

Teaching Body Awareness to Students with Visual Impairments and Additional Disabilities

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Introduction and Purpose

Children who grow up without useful visual information often have difficulties with motor planning, are at risk for delayed motor development, and may have sensory integration deficits.

- Body awareness leads to concept development which is the foundation for more complex concepts and abstract reasoning.
- Motor responses significantly increase when modeled.
- Concepts must be taught more deliberately to students who are blind and visually impaired.

Importance of Body Awareness

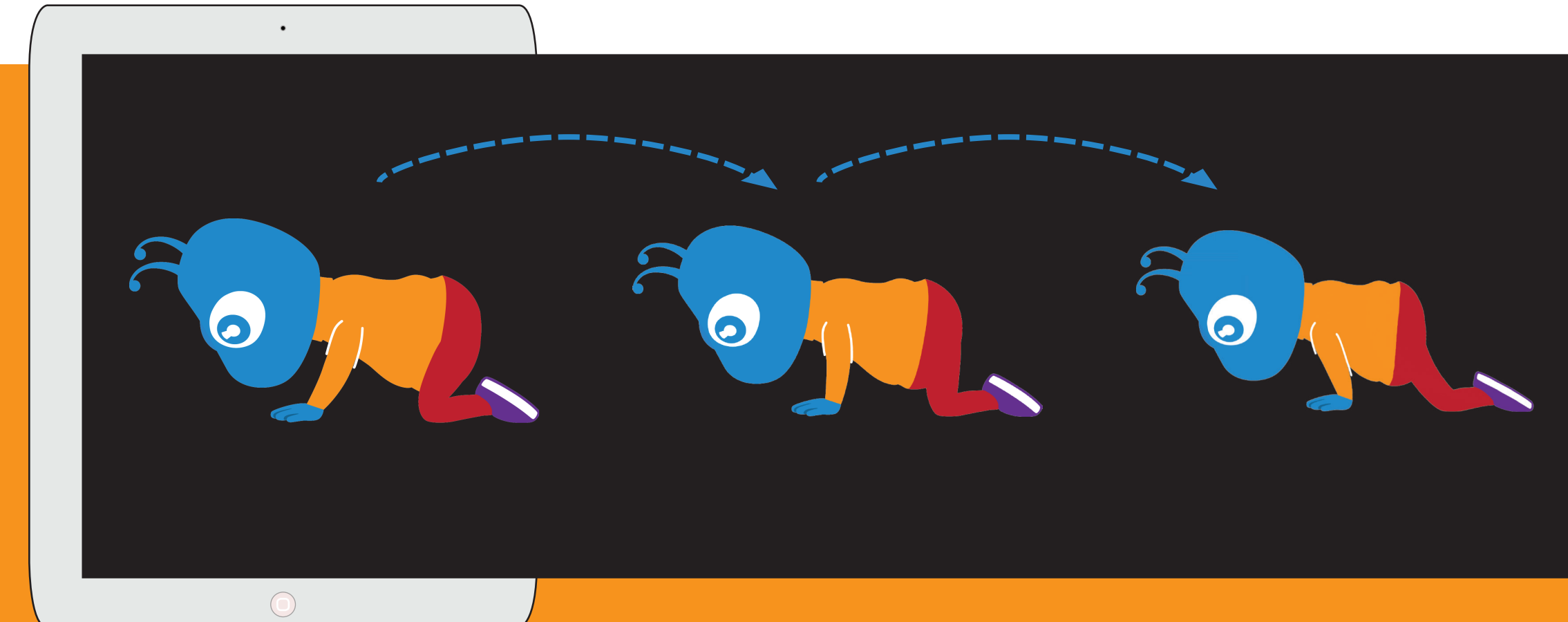
- The conceptual understanding of body, space and environment provides the purpose for physical movement and helps foster the development of safe and efficient O&M travel skills.
- Purposeful, self-initiated movement is essential for developing motor skills.
- ONLY through active movement can muscle tone, proprioceptive awareness and coordination occur.
- Early intervention minimizes sensory delays.

Strategies for Improvement of Body Awareness

- Facilitating sensorimotor functioning is important: for all persons with visual impairment but especially in children.
- Hands on facilitation and demonstration is necessary.
- Consider prerequisite abilities and functional skills necessary when planning activities.
- Make BAMM or other motor activities a daily routine.
- Provide consistent cues at consistent times.
- Make the activity and environment predictable.
- Allow familiarization time as needed.
- Infuse object, tactile, and picture symbols as appropriate.
- Provide wait time to allow for motor planning.
- Keep track of what is motivating to the child.

Benefits of Using the BAMM App

- Video modeling
- High-contrast color
- Visual, tactual, auditory choice making
- Tempo adjustments
- Facilitates consistency
- Lyrics that emphasize body awareness concepts



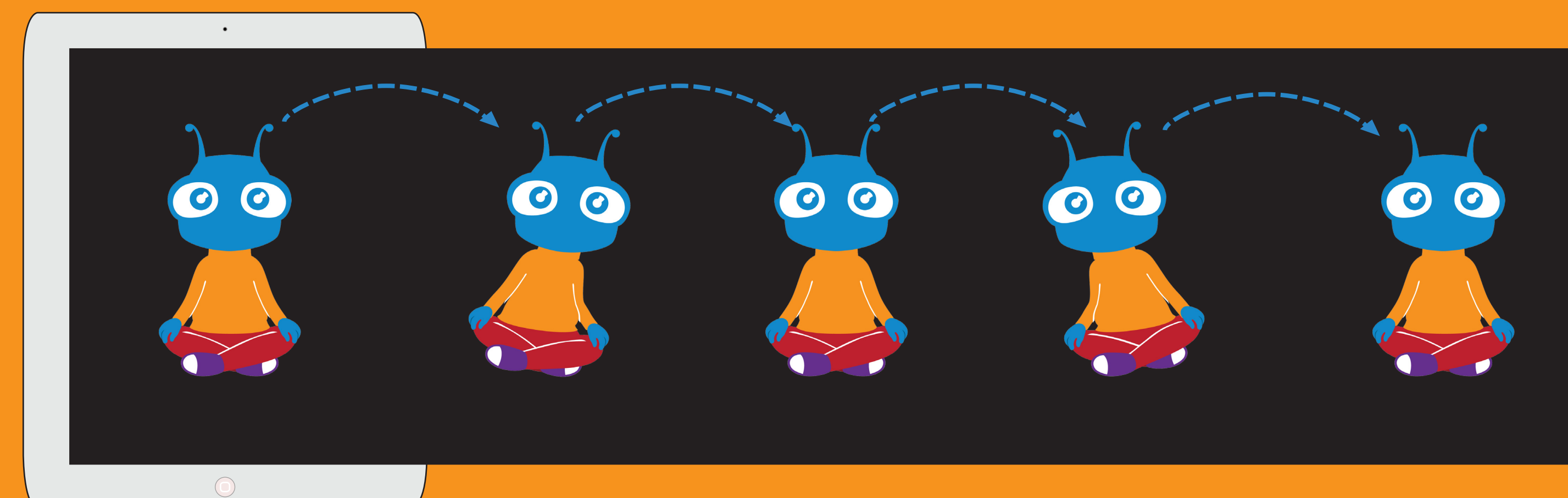
Rocking Horse

Functional Purpose

Transitioning from floor to standing. Shifting weight in preparation for bringing knee up.

Concepts

On all fours; knees; hands; toes; face down; forward/back; balance.



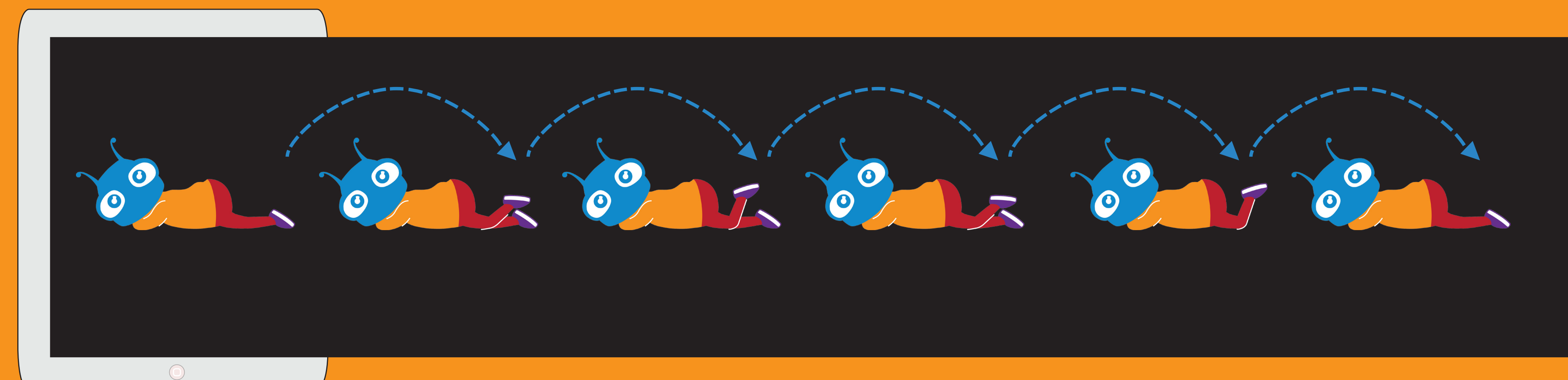
Egg Wobbling

Functional Purpose

Transitioning from sitting on floor to standing.

Concepts

Reaching for objects in various places; laterality; crossing legs; on top of; shifting weight in sitting.



Dolphin Swim

Functional Purpose

Controlling lower legs from prone position to improve awareness

Concepts

Front of body on floor; tummy; face; cheek; elbows; focus on knee down movements; alternating legs.

Design: Single Subject Design

Participants: At least three students who have visual impairments and additional disabilities.

Study Site: Participants will be observed in their schools or home environments.

Observers: Teachers or care givers will be trained on how to observe, what to observe and how to record.

Measurement: Occurrence levels of the target behaviors will be measured during both baseline and intervention. Direct and frequent measurements will be used to verify the effectiveness of the intervention by counting the number of times the student responds correctly or incorrectly within a given session (e.g., having played the song 10 times, how many times did the student identify / not identify a body part correctly?)

Examples of correct responses to be measured/ counted: pointing, touching, lifting, moving, any other.

Data Collection: Data will be collected in two stages.

1. Baseline

- Acts as an experimental control and taken before intervention (Before application of the musical App in our case).
- It will be taken separately for each participant.
- Baseline data will determine if the participant needs intervention and skills to teach.
- The observers will instruct the participants to perform the target behaviors (actions indicating mastery of body awareness skills) as they video-tape the participants' performances
- The baseline data will be taken for several days and plotted on a graph until a stable trend is achieved (This may vary in duration with different participants). Thereafter, the intervention will begin.

2. Intervention

- Will be determined and applied on an individual basis for each participant.
- The observers will use the musical App as a motivation and to prompt for the students to respond, as they video-tape the performances.
- The observers may also use physical and verbal prompts to remind the participants to respond to the music.
- The observers will work with each student for a certain amount of time per day. Each day will be considered a session and each session will have several trials (Playing a song from the beginning to the end will be considered a trial).

Data Analysis: Will calculate the % of the correct responses as a proportion of the total number of opportunities available to respond for both the baseline and the intervention.