FLYING FISH
Teacher Manual

Contents

Goals/Objectives

English Language Arts Standard	Students will build high-frequency word recognition and phonics/decoding skills by rapidly matching spoken words to written words.

Language/ Reading Skills	Students will... • identify spoken words and distinguish between similar-sounding words (auditory word recognition) • quickly and automatically read and understand common high-frequency words by sight (high-frequency words) • relate speech sounds to specific letters (phonics) and apply knowledge of letter-sound relationships to the process of sounding out and reading words (decoding)

Cognitive Skills	Students will… • hold a word in working memory while identifying its match within a stream of words (memory) • focus on a word and ignore distractions while monitoring a stream of words that will eventually present the word (attention) • rapidly interpret and integrate auditory and visual information to identify words (processing)

Social-Emotional/ Executive Function Skills	Students will... • enhance selective and sustained auditory and visual attention and vigilance • increase the ability to inhibit impulsive responses • increase confidence in left-to-right visual tracking for word identification • enhance motivation for vocabulary recognition tasks • increase self-regulation

Icon Key

🔊 Audio	⬇ Download	🌐 English Learner	✓ Quick Check	⚙ Settings	▶ Video

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Exercise Screen

1 Menu
Shows:
- Time Spent / Time Scheduled for the exercise.
- Network connection status.
- Exit: Returns student to the Assignments screen.
- Continue: Returns student to the exercise.

2 Time
Bar fills in from left to right to show time spent in the exercise.

3 Number of Streaks (Fish)
A fish flies to the mountain and leaves a fish-print in the snow after the student makes four 3-in-a-row streaks in the session. Up to 12 fish-prints can be earned.

4 Answer Button (Fish)
Presents a possible match for the word.

5 Go Button
Presents a word.

6 Points
Shows total points awarded across all of a day's sessions.
- Correct answers: 3 points for each correct answer.
- Bonus points: 10 points after 12 correct answers.
- High score: Animates when the student surpasses the highest score ever achieved in one session.

7 Current Streak (Fingers)
Counts the current consecutive correct answer. Starts over after 3 correct in a row or an incorrect answer.

8 Progress Meter (Stars)
Tracks and celebrates every 10% of exercise content completion.

Task

In Flying Fish, the fishing pelican presents a target word to the student. A series of fish with words on them fly across the screen. The student must click the fish that matches the target word before it flies off the screen.

The exercise presents each word in 2 different ways:

- Written & Spoken Words: The target word and the possible matches are written and spoken. Students have 2 seconds to click the matching word.

- Written Words: The target word is spoken and the possible matches are written. Students have 1.5 seconds to click the matching word.

Throughout the exercise, the fish fly across the screen from left to right to reinforce the left-to-right reading pattern of the English language.

Speed (Fluency) Round

Periodically, Flying Fish presents a speed round, which gives the student an opportunity to review the material at a faster pace and earn extra points. The student matches spoken to written words as before, but faster; they only have 1 second to click the matching word. The speed round automatically ends after one minute and the student returns to the regular exercise. By requiring students to respond more rapidly while maintaining high accuracy, Flying Fish increases the attention and memory demands of the task.

Content

In Flying Fish, the student works on 6 word lists that include the 200 highest frequency words in the English language. The first word list includes the highest frequency words. As the student progresses, the exercise presents progressively lower frequency words.

Word List 1				
a	can	if	she	we
all	do	in	that	were
an	each	is	the	what
and	for	it	their	when
are	from	not	there	which
as	had	of	they	will
at	have	on	this	with
be	he	one	to	word
but	his	or	use	you
by	how	said	was	your

Word List 2				
about	get	made	other	then
been	go	make	out	these
call	has	many	over	time
come	her	may	part	two
could	him	more	people	up
day	into	my	see	water
did	its	no	so	way
down	like	now	some	who
find	long	number	than	would
first	look	oil	them	write

Word List 3

after	give	me	right	think
also	good	mean	same	three
any	great	most	say	through
around	help	much	sentence	too
back	just	name	set	very
before	know	new	show	want
boy	line	old	small	where
came	little	only	sound	work
follow	live	our	take tell	year
form	man	place	thing	

Word List 4

again	does	letter	put
air	end	men	read
animal	even	move	spell
another	hand	must	such
ask	here	need	try
away	home	off	turn
because	house	page	us
big	kind	picture	well
change	land	play	went
different	large	point	why

Word List 5

always	high	own	those
answer	last	run	thought
between	learn	saw	took
both	left	school	under
every	life	should	until
few	might	something	walk
found	mother	state	while
four	never	still	white
got	once	stop	without
head	open	study	world

Word List 6

against	eat	jump	since
almost	enough	less	soon
am	fact	let	thank
ate	far	please	though
being	fly	pretty	united
black	funny	public	upon
blue	general	ran	war
brown	giving	red	wept
course	himself	ride	yellow
during	however	round	yes

Progression

To master a word list and advance to the next one, the student must pass 90% of the words, presented both ways (Written & Spoken Words, then Written Words). Students who need more practice will repeat lists as needed. After three attempts to pass a given word list, Flying Fish will transition the student to the next list. At the end of the exercise, the student will repeat any word lists that were not previously mastered.

Did you know?

Practice with rapidly identifying high-frequency words promotes sight word recognition, or the ability to rapidly identify and attach meaning to a word. Sight word recognition reduces the need to break the word down into component parts, thereby increasing reading fluency. Flying Fish provides a distinctive vocabulary recognition activity in which a student matches high-frequency words (presented orally and visually, then later presented orally only) to one of a few word options that fly across the screen from left to right.

Flying Fish is unique in that the word presentations and responses require rapid visual discrimination, visual sequencing, and visual-spatial processing. Visual processing is essential for literacy because of the need in reading and writing to recognize and order visual information quickly and accurately.[1] Flying Fish is also unique in that the nature of the activity—a continuous performance task—requires consistent sustained attention (vigilance) as well as response inhibition, and as such also exercises attentional skills. Vigilance or sustained/vigilant attention refers to the ability of individuals to maintain attentional focus and remain alert to stimuli over prolonged periods.[2] Recent research indicates that difficulties with attentional focus, response inhibition, vigilance, and processing speed show statistically direct effects on reading.[3]

1. Adapted from Sight Recognition | Learner Variability Project (digitalpromiseglobal.org); High Frequency Word List | Learner Variability Project (digitalpromiseglobal.org)

2. Warm, J., Finomore, V., Vidulich, M., & Funke, M. (2015). Vigilance: A Perceptual Challenge. In R. Hoffman, P. Hancock, M. Scerbo, R. Parasuraman, & J. Szalma (Eds.), *The Cambridge Handbook of Applied Perception Research* (Cambridge Handbooks in Psychology, pp. 241-283). Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9780511973017.018

3. Rezaei, A., & Jeddi, E. M. (2020). The Contributions of Attentional Control Components, Phonological Awareness, and Working Memory to Reading Ability. *Journal of Psycholinguistic Research*, 49(1), 31-40.

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Introduce

Engage

Select words from the high-frequency sight word list found in this activity. To introduce this exercise to your students, start by saying: Today, we are going to work on identifying common words that we often see, hear, and spell. I am going to say a word. After I say the word, you are going to hold up the word card that matches the word.

1. Say: The word is…*and*. Hold up the card that says *and*. Provide feedback to the whole group.

2. Say: This is the word and. Hold up the word and. Excellent work! Let's practice a few more words together.

3. Follow the same process when presenting each word. For this exercise, provide each student with three different word cards as response options.

After you have reviewed the three chosen words, say: Now, we will practice identifying more sight words in the Flying Fish activity.

Demo

1. Say: Today, we're going to match the word written on the fish with the word the pelican says. Together, we'll work on an exercise called Flying Fish. I'll get us started, and then I'd like for you to try.

2. Project the "Introduction - English or Spanish" demo for Flying Fish.

3. Follow along with the demo, which explains how the exercise works.

   • Click the correct answer.

4. Demo the keyboard shortcuts:

   • Go button = Space bar

   • Answer = Down arrow

Notes

• Speed (Fluency) Round Demo - Say: When the go button turns into a timer, the speed round begins. Work on the exercise as before, but faster. You can earn points by getting as many correct answers as possible in the time allowed.

• Content Demo - Say: At first, Flying Fish says and shows all the words in the exercise. After some practice, the exercise only pronounces the target words and only displays the responses. Also, the fish will fly faster across the screen.

Direct students to log in and work individually on the Flying Fish 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.

Flying Fish 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.
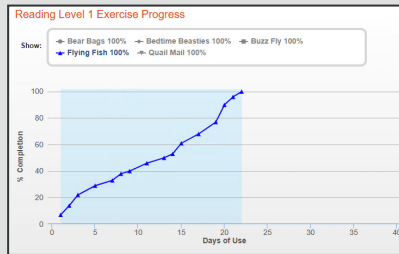
Monitor Student Progress

Review Flying Fish 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: Reading Readiness Exercise Progress - Flying Fish

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

Reading Level 1 Exercise Progress

Show: Bear Bags 100% — Bedtime Beasties 100% — Buzz Fly 100%
Flying Fish 100% — Quail Mail 100%

(chart: % Completion vs Days of Use)

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

Usage Details ?

| Schedule | Minutes/Questions | Start Time | Total Minutes |

Days of Use	Date	Bear Bags	Bedtime Beasties	Buzz Fly	Flying Fish	Quail Mail
22	04/06/2021				●	
21	04/05/2021	●			●	
20	04/01/2021				●	●
19	03/30/2021				●	●
18	03/29/2021	●				
17	03/26/2021	●			●	

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

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

Usage Details ?

| Schedule | Minutes/Questions | Start Time | Total Minutes |

Days of Use	Date	Bear Bags Min	Bear Bags Ques	Bedtime Beasties Min	Bedtime Beasties Ques	Buzz Fly Min	Buzz Fly Ques	Flying Fish Min	Flying Fish Ques	Quail Mail Min	Quail Mail Ques
22	04/06/2021	-	-	-	-	-	-	30	33	-	-
21	04/05/2021	15	111	-	-	-	-	15	65	-	-
20	04/01/2021	-	-	-	-	-	-	15	75	15	34
19	03/30/2021	-	-	-	-	-	-	15	69	15	124
18	03/29/2021	15	130	-	-	15	19	-	-	-	-
17	03/26/2021	9	88	-	-	10	22	11	46	-	-
16	03/25/2021	-	-	-	-	15	29	-	-	15	156
15	03/22/2021	15	136	-	-	-	-	15	64	-	-
14	03/18/2021	-	-	-	-	11	24	11	41	8	84
13	03/16/2021	-	-	10	2	-	-	10	28	10	76

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 questions 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.

Where to look...

PROGRESS: Progress Details - Flying Fish Progress

Flying Fish Progress

✅ Complete, advancement criteria met

▮▮▮ In progress

▮▮▮ Not started

▮▮▮ Advancement criteria not met*

Flying Fish ❓ ✔			9/1/2021
			...estions ❓
Word List 1			
Spoken & Written Words	✅	90%	60
Written Words	✅	88%	80
Word List 2			
Spoken & Written Words	▮▮	85%	70
Written Words	▮▮	86%	60

Percent Correct

To make progress, students must correctly answer 90% of the questions in a group.

Questions

Each word list includes 4-5 groups, with 10 questions per group. The minimum number of questions varies:

Word List 1
- Spoken & Written Words: 50
- Written Words: 50

Word List 2
- Spoken & Written Words: 50
- Written Words: 50

Word List 3
- Spoken & Written Words: 50
- Written Words: 50

Word List 4
- Spoken & Written Words: 40
- Written Words: 40

Word List 5
- Spoken & Written Words: 40
- Written Words: 40

Word Lists 6
- Spoken & Written Words: 40
- Written Words: 40

If a word list is repeated, the student may only be required to repeat a subset of the questions.

PROGRESS: Errors - Flying Fish

Words the student is struggling with the most are indicated in red.

Flying Fish	Spoken and Written Words		Written Words	
	Errors	Errors / Questions	Errors	Errors / Questions
Word List 1				
as			100%	1 / 1
at	100%	3 / 3	100%	1 / 1
but			100%	1 / 1
each			50%	1 / 2
it	100%	1 / 1		
not			33%	1 / 3
said	50%	1 / 2		
their			50%	1 / 2

What to look for... what it means

Are there red bars under Progress?

Each word list includes 4-5 groups of 10 words. If a student doesn't correctly answer at least 9 out of 10 questions in a group, they will repeat that group. Red bars indicate that the student was unable to pass a group after 3 attempts, and will revisit that content after additional practice. Make sure that the student remains focused and motivated.

Note that students must pass a group under Spoken & Written Words before they will see that group under Written Words.

Is percent correct well below 90%?

The student may be struggling. Check the Errors section of this report to determine where the student needs additional support.

Has the student answered too many questions without passing?

Typically, students are able to pass a word list within 3 attempts (50-130 questions), which means most students will not have red bars. A student with red bars may be struggling. Check the Errors section of this report to determine where the student is struggling so you can assist them on specific words.

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

Are specific command types highlighted in red?

Provide the student with instruction on the specific vocabulary and/or complex commands with which they are struggling.

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

⬇ Reading Level 1 Progress Monitoring Chart in [Student & Teacher Resources](#)

Adjust Instruction/Intervene

Differentiation Activities

Differentiating instruction requires continually striving to know and to respond to each student's needs in order to maximize learning. Use the data in Flying Fish reports to adjust instruction to meet each student's needs and respond to variance among learners. The activities below are suggestions to support students who might be struggling with their progress in Flying Fish.

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

After initially reviewing the exercise goal/task with the student, if the student is demonstrating difficulty, consider clarifying the instructions, setting a goal based on student area of need, and modeling and practicing self-monitoring to encourage accuracy, confidence, and independence.

- First, start by setting a clear goal:
  - Set a goal in student-friendly language prior to beginning the exercise. The goal should be positively stated, written using clear and concise language, and be observable and measurable.
  - Review the goal with the student and check for understanding.
- Next, introduce and model how the student will monitor their goal:
  - Choose or create a self-monitoring chart for students to track their progress (aligned with the Reading Level 1 Progress Monitoring Chart found in Teacher Resources). Use the chart to motivate, encourage, and allow the student to practice self-monitoring. Include the goal on the self-monitoring chart.
  - Explain and model the steps needed to complete and interpret the self-monitoring chart.
  - Practice completing and interpreting the self-monitoring chart with the student.
- Then, clarify the expectations by modeling and reviewing the specific steps required to complete the exercise:
  - Review the steps of the activity with the student.
  - Model or explain the steps of the activity.
  - Practice completion of the task with the student.
  - Encourage the student to explain or show you how to complete the task.
  - Monitor independent practice and provide feedback and prompts as needed.

☑ **Is the student on task and engaged with the activity?**

When a student is struggling to stay on-task and engaged, consider the strategies below as a starting point to increasing student engagement.

- Adjust the pacing or duration of instruction.

- Provide built-in breaks as well as allow the student to request breaks as needed. Involve the student in determining their preferred and most successful work schedule. Some students prefer longer work periods and longer breaks while others prefer shorter work periods and more frequent breaks. Adjust as needed to increase student momentum, success, and confidence.

- Consider student motivation. Motivation can be intrinsic and extrinsic. How to motivate the student is largely dependent on their learning needs, preferences, and reinforcers. Student observation, reinforcer surveys, rapport building, and parent and student questionnaires can be helpful in determining how to increase student motivation.

☑ **Are there words in the task (prompt and response) that the student doesn't know?**

- Define and review key vocabulary used in the task.
- Display key vocabulary words and definitions.
- Promote student practice with vocabulary sentence strips, guided notes, response cards, or note cards.

☑ **Does the student require development with sight word recognition?**

- Display a high-frequency word wall using the word list provided. Update the word wall frequently.

- Develop a classroom library with high interest texts. Include a variety of reading levels within the library to support all students.

- Use interactive and multi-sensory methods to practice reading words aloud. An example would be clapping, snapping, or stomping while saying the word aloud.

- Allow the students to practice the word in isolation by playing matching games or by reading the words on individual notecards.

- Say the sight word aloud and then have the students hold up the pre-printed response card that matches the spoken word.

Facilitate and Encourage

Adjust Instruction/Intervene

Student Resources

You may decide to use the following monitoring sheet with your students:

⬇ Reading Level 1 Completion Chart in [Student & Teacher Resources](#)

Students can self-monitor their progress in each Reading Level 1 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.

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