Conducting a Comprehensive Assessment of our Youngest Learners Using the BEAS and ESGI

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Disclosures

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Agenda

- Importance of early learning opportunities
- Key foundational skills: developmental & academic
- Early assessment and intervention
- Case Study
  - Introduction to the Battelle Early Academic Survey (BEAS)
  - Introduction and Uses of ESGI

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Importance of Early Learning Opportunities

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The Children's Reading Foundation

A child learns the fastest from birth to age 5

A baby/toddler is either learning or sleeping	90% of brain growth occurs during this period

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Parents and caregivers are the first and most influential teachers

⬇

Children learn valuable language, literacy, math, social and emotional skills early through reading, talking and purposeful play

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Children up to the age of 5

Learn

- Learn best by imitation

Learn through

- Learn through hundreds of gentle repetitions in a safe, supportive environment with someone they love and trust
  - Parents and caregivers who give attention, respond and interact with their child build a child's brain

Build

- Build networks of neurons through reading, talking and playing with purpose
  - This development helps a child build the foundational skills needed to draw upon as new learning occurs

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Early Readiness Skills

- **Print Knowledge**
  - Differentiates print from picture
  - Functions of print
  - Book rules
  - Print components
  - Letter naming
- **Linguistic Awareness**
  - Active listening
  - Vocabulary
  - Rhyming words
  - Segmenting words and sentences
  - Phonemic awareness
- **Emergent Writing**
  - Scribbling
  - Drawing
  - Copying
  - Printing letters and name
  - Invented spelling

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Importance of Reading Proficiency

- One of the most important predictors of high school graduation is reading proficiently by the end of third grade
- More than 85 percent of the curriculum is taught by reading
- By the end of third grade, 74 percent of struggling readers never catch up
- Without a strong foundation in reading, children are left behind at the beginning of their education

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Importance of Math Proficiency

- Math encourages logical reasoning, critical thinking, creative thinking, abstract or spatial thinking, problem-solving ability, and even effective communication skills.
- Mathematics helps in analytical thinking. While solving math problems, data are collected, disassembled and then interconnected to solve them.
  - Mathematics helps develop ability to think.
  - Helps explain how things work.
  - Helps to develop wisdom.
  - Increases the speed of intuitive.
  - Helps develop overall intelligence.
  - Helps develop money awareness
  - Important in a constantly evolving world.

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Developmental Math Milestones

- **Toddlers –Ages 1-2**
  - Numbers mean how many (counting fingers)
  - Begin reciting numbers
  - Match basic shapes
  - Explore measurement- filling containers
  - Understand words that compare- behind, under, faster
- **Preschoolers-Ages 3-4**
  - Recognize shapes in daily activities/settings
  - Sort by color, shape, size, purpose
  - Use classification to compare/contrast-how tall? boy/girl? big/little?
  - Understand numerals stand for number names (1=one)
  - Uses spatial awareness to put puzzles together

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Developmental Math Milestones

- **Kindergarten- Ages 5-6**
  - Adds by counting fingers (uses 2 hands)
  - Identifies larger of 2 numbers & can recognize numbers to 20
  - Copies/draws symmetrical shapes
  - Begins to understand basic time concepts-morning/night, days of the week
  - Follows multistep directions using words like first/next, before/after
- **First & Second Grade –Ages 6-7**
  - Creates what comes next in patterns
  - Knows difference between 2 & 3 dimensional shapes (cubes, cones, cylinders, pyramids)
  - Counts to 100 by ones, fives, tens
  - Writes & recognizes the numbers 1-100 & the words for 1-20
  - Does basic addition & subtraction up to 20
  - Creates & reads simple bar graphs
  - Recognizes names and values of coins

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Starting Behind

- 40% of children enter Kindergarten 1-3 years behind
- This has a lifelong impact
- It is challenging to close a learning gap because the child needs to achieve their typical year of academic growth plus another year of growth to catch up
- Studies show that children can improve, but most will never catch up to their classmates

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Early Identification & Intervention

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What Can Schools Do?

Assess & Intervene Early

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Many Avenues to Assessment

- Universally assessing developmental, early literacy, and mathematics skills for all students
- Part of a transition assessment from PreK to Kindergarten
- Part of response to intervention (RTI)
- Part of a kindergarten readiness assessment
- Part of a full-individual evaluation (FIE) for special education

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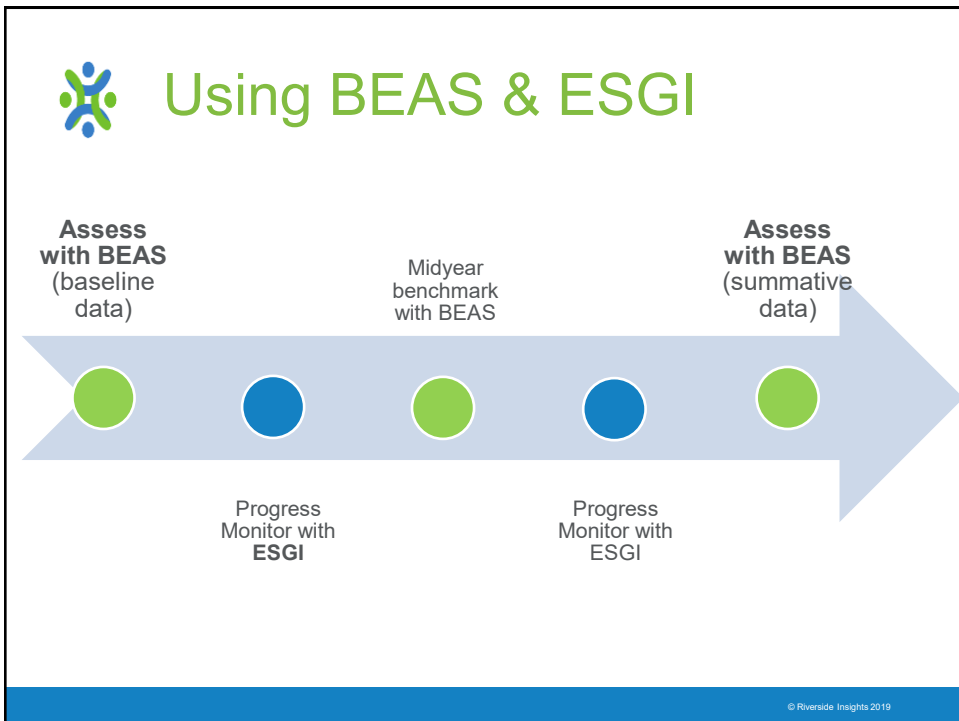
Battelle Early Academic Survey (BEAS)

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What is the BEAS?

The newest member of the BDI-3 family

Assesses early literacy & mathematics skills

Ages 3.6-7.11 years

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Who Can Administer the BEAS?

- Preschool Teachers
- Head Start Teachers
- Kindergarten Teachers
- Special Education Teachers
- General Education Teachers
- Educational Diagnosticians
- School Psychologists
- Speech/Language Pathologists (SLP)
- Trained Paraeducators

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Importance of Early Literacy Skills

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Although babies don't become readers for several years, they begin to develop the necessary skills for reading and writing at birth. The **first three years** of life are important ones in developing the language foundations that will lead to reading.

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5 Pillars of Reading
(National Reading Panel, 2000)

- **Phonemic Awareness**
- **Phonics**
- **Fluency**
- **Vocabulary**
- **Comprehension**

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Literacy Domain

- Print Concepts
- Phonological Awareness
  - Rhyming
  - Syllables
  - Onset Rime
  - Phoneme Identification
  - Phoneme Blending & Segmenting
  - Phoneme Manipulation
- Phonics and Word Recognition
  - Letter Identification
  - Letter Sound Correspondence
  - Early Decoding
  - Sight Words
  - Nonsense Words
  - Long Vowel Patterns
  - Inflectional Endings
- Listening Comprehension
- Fluency

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Print Concepts

- First step in literacy development; an understanding of basic concepts of print is essential for the child to move forward as a reader.

- Understanding the features of standard English print through the analysis of a picture book

- The child is given a picture book and asked to identify elements such as the title, the first page, specific text on the page, and the direction in which the text should be read.

- The child is asked to follow along in the text as the examiner reads it and to identify individual sentences and punctuation marks.
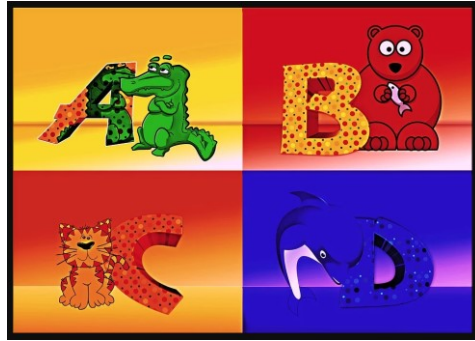
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Phonological Awareness

- Rhyming
- Syllables
- Onsite Rime
- Phoneme Identification
- Phoneme Blending and Segmenting
- Phoneme Manipulation

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Phonics and Word Recognition

- Letter Identification
- Letter-Sound Correspondence
- Early Decoding
- Sight Words
- Nonsense Words
- Long Vowel Patterns
- Inflectional Endings
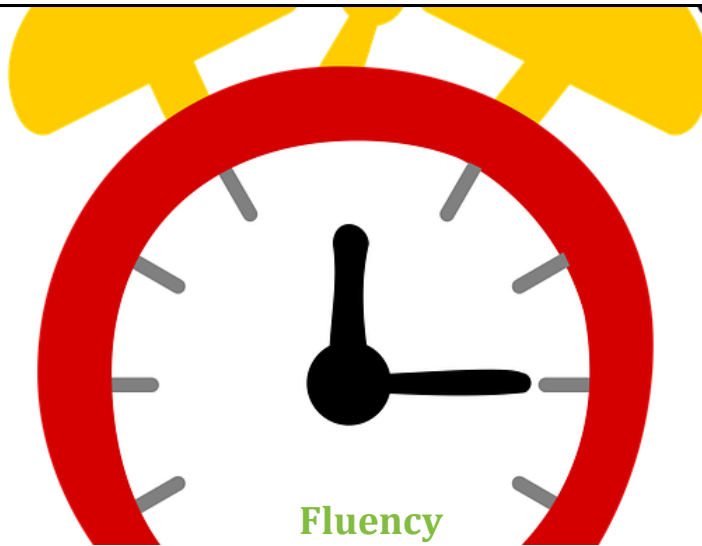
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Listening Comprehension

The ability to listen and demonstrate understanding of what has been heard

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Fluency

How quickly the student can name pictures under timed conditions

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Mathematics Domain in the BEAS

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Math Domain

- Numbers, Counting, & Sets (NCS)
- Geometry (GE)
- Measurement & Data (MD)
- Operations & Algebraic Thinking (OAT)

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Numbers, Counting, & Sets

- 3.6-7.11
- Counting with one-to-one correspondence;
- Identify numbers based on visual prompt;
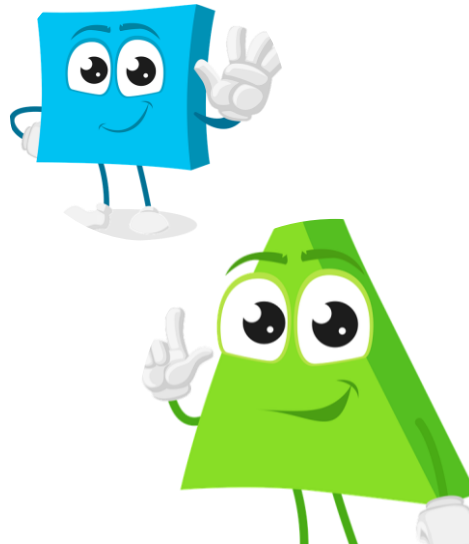- Compare values;
- Analyze and complete patterns

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Geometry

- 3.6-7.11
- Label shapes;
- identify shapes;
- combine shapes to match a visual model

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Measurement & Data

- 3.6-7.11
- Apply knowledge of visual attributes when analyzing pictures;
- Analyze data presented in a simple picture graph
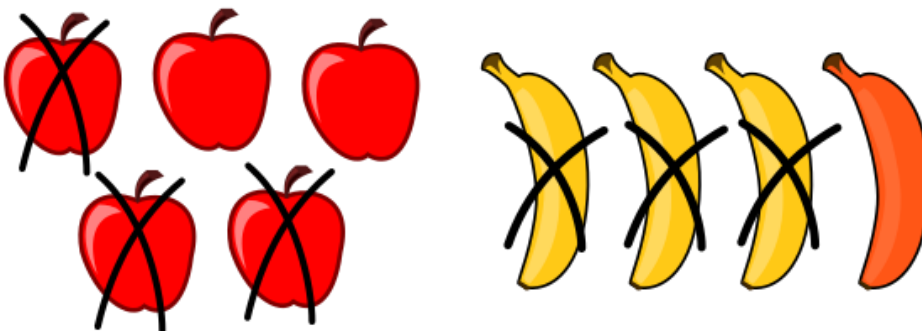- Use pictures of clocks to tell time

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Operations & Algebraic Thinking

- 5.0-7.11
- Add and subtract objects with aid of illustrations
- Solve simple addition and subtraction equations

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Battelle Early Academic Survey Sample Reports- Table of Scores- Literacy

Adams, Mallory			DOB: 05/08/2015				Score Report
Table of Scores		On Track	Monitor		Support		Not Applicable
Domain: Subdomain	Examiner	Test Date	RS	Scaled Score	Standard Score	Percentile Rank	Performance Level
Literacy					84	14	SUPPORT
Print Concepts	Demo Examiner	08/31/2020	4	7		16	SUPPORT
Phonological Awareness				10		50	ON TRACK
Rhyming	Demo Examiner	08/31/2020	6				ON TRACK
Syllables	Demo Examiner	08/31/2020	4				MONITOR
Onset Rime	Demo Examiner	08/31/2020	6				ON TRACK
Phoneme Identification	Demo Examiner	08/31/2020	2				MONITOR
Phoneme Blending and Segmenting	Demo Examiner	08/31/2020	4				ON TRACK
Phonics and Word Recognition				10		50	ON TRACK
Letter Identification	Demo Examiner	08/31/2020	32				MONITOR
Letter-Sound Correspondence	Demo Examiner	08/31/2020	4				MONITOR
Early Decoding	Demo Examiner	08/31/2020	4				MONITOR
Sight Words	Demo Examiner	08/31/2020	4				ON TRACK
Listening Comprehension	Demo Examiner	08/31/2020	3	7		16	SUPPORT
Fluency	Demo Examiner	08/31/2020	11	5		5	SUPPORT

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Battelle Early Academic Survey Sample Reports Table of Scores- Math

Adams, Mallory			DOB: 05/08/2015				Score Report
Table of Scores		On Track	Monitor		Support		Not Applicable
Domain: Subdomain	Examiner	Test Date	RS	Scaled Score	Standard Score	Percentile Rank	Performance Level
Mathematics					93	32	MONITOR
Numbers, Counting, and Sets	Demo Examiner	08/31/2020	13	9		37	MONITOR
Geometry	Demo Examiner	08/31/2020	5	8		25	MONITOR
Measurement and Data	Demo Examiner	08/31/2020	3	7		16	SUPPORT
Operations and Algebraic Thinking	Demo Examiner	08/31/2020	5	14		91	ON TRACK

*Support indicates scores that fall below the 25th percentile. Monitor indicates scores falling within the 25th-49th percentile. On track indicates scores falling at the 50th percentile or above.

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USING YOUR BEAS WITH SPECIAL EDUCATION

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USES OF THE BEAS IN SPECIAL EDUCATION

The BDI-3/BEAS can be used by educational diagnosticians, school psychologists, speech pathologists and private clinicians to:

- help determine eligibility for special education
- assist in the development of individualized family service plans (IFSPs) and individualized education programs (IEPs) as needed
- document progress on IEP goals

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MEASURE EARLY ACADEMIC SKILLS OF STUDENTS WITH DEVELOPMENTAL DELAYS

- The BEAS can be used for early academic skills beginning at 3 years 6 months. This is an earlier measure that can be used to measure the academic levels of children with a variety of developmental delays:
  - Autism
  - Cognitive Delay
  - Motor Delay
  - Speech and Language Delay
  - Noncategorical

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DEVELOPMENT OF IEP GOALS

Once identified as a child with a disability & and educational need for Special Education services, the child's IEP must include(**34 Code of Federal Regulations § 300.320)**:

- A statement of measurable annual goals, including academic and functional goals designed to—
  - Meet the child's needs that result from the child's disability to enable the child to be involved in and make progress in the general education curriculum; and
  - Meet each of the child's other educational needs that result from the child's disability;
- A description of—
  - How the child's progress toward meeting the annual goals described in paragraph (2) of this section will be measured; and
- A description of—
  - When periodic reports on the progress the child is making toward meeting the annual goals (such as **through the use of quarterly or other periodic reports**, concurrent with the issuance of report cards) will be provided;

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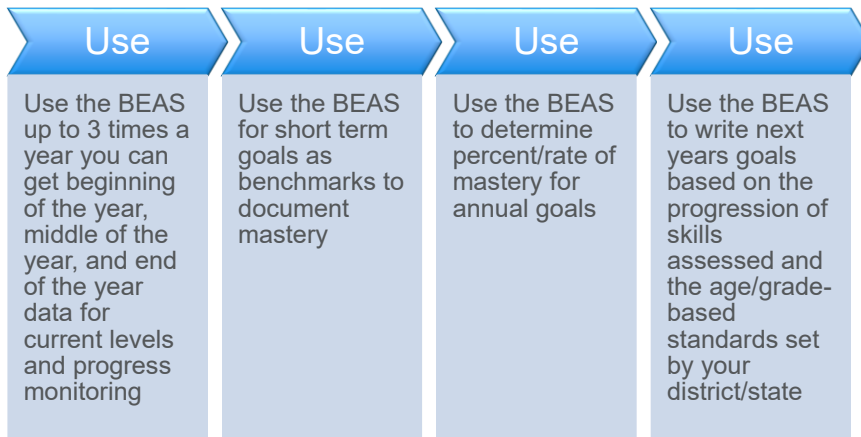## How frequently can I administer the BEAS?

- BEAS can be administered at the **beginning and the end** of the **academic school year**, or the second test administration takes place no less than **4 months** after the first.

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USING YOUR BEAS FOR IEPs

Use	Use	Use	Use
Use the BEAS up to 3 times a year you can get beginning of the year, middle of the year, and end of the year data for current levels and progress monitoring	Use the BEAS for short term goals as benchmarks to document mastery	Use the BEAS to determine percent/rate of mastery for annual goals	Use the BEAS to write next years goals based on the progression of skills assessed and the age/grade-based standards set by your district/state

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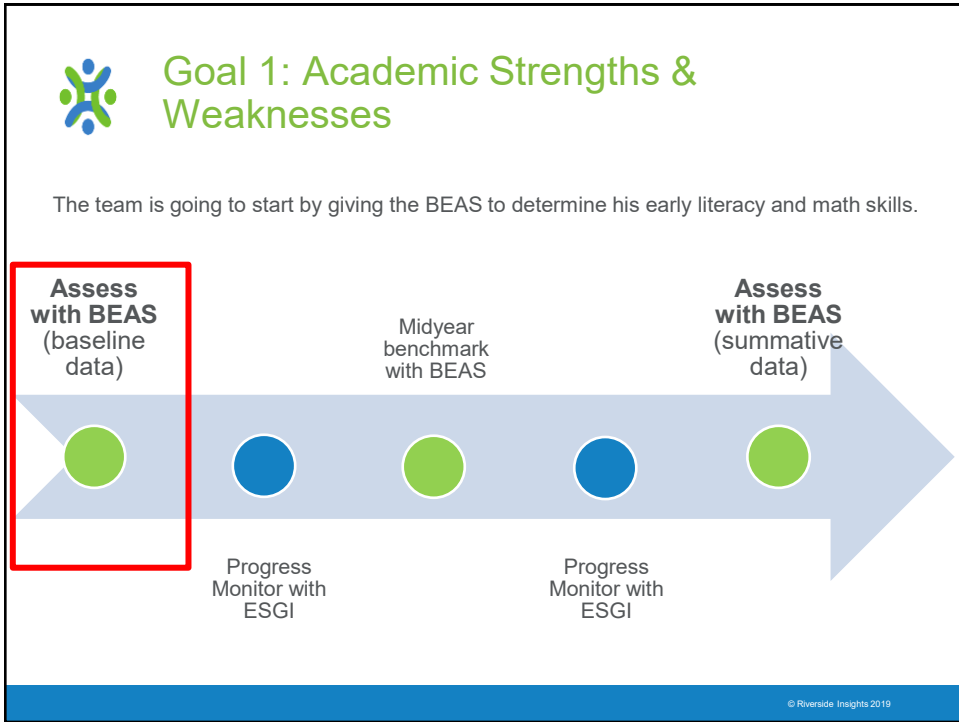
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A Case Study

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Meet Christopher Robin

- Five years old
- Fall Starting Kindergarten
- Identified with a Developmental Delay in Preschool
- Is starting Kindergarten with an IEP
- His kindergarten team has two goals
  1. Determine academic strengths and weaknesses to adjust IEP goals at upcoming Kindergarten transition meeting
  2. Pinpoint a tool progress monitor his goals between benchmarking

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Goal 1: Academic Strengths & Weaknesses

The team is going to start by giving the BEAS to determine his early literacy and math skills.

Assess with BEAS (baseline data)

Midyear benchmark with BEAS

Assess with BEAS (summative data)

Progress Monitor with ESGI

Progress Monitor with ESGI

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BEAS Literacy Results 9/7/22

Domain: Subdomain	Examiner	Test Date	RS	Scaled Score	Standard Score	Percentile Rank	Performance Level
Literacy					78	7	SUPPORT
Print Concepts	Rebecca Elliott	09/07/2022	4	8		25	MONITOR
Phonological Awareness				5		5	SUPPORT
Rhyming	Rebecca Elliott	09/07/2022	0				SUPPORT
Syllables	Rebecca Elliott	09/07/2022	0				SUPPORT
Onset Rime	Rebecca Elliott	09/07/2022	0				MONITOR
Phoneme Identification	Rebecca Elliott	09/07/2022	0				SUPPORT
Phoneme Blending and Segmenting	Rebecca Elliott	09/07/2022	0				MONITOR
Phonics and Word Recognition				7		16	SUPPORT
Letter Identification	Rebecca Elliott	09/07/2022	9				MONITOR
Letter-Sound Correspondence	Rebecca Elliott	09/07/2022	0				SUPPORT
Early Decoding	Rebecca Elliott	09/07/2022	0				SUPPORT
Sight Words	Rebecca Elliott	09/07/2022	0				ON TRACK
Listening Comprehension	Rebecca Elliott	09/07/2022	3	8		25	MONITOR
Fluency	Rebecca Elliott	09/07/2022	13	6		9	SUPPORT

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BEAS Mathematic Results 9/7/22

Domain: Subdomain	Examiner	Test Date	RS	Scaled Score	Standard Score	Percentile Rank	Performance Level
Mathematics					76	5	SUPPORT
Numbers, Counting, and Sets	Rebecca Elliott	09/07/2022	6	6		9	SUPPORT
Geometry	Rebecca Elliott	09/07/2022	3	6		9	SUPPORT
Measurement and Data	Rebecca Elliott	09/07/2022	2	6		9	SUPPORT
Operations and Algebraic Thinking	Rebecca Elliott	09/07/2022	0	8		25	MONITOR

*Support indicates scores that fall below the 25th percentile. Monitor indicates scores falling within the 25th-49th percentile. On track indicates scores falling at the 50th percentile or above.

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IEP at a Glance

Name: Christopher Robin
Grade: Kindergarten
DOB: 8/01/2018
Case Manager: Ms. Elliott
BIP: Yes   No
Disability: Developmental Delay

IEP Goals:
*Verbally segment sentences
*Recognize a pair of rhyming words
*Lower-case letter recognition
*Letter sound production
*Count and produce a set of objects up to 10.
*Identify and sort basic shapes

Accommodations/Modifications:

In the Classroom:
* Preferential seating close to instruction
* Check for understanding after instructions
*Directions read out loud

Testing:
* Testing in a small group or 1:1
*Instructions read out loud
*Extended time
*Check for understanding

Strengths:
*Listening Comprehension
*Print Concepts
*Following 1-2 step directions

Services Provided:
* 30 minutes push in services for math and reading daily
* 30 minutes pull-out for reading 3x weekly
* 15 minutes daily of organization and behavior

Weaknesses:
*Self-checking for understanding
*Phonological awareness
*Beginning phonics skills
*Counting and 1:1 correspondence

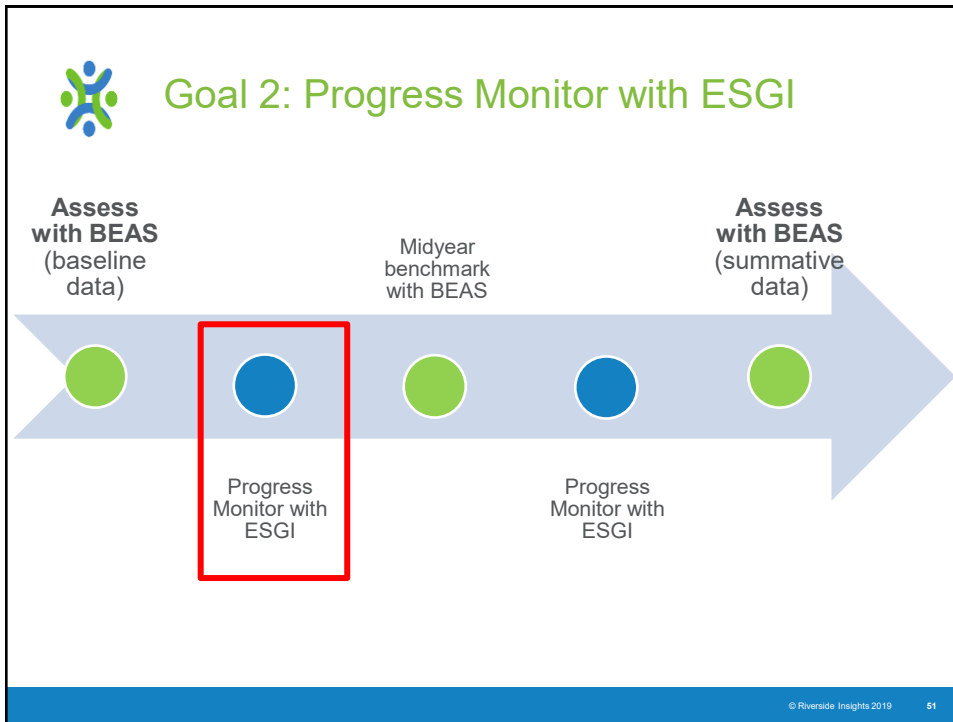Notes:
Student is benchmarked 3 times a year using the BEAS assessment and is monitored 2x weekly using ESGI to keep track of goal progress.

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IEP Development

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Midyear BEAS Math Results

Domain: Subdomain	Examiner	Test Date	RS	Scaled Score	Standard Score	Percentile Rank	Performance Level
Mathematics					76	5	SUPPORT
Numbers, Counting, and Sets	Rebecca Elliott	09/07/2022	6	6		9	SUPPORT
Geometry	Rebecca Elliott	09/07/2022	3	6		9	SUPPORT
Measurement and Data	Rebecca Elliott	09/07/2022	2	6		9	SUPPORT
Operations and Algebraic Thinking	Rebecca Elliott	09/07/2022	0	8		25	MONITOR

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Domain: Subdomain	Examiner	Test Date	RS	Scaled Score	Standard Score	Percentile Rank	Performance Level
Mathematics					82	12	SUPPORT
Numbers, Counting, and Sets	Rebecca Elliott	01/26/2023	10	7		16	SUPPORT
Geometry	Rebecca Elliott	01/26/2023	4	7		16	SUPPORT
Measurement and Data	Rebecca Elliott	01/26/2023	3	7		16	SUPPORT
Operations and Algebraic Thinking	Rebecca Elliott	01/26/2023	1	9		37	MONITOR

*Support indicates scores that fall below the 25th percentile. Monitor indicates scores falling within the 25th–49th percentile. On track indicates scores falling at the 50th percentile or above.
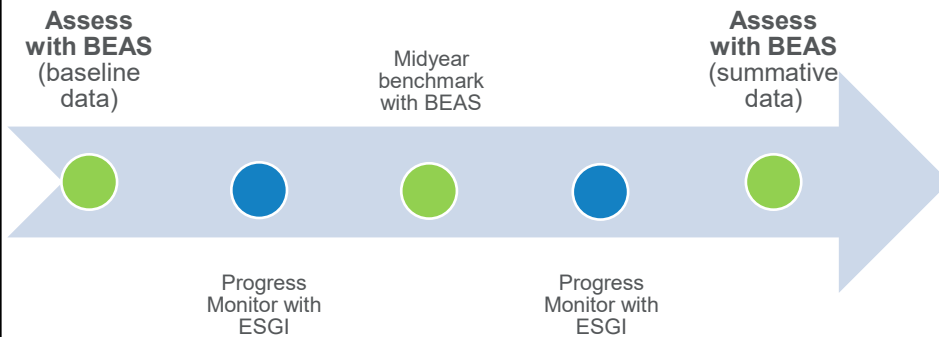
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Summary of Process

Assess with BEAS (baseline data)

Midyear benchmark with BEAS

Assess with BEAS (summative data)

Progress Monitor with ESGI

Progress Monitor with ESGI

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Summary

- Early identification & intervention is necessary to ensure young children obtain the early developmental and academic skills
- BEAS is a measure of early literacy & mathematics skills for ages 3.6-7.11
- Each domain (Literacy & Mathematics) assesses the pertinent foundational skills necessary for later learning
- ESGI add
  - Add 60 day free trial promo code FOCUS23
  - Add contact email support@esgisoftware.com

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