FAST FORWORD®
LITERACY

PICFLIP
Teacher Manual

Contents

Goals/Objectives

English Language Arts Standard(s)	Phonological Awareness: students will demonstrate understanding of spoken words, syllables, and sounds (phonemes)

Language/ Reading Skills	Students will be able to... • discriminate between sounds and correctly identify sounds and sound sequences (listening accuracy) • identify spoken words and distinguish between similar-sounding 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) • recognize and apply knowledge of words and word parts such as morphemes and phonemes (word structure and knowledge)

Cognitive Skills	Students will be able to... • hold a word in working memory while retrieving word associations from long-term memory (memory) • focus on specific information, to sustain that focus, and to ignore distractions, while carrying out a task (attention) • rapidly interpret and integrate auditory information at the level of phonemes and access linguistic/semantic knowledge at the level of words (processing)

Social-Emotional/ Executive Function Skills	Students will be able to... • selectively focus and sustain attention on a lesson or an activity • inhibit impulsive responses • build confidence in vocabulary recognition • manage ability to process rapid, complex information

Icon Key

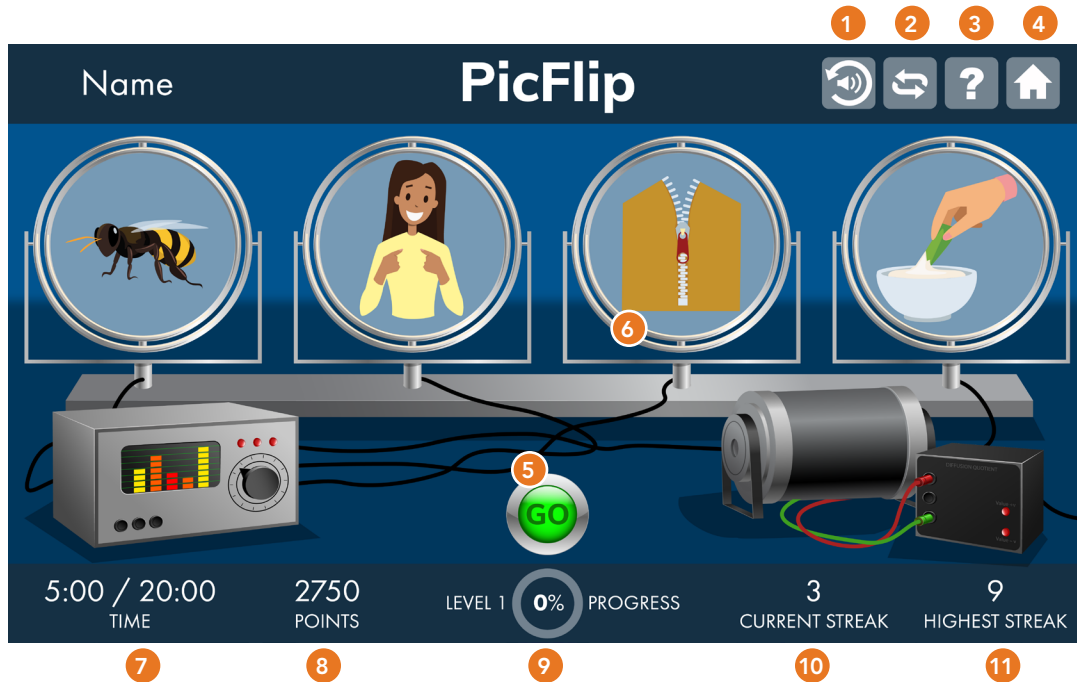| Audio	Download	English Learner	Quick Check	Settings	Video

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Exercise Screen

1 Replay
Repeats the target word.

2 Autoplay
Turns Autoplay on or off; when "on" each click of the Go button presents a series of three or more questions.

3 Help
Provides access to Help options:
- **How to** replays initial instructions.
- **Help** highlights and names each alternative.

4 Home
Returns the student to their assignments screen.

5 Go
Presents a question or a series of Autoplay questions. When an Autoplay sequence is in progress, this counter shows how many questions remain in the sequence.

6 Answer Buttons
Show possible answers to a question.

7 Time
Shows Time Worked/Time Scheduled for the exercise.

8 Points
Shows total points awarded across all of a day's sessions.
- Correct answers: 2 points for questions that count toward progress; 1 point for practice or intervention questions.
- Autoplay bonus: double the usual points if all answers in an Autoplay set are answered correctly.

9 Level Progress
Displays the current level and percent complete of the level.

10 Current Streak
Shows the number of consecutive correct answers in the session. Resets to zero after an incorrect answer.

11 Highest Streak
Shows the highest number of consecutive correct answers in the session.

Task

In PicFlip, students listen to a target word and view 4 pictures, then they click the picture that best represents the target word.

Content

PicFlip is a picture identification task that presents 132 basic vocabulary words at the grade K-2 level. These words have similar sounding consonants that are emphasized and contrasted. Focusing on general vocabulary comprehension helps students build language and sound discrimination skills without having to decode less familiar terms.

Did you know?

Phonological awareness is the ability to identify and manipulate units of oral language – such as words, syllables, and onsets and rimes. Students who have phonological awareness skills are able to determine the number of syllables in a word, recognize words with the same beginning or ending sounds, and identify and make oral rhymes. The ability to parse words into their individual sounds (phonological awareness) is a critical skill underlying the ability to decode written words (phonics).

Some students, such as English language learners, those with non-standard dialects, or students with hearing issues, may have difficulty with phonological awareness, especially of similarly sounding consonants like /b/ and /d/. Developing strong competencies in phonological awareness is important for all students, as the awareness of the sounds in words and syllables is critical to hearing and segmenting the words students want to spell, and blending together the sounds in words that students read.

Progression

In PicFlip, students progress through 5 levels. In the early levels, the exercise uses modified (processed) speech to present the words. In the processed speech, the consonant sounds in each word have been lengthened and enhanced relative to the vowel sounds. As students move through the levels, the degree of speech processing decreases until, at level 5, the words are presented using natural speech.

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Four factors are varied to make the task progressively more difficult within each processing level:

- the difficulty of the target sound
- the difficulty of the possible answers
- the position of the target sound (initial vs. final)
- the availability of vocabulary help

Processing Level	Sounds	Alternatives	Vocabulary Help	Sample Words
1	Initial or Final Initial Final	Easy	Available	base, face, bear, bell base, vase, bee, knee safe, save, dip, sip
2	Initial or Final Initial Final	Difficult	Available	chip, dip, sip, zip me, knee, bee, D bug, buck, bud, bus
3	Initial or Final Initial Final	Difficult	Available	
4	Initial or Final Initial Final	Difficult	Available	
Natural Speech	Initial or Final	Difficult	Not Available	phone, foam, foal, four

PicFlip adapts to the student's performance at each level, and provides targeted interventions if the student is struggling.

Motivational Levels

Each time a student progresses through 20% of an exercise, they "level up" and the screen changes slightly. These motivational levels are not connected to specific processing levels or content.
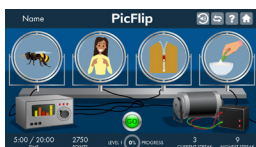
Level 1   Level 2   Level 3   Level 4   Level 5

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.

The Vocabulary Teaching intervention is used when a question is answered incorrectly. When a student answers a question incorrectly the same question is repeated. Then, one at a time, each alternate answer is highlighted and named. The 4 pictures disappear and then reappear in newly randomized places. Students proceed to answer the same question.
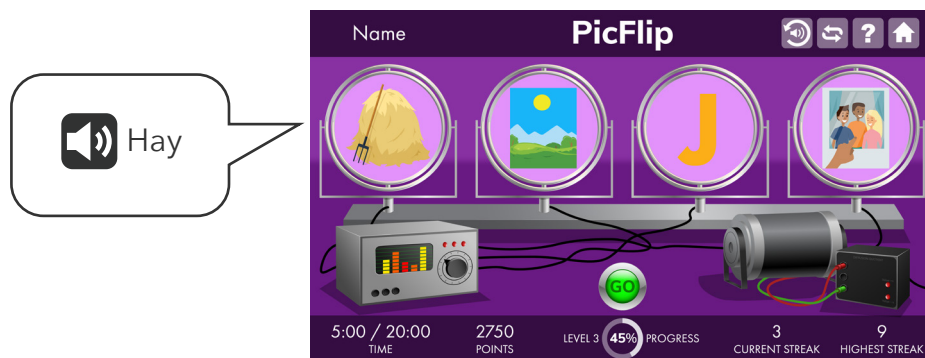
Acoustically Modified Speech

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.

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.

"Why does everything sound so strange?"

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

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Introduce

Engage

To introduce the exercise to your students, say, Words are made up of different sounds or combinations of sounds. In fact, although our alphabet has 26 letters there are 44 different sounds (phonemes) because some letters have more than one sound. For example, the letter 'c' makes two different sounds in words like cat and celery, and it makes a third sound when it comes before 'h,' in words like *chair*. In this exercise, it's important to pay attention to the sounds you hear.

I am going to say some words. Close your eyes and listen to the sounds that make up each word. Remember, I want you to identify the "sounds" not the "letters" in these words. Say a simple word like *dog*. Ask, What is the first sound you hear in *dog*? What is the last sound? What is the middle sound? Students should answer /d/, /g/, and /aw/. What sounds can the letter 'o' make other than the /aw/ sound in dog? Possible answers: /oo/ as in *who*, /long -o/ as in *toe*. Repeat the activity with other words that either begin with /d/ or end with /og/.

Demo

1. Say: Today, we're going to practice listening to words and then finding the pictures that best represent those words. Together, we'll work on an exercise called PicFlip. I'll get us started, and then I'd like for you to try.

2. Project the "Introduction – English or Spanish demo" for PicFlip.

3. Follow along with the demo, which explains how the exercise works.
   - Describe the details you see in the pictures.
   - Explain which one is the best match and how you ruled out the other options.
   - Choose an answer
     - Correct answer: a "ding" sound effect plays, the answer is highlighted, and the word appears below the picture.
     - Incorrect answer: a "thunk" sound effect plays, the correct answer is highlighted with the word below, and the incorrect answers are dimmed.

4. Demo the keyboard shortcuts:
   - Go button = Space bar
   - Possible answers (left to right) = Number keys 1-4

Direct students to log in and work individually on the PicFlip 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.

PicFlip 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.
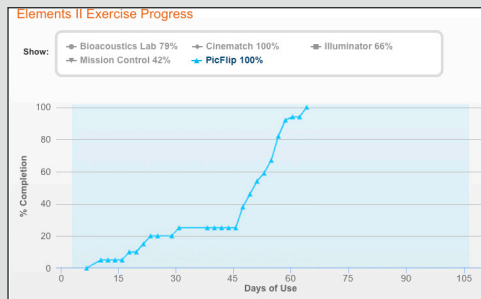
Monitor Student Progress

Review PicFlip 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...

PROGRESS: Elements II Exercise Progress - PicFlip

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

Elements II Exercise Progress

Show:
- Bioacoustics Lab 79%
- Cinematch 100%
- Illuminator 66%
- Mission Control 42%
- PicFlip 100%

% Completion vs Days of Use

USAGE: Usage Details - Schedule

Usage Details ❓

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

Days of Use ⇕	Date	Bioacoustics Lab	Cinematch	Illuminator	Mission Control	PicFlip
19	04/07/2020	○	○	○	○	
18	04/06/2020				○	
17	04/03/2020	⊖	○			
16	03/23/2020			○	○	
15	03/01/2020	●				
14	02/24/2020	●	○	○	○	

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

USAGE: Usage Details - Minutes/Questions

Usage Details ❓

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

Days of Use ⇕	Date	Bioacoustics Lab Min	Ques	Cinematch Min	Ques	Illuminator Min	Ques	Mission Control Min	Ques	PicFlip Min	Ques
18	04/06/2020	-	-	-	-	-	-	0	-	0	-
17	04/03/2020	6	57	0	-	-	-	-	-	0	-
16	03/23/2020	-	-	-	-	0	-	0	-	0	-
15	03/01/2020	12	101	-	-	-	-	-	-	0	-
14	02/24/2020	9	64	0	-	-	-	0	-	0	-
13	01/03/2020	-	-	-	-	0	-	-	-	-	-

What to look for... what it means

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.

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.

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 trials to minutes may indicate the student is trying to amass points, or to progress more quickly, but rushing can result in mistakes. Ask them to turn Autoplay off. Remind them that making progress depends on accuracy, not speed.

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Facilitate and Encourage

Where to look...

PROGRESS: Progress Details - PicFlip Progress

PicFlip Progress

✅ Complete, advancement criteria met

▮▮ In progress

▯▯▯ Not started

▮▮ Advancement criteria not met*

*If the student doesn't achieve a high enough percentage of correct answers, they will repeat the group(s) that challenge them.

▼ PicFlip ❓ ✔

Processing Level 1, Easy Alternatives, Help Available	Progress ❓	Questions ❓	Questions with Help ❓
Initial or Final Sounds	✅	20	0
Initial Sounds	✅	24	0
Final Sounds	▮▮	20	0

Number of questions

The typical number of questions varies by group and level:

Level 1
Number of questions:
- Initial or Final Sounds: 20
- Initial Sounds: 24
- Final Sounds: 20

Level 2-4
Number of questions:
- Initial or Final Sounds: 18
- Initial Sounds: 18
- Final Sounds: 32

Level 5
Number of questions: 68

What to look for... what it means

Are there red bars under Progress?

When the student doesn't achieve a high enough percentage of correct answers, they will repeat a word group:

- Levels 1 & 2: Students are encouraged to use Help to learn the vocabulary. Questions answered with the Help count towards progress.
  - If a student is missing a lot of questions, encourage them to use Help to learn both the vocabulary and the difference between phonemes, especially those that are easily confused.
- Levels 3 & 4: Help is still available, but students should know the vocabulary at this point. Questions answered with Help will not count toward progress.
  - Encourage students to learn the vocabulary and avoid relying on Help.
- Level 5: Help is not available. This level cannot be failed, so no red bars will appear. Students who are struggling will have to repeat many questions.
  - Has the student answered too many questions without completing this level? A student who is still working after more than 200 questions may be struggling. Make sure the student remains attentive and motivated. Any increase in a student's chart shows that the student is making progress. Celebrate these improvements, however small they may seem.

If a student has to repeat a word group several times, or has not passed Level 5 after more than 200 questions, they may need more support.
- Students who struggle to maintain a high level of accuracy for a long session may do better by attacking the content in smaller chunks. Have the student turn off Auto Assign, take ten trials with laser focus, and take a brief brain break before doing the next set of 10.

PROGRESS: Errors - PicFlip

Content that the student is struggling with the most is highlighted in red.

▼ PicFlip

Initial Sounds	Errors	Errors / Questions
/b/	22%	15 / 68
/d/	14%	10 / 69
/f/	11%	2 / 18
/l/	67%	20 / 30
/m/	19%	7 / 36

Are specific word groups highlighted in red?

Have the student practice saying words that start/end with the specific sounds with which they are struggling, and with easily confusable sounds (i.e. /m/ and /n/, /b/, /d/, and /p/) while focusing on the sounds and their differences. Sometimes just suggesting the student focus extra on those sounds as they progress through the exercise will help. Consider providing the student with instruction on the specific vocabulary with which they are struggling.

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

⬇ Elements II Progress Monitoring Chart in Student & Teacher Resources

Facilitate and Encourage

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 PicFlip 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 PicFlip.

✅ **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.

✅ **Can the student repeat the target word out loud?**

Repeating the word helps the student commit it to memory, and it tells you what word the student hears. If the student can't remember or hear the word the first time, teach them to use the replay button to hear it again. Students can use the replay button as often as they want, without penalties.

✅ **Does the student know which picture represents each word?**

Some of the words in the exercise (such as "thorn" or "foam") may be unfamiliar to the student. If the student is not familiar with the vocabulary words or cannot match the pictures to the words, encourage them to use the Help feature, especially at Processing Level 1. Remind them that they need to learn the words. Beyond Level 1, they won't make progress when they use Help so they should only use it when they don't know the picture for a word.

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☑ **Does the student have difficulty telling the difference between similar words they hear?**

Words like "thorn" and "torn" sound similar. For words like these, make sure the student knows they can use the Replay button to hear the word repeated as many times as they want. The more the student practices hearing the word, the more likely they are to succeed with the task.

☑ **Is the student staying engaged with the activity?**

Ask the student how difficult the exercise is for them. If they say it is too easy, they may be losing interest. Remind the student that advancing through content depends on correct answers.

Facilitate and Encourage

Adjust Instruction/Intervene

Student Resources

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

Elements II Streaks & Completion Chart in <u>Student & Teacher Resources</u>
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.

Elements II Completion Chart in <u>Student & Teacher Resources</u>
Students can self-monitor their progress in each Elements II 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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