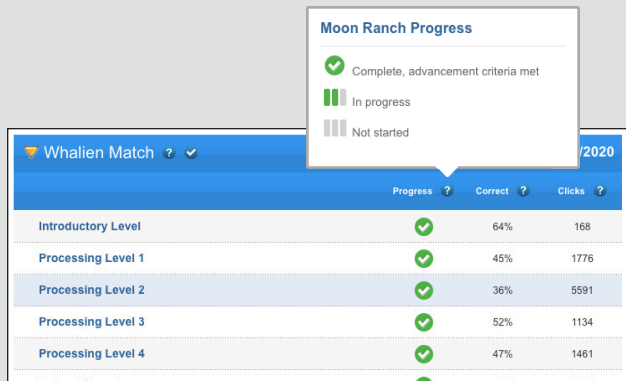
#### Is the student answering more questions than usual?

They may be rushing. In comparison to their previous activity, a high number of questions to minutes may indicate that the student is trying to amass points or progress through the content without actually learning it. Remind them that making progress depends on accuracy, not speed.

# Facilitate and Encourage

## Where to look...

### PROGRESS: Progress Details - Whalien Match Completion Status



### Questions

The minimum number of clicks (questions) varies by level:

- Introductory Level: 78
- Processing Levels & Natural Speech: 480

After completing the Introductory level, students making good progress average 700-1400 clicks in a level.

## What to look for... what it means

### Has the student used too many clicks without passing a level?

Students who need more than 160 clicks to pass the introductory level or more than 1700 clicks to pass a processing level or natural speech may be struggling to approach the task strategically, or they may be having auditory processing and/or memory difficulties. Most students should be able to complete a level in under 100 questions.

See the "Adjust Instruction/Intervene" section in this teacher manual for suggestions on supporting struggling students.



Foundations I Progress Monitoring Chart in [Student & Teacher Resources](#)

# Facilitate and Encourage

## Adjust Instruction/Intervene

### Differentiation Activities

Differentiating instruction requires continually striving to use student progress and usage data to respond to each students' needs in order to maximize learning. The activities below are suggestions to support students who might be struggling with their progress in Whalien Match.



#### **Does the student understand the exercise goal/task?**

Observe the student as they work through the exercise demo to determine where their understanding may be breaking down. Make sure the student clearly understands the task of the exercise. Ask: *Can you tell me what this exercise wants you to do?* If needed, explain how the exercise works. Say: *Click the objects, listen to the sounds, and match them together to clear the screen.*



#### **Can the student repeat the word or sound they are trying to find?**

When the student can hold the word or sound in their working memory it will increase their success with this exercise.



#### **Is the student confused by the speech processing, thinking they should be able to understand words that their ears are not detecting?**

Work with the student to listen for "sounds" vs. "words." Simulate environmental sounds (beep of a horn, moo of a cow, roar of a lion, etc.) and have the student repeat what they hear. The student will almost always be good at this. Go through several examples and then transition to the kinds of sounds students here at the earliest levels of the exercise. For example when the word "cap" is heard at processing level 1, the student will usually hear it as "cowp." At this point ask the learner to repeat the sound they hear 5 times. This gives the student the opportunity to refocus on repetition as a strategy for improving their working memory. Transition the student to working in the demos and have the student repeat the first sound they hear 3 to 5 times before clicking other objects on the screen.

# Facilitate and Encourage



## **Is the student attempting to find matches in a haphazard way?**

The student has a limited number of clicks to find a match. The more they click around randomly looking for a sound match, the more clicks they lose and the less progress they will make. The student needs at least one point remaining once all the matches have been made in order to advance to the next level. Clicking randomly will decrease the number of points more quickly than using a pattern.

Listen with the student and observe them as they complete the task. Guide the student in using the following strategies.

- Teach the student to use a left-to-right, top to bottom strategy. After clicking the first sound, the student should hold that sound in their memory while they go left-to-right seeking the matching sound. Clicking in a pattern can help the student remember the sound for each location on the screen.
- Have the student remember the first sound and then click until they find the matching sound. If the student can't remember the first sound, have the student click the location again to commit it to memory.
- Have the student continually whisper the first sound clicked until they locate the matching sound. When the student finds the match to the sound they are whispering, have them go back and click the original location to complete the match. Repeat this process with the next sound.

# Facilitate and Encourage

## Adjust Instruction/Intervene

### Student Resources

You may decide to use any or all of these monitoring sheets with your students:



Foundations I Streaks & Completion Chart in [Student & Teacher Resources](#)

Explain to students that accuracy is the key to moving through the content in Fast ForWord. Because streaks record the number of correct answers in a row, this chart can help students self-monitor for accuracy. After they complete their exercises for each day, have students record their highest streaks and percent complete in each exercise, then challenge them to exceed those numbers tomorrow. Students will need one copy every 5 days.



Foundations I Completion Chart in [Student & Teacher Resources](#)

Students can self-monitor their progress in each Foundations I exercise by filling in the bar each day with their actual completed percentage. This provides students with an overall view of how much content they've completed compared to how much they have left to do. Students will need one copy.