

## Chapter 3: The Environment

### I. INTRODUCTION TO CHAPTER 3

This chapter focuses on a **person’s environment** and the *CAIS Environment Questions to Ask* and the *CAIS Environmental Intervention Strategies*.

This is the third of five chapters in Volume I of the three-volume Cognitive Abilities and Intervention Strategies (CAIS) Manual: *Asking Why with the CAIS: A Guide to Supporting a Person and Their Cognitive Abilities*.

The **five chapters** along with the **CAIS Handouts** in Volume I provide **background information** useful for understanding concepts and issues addressed in the *CAIS Questions to Ask* and *CAIS Intervention Strategies* presented in Volume II, the *CAIS Educational Series* curriculum in Volume III, and the **CAIS Online Course** “*Beyond Behavior: The Cognitive Abilities and Intervention Strategies (CAIS)*”. All of these, including the online course are described at the end of this chapter under the heading “Additional Resources”.

**On Website:** This chapter and all of the resources noted above, including the **CAIS Questions and Intervention Strategies** (in an interactive format and as pdf documents), the entire **three-volume manual**, and the **online course** are available on the **Improving MI Practices (IMP)** website at <https://www.improvingmipractices.org>

This **Chapter 3** (“The Environment”) directly relates to **Module III** (“The Environment”) of the **online course**, and **Session 3** (“Understanding the Environment”) of the *CAIS Educational Series*. Chapter 3 goes into **more depth** and provides **additional tips** and **content** that can help you better **understand** and more easily **apply** the information in **Module III**, in **Session 3**, and in the *CAIS Environment Questions to Ask* and *CAIS Environmental Intervention Strategies*.

In this chapter and manual are **examples** to illustrate particular intervention or support strategies and specific, often misunderstood aspects of the effects of brain and cognitive changes on a person’s behavior, or their ability to understand and interact with their surroundings, communicate, or perform a task. The examples are drawn from the experience of this author over many years. The term “**assistant**” is used in this manual (and in the examples) to refer generically to anyone who is in a role of advising, supporting, consulting, or directly helping a person in some way.

In this chapter the words “**Questions**” and “**Interventions**” or “**CAIS**” will frequently be used to refer to the “*Cognitive Abilities and Intervention Strategies (CAIS) Questions to Ask*” and the “*Cognitive Abilities and Intervention Strategies (CAIS) Intervention Strategies*”.

**Topics (and headings) in Chapter 3:**

- I. Introduction to Chapter 3
- II. A Supportive Environment
- III. Environmental Intervention Concepts
- IV. Tips about the Environment and Examples from the CAIS
- V. Illustration of Individualizing the CAIS through Similar Intervention Concepts
- VI. Summary and Looking Ahead
- VII. Additional Resources
- VIII. Description of the Environment CAIS: CAIS REVIEW

**Topics in this Chapter**

This chapter presents some **concepts** and issues related to a person’s environment with respect to their cognitive abilities, some tips regarding how to **modify** the **environment** to better support a person’s cognitive abilities, and some **examples** from the *CAIS Environment Questions to Ask* and *Intervention Strategies* to illustrate how the Questions and Interventions are **structured** and how they address the concepts and issues.

There are **four parts** to the CAIS Questions and Interventions: Cognitive Abilities, Environment, Communication, the Task and Daily Routines. This chapter addresses the **Environment CAIS**. Each part has a set of **questions** you ask yourself as you observe a person performing a task (with or without assistance). The Environment CAIS questions help you **identify** how well a particular person’s **environment supports** their **cognitive strengths** and **cognitive needs**, even as they change over time. For **each question** there is a **list of** ideas of concrete, practical, everyday **intervention** or support **strategies** that address that particular question.

You can find the full set of **all four parts** of the **CAIS Questions and Interventions** (including the Environment Questions and Interventions) in **Volume II** of this manual. It can also be found both in an **interactive** format and as **pdf** documents on the **Improving MI Practices (IMP) website** at <https://www.improvingmipractices.org>

An **introduction** and **instructions** for the **CAIS** are also in **Volume II** and on the same **website**. The **first page** of each *Questions to Ask* in all four parts of the CAIS gives brief instructions.

For a **brief description** of the **Environment CAIS** Questions and Interventions that still has details, see the “**CAIS REVIEW**” content at the end of **this chapter** under the heading “**Description of the Environment CAIS: CAIS REVIEW**”. It focuses on the environment, but is a brief overview of the full description of all four parts of the CAIS in Volume II. It might be helpful to read the “CAIS REVIEW” before reading the rest of Chapter 3 if you are not familiar with the CAIS and how it is structured.

## II. A SUPPORTIVE ENVIRONMENT

This chapter looks at how you can modify various aspects of the **environment** of a person to adapt to and support this person and their **cognitive abilities**. It explores how the CAIS can help you identify **what makes tasks and interactions with the environment and other people easy or difficult** for a particular person, and what helps this person feel relaxed or upset.

By adapting the environment to a particular person, you can help **improve this person's ability to understand and interact with their surroundings, perform a task, and feel more comfortable**. You can prevent or alleviate distressing situations (including behavior that creates distress), as well as reduce frustration and stress for both you and this person. Adapting the environment can make it easier for you and this person to feel comfortable, competent, and to enjoy your time together.

### The Environment

The **environment** includes **everything** in a **person's space**, for example, the size, shape, color of objects, walls and flooring, the wall textures, sounds, visual images, temperature, décor, and other objects and people this person may interact with. The physical environment includes **everything this person sees, hears, feels, tastes, and smells**.

The environment plays an important role in helping a person perform a task, understand, and interact with other people. It can make interactions or a task much easier or much harder to do. It also affects mood or how this person is feeling. It can reduce or increase fatigue and confusion.

When an environment does not meet a person's cognitive needs, this person can feel tired or overwhelmed. Even when this person appears to be sitting and doing nothing, an overly stimulating (or "wrongly" stimulating) environment can be tiring or confusing.

An **environment** that is **not adequately supportive** makes it much **more difficult** for **this person**, as well as for **you** to relate to and help this person.

### A Supportive Environment

A supportive environment helps a person in three main ways:

1. It **informs** this person, for example, telling them what to do and where things are.
2. It **stimulates** this person to have energy and the desire to do something.
3. It helps this person be and **feel safe and comfortable**.

For example, a supportive environment may have:

- **Objects** around that attract this person's attention and says what to do in this room, such as pictures of apples on the dining room wall.
- A **label** on the cupboard that says what is inside or to say where things are.
- A **sign** that can guide this person to the bathroom or to the dining room.

- A **familiar** overstuffed chair can remind a person this is their living room.
- **Pictures** on the **wall** of people engaged in interesting activities, such as flying a kite, to stimulate this person to go outside or to talk about memories of flying kites.
- Pictures of food and **savory smells** to stimulate an appetite.

### Example

Photo #1: **Shiny Floor**, Photo Credit: Todd Tarrant



**About this photo:** This is a floor in a public building. It has **bright shiny spots** of reflected light (that is, glare) that can be confusing.

A person can feel **anxious** or **cautious** when a **floor looks wet** and **slippery** because it is shiny. Even if this person's **eyes** work well, the reflected light on the floor may be distracting. Or this person's **brain** may **misinterpret** what this person is seeing.

A hallway with low light might cast shadows that are misinterpreted as holes or steps. Mirrors in odd places may look like someone else is in the room or may reflect light or movement that is misinterpreted as something scary. Big dark objects in the corner can look frightening.

Whereas, a bright cheerful room décor can **lift** a person's **mood**. The furniture arrangement, grab bars in the shower, and non-glare (non-shiny) floors can help a person feel and be safe. Contrast between the floor and a chair (for example, a light versus dark color) will help a person know exactly where to sit without fear of falling.

This information or **cues** in the environment may be **subtle**. Some of the cues may be unintentional and cause distress. For example, while you may not notice an exit sign, it might catch the attention of a person with many cognitive needs and encourage them to leave the building. Or if they only see the exit sign and not the sign next to it (that says "for emergency only"), they may use a door intended to be an emergency exit.

### Save This Person's Energy and Reduce Frustration

Chapter 3: The Environment in Volume I: Understanding Why with Concepts, Tips, and CAIS Examples.  
From Cognitive Abilities and Intervention Strategies (CAIS) Manual: *Asking Why with the CAIS: A Guide to Supporting a Person and Their Cognitive Abilities*. By Shelly E. Weaverdyck, PhD; Edited by Marcia Cameron, MA, Gail Brusseau, LMSW, Jacqueline Dobson, BA. 2010. Revised 6/30/20. On Improving MI Practices website at <https://www.improvingmipractices.org>

Chapter 1 describes how difficult it might be for a person with parietal lobe changes to do tasks such as locating an object, picking up a spoon, or walking on a floor that looks risky. Such seemingly simple tasks can cause this person to **work hard** and use a significant amount of energy. This person usually doesn't look like they are working hard even when they are.

Even for a person who understands and uses their environment well, it is important to **make tasks** and understanding and using their **environment easier** for them to save their energy for more difficult experiences or for fun experiences. It will also help this person feel less confused, tired, frustrated, or irritable.

An important **goal** of all **environmental intervention** is to **reduce fatigue** and to **make interactions** or a **task easier** for this person, regardless of how strong their cognitive abilities are.

**FOR MORE INFORMATION SEE CAIS HANDOUTS:**

#8 about the brain and cognitive abilities described in Chapter 1

#29 that describes visuospatial abilities and suggests interventions

#30 with vision and hearing interventions

### Compensate

When you can't change the environment or the change takes time, compensate for the environment by **explaining** or **reassuring** a person in a way that reduces the impact of the challenging environment. For example, you may need to explain and reassure this person that even though the floor looks wet, it is not wet. Chapter 4 discusses this in more detail.

### Changing the Environment Can Make it Easier for Both of You

**Modifying the environment** is often **easier than** trying to **change your communication strategies**. Adapting a challenging environment can make interactions and a task easier for both you and this person, and can help both of you feel less fatigued or distressed.

**Modifying the environment** can have a huge **impact** on a person with brain changes or differences. For example, when helping this person wash their arm, if you use a **plain brightly colored washcloth** it might be easier for this person to see and use it. If you carpet the floor or use a less shiny finish, they will more likely feel comfortable walking on it.

Usually, a person's environment can make your efforts to help this person much **easier** or much more **difficult**. If this person is frightened, distracted, or overwhelmed by the environment, you and they will have to work harder to help them feel safe, or to focus their attention on you, or to help them understand what you are saying. When the environment looks or feels dangerous or threatening to this person, it can be difficult to convince them it is not. When such

environmental challenges exist, the toll on your time, patience, problem solving abilities, and energy can be profound.

Examples of this are:

- If the shine on the floor is removed so it doesn't look wet or blinding to this person, then you will not need to put as much effort into persuading them to walk on the floor when they resist doing so.
- Posting a **sign on the door** of the bathroom so this person knows where the bathroom is, can save you the stress or embarrassment of having to tell this person where it is or remind them to use the bathroom.
- An accurate wall **clock with a sign** beside it saying when lunch is can reduce the frequency of questions you need to answer.
- **Increasing the lighting** to avoid shadows on the floors or walls can reduce the anxiety or fear this person might feel if they misinterpret the shadows as something threatening.
- **Removing** from the bedroom wall a **picture** that looks scary to this person can help them go to sleep more easily. This might reduce the need for you to repeatedly reassure this person with words or emotional support.
- Making an **exit door** less obvious by **decorating** it or painting it the same color as the surrounding wall can reduce the number of times a person tries to go through the door when it is unsafe to do so. That can reduce the number of times you will be required to intervene and persuade this person to stay inside with you. (This would need to be done carefully with exit doors in public spaces due to fire codes, etc.)

A person's **distress** can also be triggered when the environment reminds a person of an emotional, physical, or sexual encounter that was uncomfortable, painful, or traumatic in their remote or recent **past**. Some rooms or spaces might cause a person to relive their experience (for example if the spaces are similar to where such encounters occurred such as bedrooms, bathrooms, shower rooms, and especially in situations that involve removing clothing or being touched or someone else having control over this person). It is important to help this person **leave the room** in such cases. Watch and listen closely to this person and move slowly, gently, and with respect and compassion.

Changing the environment to make sure it isn't distracting, frightening, or overwhelming to this person, and ensuring the environment informs, encourages, and reassures this person can reduce anxiety, stress, and fatigue for both you and this person.

### III. ENVIRONMENTAL INTERVENTION CONCEPTS

The Environment part of the *Cognitive Abilities and Intervention Strategies (CAIS)* is organized around nine **intervention concepts** that are subheadings in the *CAIS Environment Questions to Ask* and the *CAIS Environmental Intervention Strategies*.

If you would like to look at the Environment CAIS as you read this chapter, see the **CAIS Environment Questions to Ask** and the **CAIS Environmental Intervention Strategies** in **Volume II** or on the Improving MI Practices (IMP) website at <https://www.improvingmipractices.org>

As mentioned earlier, there are **instructions** and a **description** of the CAIS in Volume II and an abbreviated description (called the “CAIS REVIEW”) at the end of this chapter under the heading “**Description of the Environment CAIS: CAIS REVIEW**”. You may want to read the CAIS REVIEW if you are not already familiar with the CAIS.

There are **additional instructions** for the *Environment Questions to Ask* that help with understanding a question or quantifying your responses to the questions in the *CAIS Environment Questions to Ask*. These additional instructions are called the *CAIS Environment Questions to Ask Additional Instructions for Response*. This is mentioned in the “Description of the Environment CAIS: CAIS Review” at the end of this chapter.

The CAIS is available in Volume II and is on the IMP website in an **interactive** format and as **pdf** documents that you can download.

There are two formats for the *CAIS Questions to Ask*: The *Yes/No* and *Four Point* Response Formats. They have exactly the same questions.

### **Subheadings in the CAIS Environment: Nine Environmental Intervention Concepts**

Look at the *CAIS Environment Questions to Ask Four Point Response Format*.

After the first page with an introduction and instructions, you see **I. Contrast** on the left.

It looks like this:

I. Contrast: Look for contrasts in:

As you glance through the *Environment Questions to Ask*, you’ll see the questions are organized under **nine subheadings** (numbered by Roman Numerals I-IX) that are **environmental intervention concepts**. These are concepts that address needs a person might frequently experience in most environments.

These are **aspects** of the **environment you can change** to accommodate this person’s cognitive strengths and needs. Modifying these aspects can help this person feel and be more successful, as well as **reduce stress** and **anxiety** and **increase enjoyment** for both **you** and **this person** you are helping.

These intervention concepts apply to **any room** in any **building** in any **setting** (as is true for all the concepts, questions, and interventions discussed in these three volumes.)

The nine concepts are:

- I. Contrast
- II. Patterns
- III. Clutter
- IV. Cueing
- V. Normal
- VI. Homey
- VII. Lighting
- VIII. Texture
- IX. Privacy

#### IV. TIPS ABOUT THE ENVIRONMENT AND EXAMPLES FROM THE CAIS

More tips regarding the environment are presented here under the nine **environmental intervention concepts (subheadings)** that are in the CAIS Questions and Interventions. The first four concepts are considered in more detail with **examples** from the Environment CAIS to illustrate how the **CAIS is structured**.

Only a few of the tips, issues, questions, and interventions are mentioned in this chapter. See many **more details** and **questions** and **interventions** in the Environment **CAIS** in Volume II. There are **many more** issues, questions, and interventions that **could have been added** to the **CAIS** as well. You may want to add some of your own.

##### **I. Contrast as An Environmental Intervention Concept**

We used an illustration in Chapter 2 of standing at a bathroom sink and **offering** a person a **washcloth** to wash something off their arm. Now let's consider the environment in this illustration.

Whether or not this person has any sensory loss as described in Chapter 2, this person will likely benefit from an environment that offers contrast between an object and the area surrounding it. Contrast can address a variety of cognitive needs, in addition to sensory needs. Making an object easy to see quickly can save this person's energy and free their attention for other thoughts and details.

In an environment such as a bathroom full of hard shiny surfaces that are highly **reflective** of **light** and **sound**, **objects** can easily blur into the background and **words** can be hard to hear.



This could cause any of us to have to work harder than necessary to see the object or to hear words. But this would be especially true of the middle aged and older adults or anyone else with sensory changes or a person with cognitive changes as described in Chapter 2.

Photo #2: **White toilet, walls, and floor**, Photo Credit: Shelly Weaverdyck

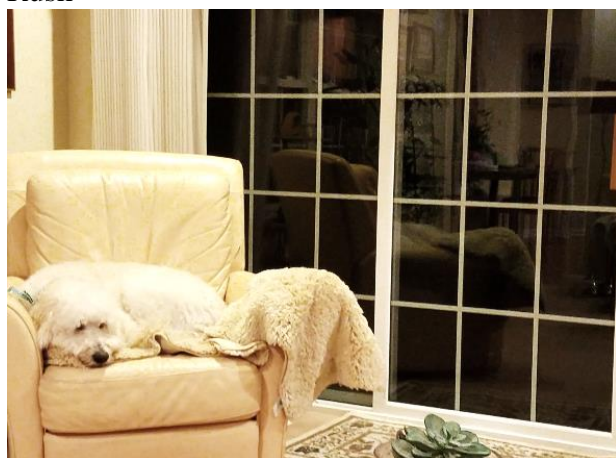


**About this photo:** A white toilet, bathtub, or shower beside a light-colored wall or floor is **hard to recognize and use**.

This toilet can be hard to see. It may be difficult to sit on it or to aim for it when using it. This person may assume a round dark waste basket is the place to urinate.

It can also be difficult to see where a white grab bar is when it is in front of a white shower wall, or a white washcloth in front of a white shirt.

Photo #3: **Dark window, white chair, white dog, and white blanket**, Photo Credit: Alyson Rush



**About this photo:** The bold black windows contrasting with the white around them, might draw a person’s **attention** toward the window and away from the white dog camouflaged in the white chair.

It might be easy for this person to accidentally sit on the dog or be knocked over by the dog when they try to sit in the chair. The plant on the table may look like it’s sitting on the rug on the floor, creating another possibility of a stumble or of increased confusion.

The chair itself might be **difficult to see**. The white blanket on the arm of the chair is difficult to see and can appear to change the shape of the chair. So the chair might not be recognized as a chair.

The dark windows could be frightening. Note the reflection in the windows that can also be confusing to a person whose eyes or brain have difficulty understanding the environment.

Objects that contrast with their background or other objects behind them are much easier for a person to see and locate. You can **create contrast** in the bathroom by using colored towels, toilet seats, shower nozzles, and grab bars that contrast with the walls, floor, and shower. You can use objects that contrast with your own skin or clothes as you hand them to a person.

**Objects** that are **not intended** for a person, such as electrical outlets and doors on closets with out-of-season clothes, can be **blended** into the **background** by painting them the same color as the wall to discourage use. It is best if dangerous objects can be removed.

**Avoid** using **too much contrast**. Use contrast only with objects that are important and a person needs to see. Let all other objects fade into the background. Too many objects that are unnecessarily contrasted can be overwhelming, causing even more confusion, stumbles, and fatigue.

**Example: Contrast in the CAIS Environment Questions to Ask**

Look at the questions in the **I. Contrast** section of the *CAIS Environment Questions to Ask Four Point Response Format*.

**I. CONTRAST:** Look for contrasts in:

- Color intensities (dark against light)
- Amount of lighting (dim versus bright)
- Busyness (patterns versus plain solids, or commotion versus quiet)

A. Are there contrasts that draw attention to the areas of the room this person might need or want to use? (For example, are the room decorations in safe areas more visibly engaging than decorations near dangerous or unused exit doors?)	1. <b>None or few</b> areas are appropriately contrasted	2. <b>Some</b> areas are appropriately contrasted	3. <b>Many</b> areas are appropriately contrasted	4. <b>Most or all</b> areas are appropriately contrasted
B. Are there contrasts that highlight objects this person might need	1. <b>None or few</b>	2. <b>Some</b> of the	3. <b>Many</b> of the	4. <b>Most or all</b>

or want to use? (For example, is there enough difference between the toilet seat and floor, the closet door and surrounding wall, the towel and the wall, the shower nozzle and shower wall?)	of the important objects are appropriately contrasted	important objects are appropriately contrasted	important objects are appropriately contrasted	of the important objects are appropriately contrasted
C. Are edges of surfaces, including changes in floor height, highlighted with contrasts so this person can see how high to lift their feet or avoid dropping or bumping into objects? (For example, highlighted edges of tables, stair steps, bathtubs, and shower thresholds?)	1. <b>None or few</b> of the edges are appropriately contrasted	2. <b>Some</b> of the edges are appropriately contrasted	3. <b>Many</b> of the edges are appropriately contrasted	4. <b>Most or all</b> of the edges are appropriately contrasted
D. Do objects this person needs to avoid look similar to the surrounding area? (For example, do electrical outlets and dangerous door exits look similar to the surrounding wall?)	1. <b>None or few</b> of such objects look similar	2. <b>Some</b> of such objects look similar	3. <b>Many</b> of such objects look similar	4. <b>Most or all</b> of such objects look similar
E. Is there a variety of moods created by various spaces, so this person can be drawn or led to an area that accommodates (by either matching or changing) their mood at the moment? (For example, are there both a busy high-energy living room and a quiet cozy den?)	1. <b>No</b> spaces are a different mood from each other	2. <b>Two</b> types of moods	3. <b>Three</b> types of moods	4. <b>Four or more</b> types of moods

Note **Question B** above.

- I. *Contrast* Question B: “Are there contrasts that highlight objects this person might need or want to use?”

If you are offering a washcloth for this person to wash their arm, then you want to make sure this person can **easily see** the **washcloth**. Even if this person can see well, make this part of the task as easy as possible. So, look to see if the washcloth contrasts with the clothing you are wearing, your skin, or the object and wall behind the washcloth. Does it contrast with the sink?

Note **Question D** above.

- I. *Contrast* Question D: “Do objects this person needs to avoid look similar to the surrounding area? “

To reduce the chances of this person grabbing the electrical cord for balance as they reach a hand out to take the washcloth, look to see if the electrical cord blends into the background behind the cord. Is the grab bar highly contrasted with its background, so this person grabs the grab bar instead?

As mentioned earlier in this chapter, if you want **additional instructions** or more **explanation**, elaboration, detail, rationale, or help with understanding a question or quantifying your responses regarding **each question** in the *CAIS Environment Questions to Ask*, you can look up the question in the *CAIS Environment Questions to Ask Additional Instructions for Response*. This is mentioned in the “Description of the Environment CAIS: CAIS Review” at the end of this chapter.

**Example: Contrast in the CAIS Environmental Intervention Strategies**

Now look at the suggested intervention strategies in the ***I. Contrast*** section of the *CAIS Environmental Intervention Strategies*.

A “1” or “2” response (or “No” in the *Yes/No Response Format*) in the *Environment Questions to Ask* directs you to the *Environmental Intervention Strategies* where ideas of **intervention strategies** are identified for **each question** in the *Environment Questions to Ask*.

The interventions that suggest how to make an object stand out from (that is, **contrast** with) other objects and from the area surrounding the object are listed under Question B.

Look at the interventions under **Question B** in the ***I. Contrast*** section of the *Environmental Intervention Strategies*.

**I. CONTRAST**

**Look for ways to increase or reduce contrast in:**

- Color intensities (dark against light)
- Amount of lighting (dim versus bright)
- Busyness (patterns versus plain solids, or commotion versus quiet)

.....

**B. Are there contrasts that highlight objects this person might need or want to use? (For example, is there enough difference between the toilet seat and floor, the closet door and surrounding wall, the towel and the wall, the shower nozzle and shower wall?)**

**STRATEGIES:**

1. Identify objects this person might need or want to use.
2. Make objects this person might need or want to use stand out from the area surrounding them, so they draw this person’s attention and help this person see an object and its exact location.
3. Increase the color or light-dark differences between an object and the wall or surface behind it to make an object draw this person’s attention and easily see its location.

**EXAMPLES for #B.3:**

- *The toilet and the floor so this person can easily recognize the location of the toilet when trying to find it, sit on it, or stand in front of it.*
- *A railing or grab bar and the wall behind it, so they can more easily grab the railing or bar when falling.*
- *A dinner plate and the table underneath it, so they can more easily aim for the plate with a fork when eating.*
- *A colorful light switch on a plain wall.*
- *The shower nozzle and the wall behind it.*

4. Make objects this person might need or want to use different from other objects.

**EXAMPLES for #B.4:**

- *Add color to the spoon to contrast with the fork.*
- *Boldly write this person’s name on the toothpaste tube to make more contrast with the tube of cream.*
- *Use a different color, size, or shape of pill box for morning pills versus afternoon pills.*
- *Make the food different from the dinner plate, so it stands out.*

5. Increase the light-dark difference between objects.

**EXAMPLES for #B.5:**

- *A white pill in a small dark dish.*
  - *A colorful toothbrush on a plain neutral colored shelf.*
  - *A colorful washcloth on a white sink.*
  - *A chair and the floor.*
  - *The floor and table.*
6. Serve foods that vary in color for easier identification.

**EXAMPLES for #B.6:**

- *Serve green beans, red tomatoes, and white potatoes, rather than white potatoes, white pears, and white cauliflower in the same meal.*
7. Avoid using contrast with too many objects. Highlight only important objects. Let other objects fade into the background so that this person doesn't expend energy on noticing and interpreting unnecessary contrast, and can save energy for more important environmental stimuli.

**EXAMPLES for #B.7:**

- *Make the dinner plate and the other dishes all the same color (unless a particular dish must stand out).*
- *Make the food more colorful than the dinner plate so it is the food this person notices, rather than the plate.*

Here are interventions listed for **Question D** in the *I. Contrast* section of the *CAIS Environmental Intervention Strategies*.

They suggest **reducing** contrast for some objects.

**D. Do objects this person needs to avoid look similar to the surrounding area? (For example, do electrical outlets and dangerous door exits look similar to the surrounding wall?)**

**STRATEGIES:**

1. Identify each object in the room this person might need to avoid or not want to use very frequently.

**EXAMPLES for #D.1:**

- *A sharp knife in the kitchen.*
  - *Scissors in the sewing room.*
  - *Electrical outlets in the bathroom.*
  - *A dangerous exit door.*
  - *A storage closet door.*
2. Make each object in the room that is dangerous or less desirable, less obvious. Either remove the object or make it blend in with its background so this person will less likely notice it.

**EXAMPLES for #D.2:**

- *Camouflage an electrical outlet, a dangerous exit door, or a storage closet door by painting it the same color as the wall around it.*
3. Avoid increasing this person's confusion by giving inaccurate environmental information, such as changing an object so that it looks like something it isn't.

**EXAMPLES for #D.3:**

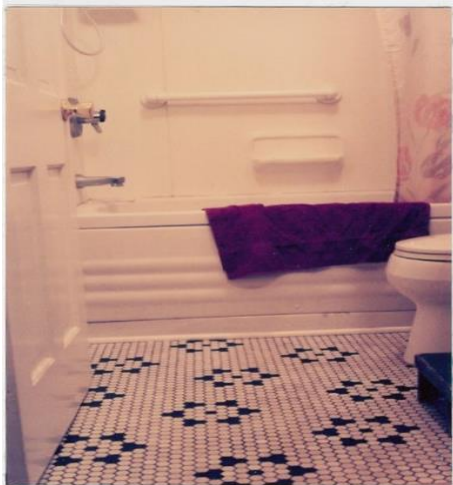
- *Making an electrical outlet look like a wall decoration.*

**See more interventions** listed in this contrast section of the *CAIS Environmental Intervention Strategies*.

## **II. Patterns as An Environmental Intervention Concept**

Decorations can make a room look homier, but they should not be distracting or look like bugs or objects to a person. Patterns that are geometric or repetitive, such as plaids or alternating dark and light squares, can make a surface look like it is moving or make a person dizzy or nauseous. Borders or patterns on floors can look like steps, holes, or different floor heights and can cause a person to hesitate or fall or refuse to go near that area. Figures such as flowers or circles on an overstuffed chair can look like something to pick up or can make the chair look like something other than a chair. **Avoid** such **patterns** on clothes (including yours), furniture, floors, and walls.

Photo #4: **Bathroom** with **black and white floor**, Photo Credit: Shelly Weaverdyck



**About this photo:** This pattern on the floor can be **confusing** to this person if they have reduced vision or brain changes. It might draw their attention and **distract** them, especially because so much of the bathroom is white. It might make them feel **physically uncomfortable** or make it **difficult** to stand (or aim) when they are using the toilet or to stand after using the toilet. Even the dark towel that is not hanging straight over the edge of the tub could confuse this person who may feel like the room is tilted (or that they are).

Regarding contrast, note the white bathtub, toilet, and grab bar on the wall that are **hard to see**. The dark towel does mark the edge of the tub and indicate that the tub is there.

In the context of **offering** a person a **washcloth** to wash their arm, look around you and this person as you prepare to offer the washcloth. Interventions are listed in the example below. As you read them, consider how you could **change** the **environment** in ways they suggest.

Can you **position yourself** in a spot that encourages this person to look away from parts of the environment that could be distracting, confusing, or distressing?

Is the washcloth a **plain material**, that is, not plaid or patterned?

Is your **own shirt** a plain material, that is, not plaid or patterned?

### **Example: Patterns in the CAIS Environmental Intervention Strategies**

Look at the interventions listed under **Question C** in the *II. Patterns* section of the *CAIS Environmental Intervention Strategies*.

## **II. PATTERNS**

**Look for ways to ensure there are no visual patterns that could:**

- Be distracting
- Be misinterpreted
- Cause nausea or dizziness
- Camouflage an object

.....

**C. Are all objects easy to see because they are not in front of or beside a patterned surface or object? (For example, a pill or comb is not held in front of a patterned shirt?)**

### **STRATEGIES:**

1. Ensure that all objects this person may need or want to use, are easily visible to this person.
2. Remove each object from surfaces that are patterned or that draw this person's attention to the background more than to the object.

#### **EXAMPLES for #C.2:**

- *Put a white pill in a small dark dish rather than in a hand in front of a brightly patterned shirt.*
3. Remove each object from surfaces that camouflage or hide the object. Avoid surfaces with repetitive figures that make objects on the surface difficult to locate against the busy background.

#### **EXAMPLES for #C.3:**

- *Put a dinner plate on a plain rather than figured tablecloth.*
- *Put soap on a plain washcloth.*
- *Put a hairbrush on a plain countertop.*
- *Put a chair in front of a plain or subtly decorated wallpaper.*

**See more interventions** listed in this patterns section of the *CAIS Environmental Intervention Strategies*.

## **III. Clutter as An Environmental Intervention Concept**

**Remove all unnecessary clutter.** When a mirror adds to the clutter by reflecting light and movement or making it appear there are additional people and objects in the room, cover it. Keep objects removed from sight until they are needed. Remove objects that are so big or so eye catching, such as a big piece of art, that they distract a person and make it difficult for them to see other objects or spaces that they may need to use.

Photo #5: **Bathroom with cluttered sink counter**, Photo Credit: Shelly Weaverdyck



**About this photo:** Clearly this bathroom sink counter could cause **confusion** for a person with reduced vision or with brain changes. Many of the items are unnecessary and should be removed. While some of the items are easy to see, some are hard to see and even “disappear”.

For example, there are too many toothbrushes, cups, and bottles. There is a bottle of liquid soap as well as bar soap. There is a contact lens case. The fork would not normally be in a bathroom, so could be confusing.

There should be **visible only** the **items** this person **needs** to use at this time.

The light switches blend into the wall, but there is one middle light switch that is dark. The dark spot draws attention. But, this is actually a broken switch, so should in fact not be visible. It could be dangerous for this person if they try to use it, especially when their hand is wet.

Three of the dark cups are difficult to see or could “disappear” for this person.

### **Example: Clutter in the CAIS Environmental Intervention Strategies**

Look at the *III. Clutter* section in the *CAIS Environmental Intervention Strategies*. The interventions are not listed below but are available in *Section III of the CAIS Environmental Intervention Strategies* in Volume II.

### **III. CLUTTER**

**Look for ways to ensure there are not:**

- Too many objects in the environment
- Objects and information that are recognized or useful only to other people, and not to this person
- Objects that are too distracting or confusing
- Objects, people, sounds, or unusual lighting that are inappropriate; that is they are overwhelming, confusing, or tiring, rather than appropriate for this person at this time. Appropriate here means they are limited and selected to be helpful, useful, interesting, inspiring, and to offer choices to this person.



See many interventions listed in this clutter section of the CAIS *Environmental Intervention Strategies*.

#### **IV. Cueing as An Environmental Intervention Concept**

A **cue** as used here is something in the environment that **gives a person information**. It might tell them what to do or where something is. A cue can be:

- A sign or picture on a wall or door.
- A recognizable object, such as a washcloth in your hand, suggesting it's time to wash.
- A verbal request.

A person may **depend heavily on the environment to tell them what to do**, when their brain has to work too hard to figure it out on its own. Are there **enough cues** that this person can understand what to do in the room? Does this person **recognize** and **understand** the cues? Make sure this person understands written cues that are signs or notes. Even if they can read aloud, they may not understand what they read or that the note or sign applies to them. **Modeling** a task can provide helpful cues to tell this person what to do. If they are the only person in the room washing their arm, it can be difficult for them to know that they are expected to do something different from the other people in the room. Cues need to be **repeated** frequently to inform and reassure this person.

Photo #6: **Door** with a **sign** of a **colored toilet**, Photo Credit: Shelly Weaverdyck



**About this photo:** This sign on a bathroom door is a **cue**. It tells this person this is a bathroom with a toilet.

This cue has a number of features that help make it understandable to this person. The sign **draws attention** using **contrast**. It is also **realistic**, so that if this person has trouble recognizing two dimensional drawings they might be able to recognize this drawing of a toilet. The contrast between the seat and the base of the toilet in the sign also might help them **recognize** the toilet.

**Example: Cueing in the CAIS Environmental Intervention Strategies**

Look at the interventions listed under **Question C** in the *IV. Cueing* section of the *CAIS Environmental Intervention Strategies*.

**IV. CUEING**

Look for ways to present information this person:

- Can understand
- Can see easily without searching
- Can see without moving too much
- Recognizes through various senses of hearing, seeing, touching, smelling, and tasting
- Can use and trust
- Is stimulated by

.....

**C. Are all cues recognizable? (For example, do signs use written words only if this person can read and understand the words, or three-dimensional objects when two-dimensional drawings are no longer recognized? Do cues attract emotionally and not just inform cognitively? Are multiple senses addressed to increase recognition?)**

**STRATEGIES:**

1. Adapt all cues to accommodate this person's sensory needs at this time.

**EXAMPLES for #C.1:**

- Make signs and lettering on signs big enough for this person to see well.
2. Use written notes and signs only when it is clear this person can read and understands what they read.
  3. For cues, use photos rather than drawings.
  4. Use as cues objects that look normal, such as a bathtub that looks like a normal (to them) bathtub they had in their own home.
  5. Avoid using only cues that inform with words.
  6. Avoid cues that require this person to recognize their own moods or desires. Use cues that help this person respond to a cue without thinking about it or knowing why they are responding to it or knowing how they feel.

**EXAMPLES for #C.6:**

- *Instead of posting a sign in the noisy living room that says "Quiet room" with an arrow directed toward a quiet room which might require this person to know they that they are feeling tense and want a quiet room, use cues that emotionally attract this person into a path toward the quiet room, so they don't have to notice their own feelings or make a conscious decision to go to the quiet room. Such cues could be a series of luxurious plants and soft lamps that draw this person away from the active, noisy living room.*
7. Avoid cues that require this person to consciously choose alternatives, that is that require this person to rely on their ability to recognize options in addition to the obvious option in front of them, and to make decisions about those alternative options. Adapt the cues to this person's abilities and preferences at this time.

**EXAMPLES for #C.7:**

- *When this person is eating oatmeal, have other options of food in front of this person, so they can be drawn to them as they get tired of the oatmeal. Avoid pointing to the food and saying "You can have some toast or an egg if you get tired of eating oatmeal. Would you like toast or an egg?" Make it easy for them to simply choose foods without talking about it or consciously noticing they are changing what they are eating.*
- *Avoid presenting them with a list of other foods they could choose to eat now or at the*

*next meal, while they are eating their oatmeal. Avoid requiring them to imagine and make a decision about alternatives to what they are focused on at this moment.*

8. Use cues that invite rather than simply inform. If a room is not visible, present cues that draw this person emotionally and not simply inform them cognitively (such as a directional sign of words).

**EXAMPLES for #C.8:**

- *Use cues that attract this person into a path toward a room with a different mood, such as a series of luxurious plants and soft lamps that lead toward a quiet den and away from an active, noisy living room.*
9. Adjust cues as this person's needs, abilities, and desires change. Make the cues more concrete and easily interpreted.

**EXAMPLES for #C.9:**

- *When this person no longer interprets a particular color on their bedroom door as a cue to the bedroom, then add their name to the door.*
  - *When their name on the bedroom door becomes unrecognizable as a cue (this person may be able to read it, but doesn't realize that means this is their bedroom), then replace it with a photo of this person.*
  - *When this person no longer recognizes themselves, then use a picture of a bed.*
  - *When they can no longer relate the two-dimensional picture to a three-dimensional object, keep the bedroom door open.*
10. Avoid relying solely on visual cues. Use cues this person can hear, smell, taste, and feel.

**EXAMPLES for #C.10:**

- *Use songs, such as marching songs while walking to the dining room.*
  - *Use kitchen aromas to indicate lunch is ready.*
  - *Use sequences of tastes to encourage eating.*
  - *Use fabrics or various textured wallpaper to reflect different rooms.*
11. Vary objects in multiple ways to remind this person of their function.

**EXAMPLES for #C.11:**

- *Use a hand towel that is different in texture, size, thickness, and color from a washcloth, bath towel, dish cloth, and dish towel.*

**See more interventions** listed in this cueing section of the *CAIS Environmental Intervention Strategies*.

### **V. Normal as An Environmental Intervention Concept**

Other concepts with intervention ideas are in the *CAIS Environmental Intervention Strategies*, for example, normal (as **this person** would **define** or **experience** it).

Normal for this person would be what is familiar, what this person would expect, and what is consistent with their past (for most of their life). This also needs to take into account this person's current preferences and cultural norms. Avoid assuming that adjustments a person has had to make to conform to someone else's expectations, schedule, or preferences are now the "new normal" for this person. Use standards that reflect what this person has had the most experience with in their past.

Make the **furniture, appliances, and spaces normal** and **familiar** to this person.

The harder this person needs to work to recognize or use an object, the more confused, frustrated, tired, and irritable they may become. Stoves and sinks that don't look familiar and mirrors in odd places can be confusing or frightening.

All spaces should look normal to this person, particularly rooms that require specific tasks, such as the bathroom, bedroom, kitchen, and living room. Tasks should occur in the room they are normally done throughout most of this person's life. Combing a person's hair in the living room can be confusing and embarrassing.

Try to use **words, objects, and routines** that are familiar or normal to this person, since it may be hard for their brain to recognize what is unfamiliar.

**See intervention ideas** regarding normal aspects in *Section V of the CAIS Environmental Intervention Strategies*.

## **VI. Homey as An Environmental Intervention Concept**

Another concept is Homey.

Even if this person can't understand or remember your warm, reassuring words, they will still get reassurance from a **homey, comforting** environment.

Just as "normal" depends on what feels familiar and normal to this particular person, "homey" also needs to take into account what **this person feels as homey**. This may require knowing what the homes of this person have been in the past, especially when they were of this person's choosing. Identify with this person or, if necessary, someone who knows them well what feels homey to this person and what this person wants. This needs to be done wherever this person lives, whether in their own or someone else's private home or in a larger residential setting with other people.

Some people like bright colors and lots of pillows on the couch. Others prefer a more sparse less cluttered space. The **temperature** of the room is important. It should be set to where this person feels most comfortable.

The goal in this section is to make the space feel **comforting** and **safe** to this person.

**See intervention ideas** regarding homey aspects in *Section VI of the CAIS Environmental Intervention Strategies*.

## **VII. Lighting as An Environmental Intervention Concept**

It is important to have **bright, evenly spaced lighting** in the **entire room**, so there are **no shadows**. Shadows can be misinterpreted and frightening. They can look like ghosts, moving objects, wet spots, or a step. Light from windows can also create shadows and dark spaces.

All spaces, including the bathroom, kitchen, and shower need to be well lit without glare. This person's brain may have difficulty interpreting what they are seeing if objects are not clearly visible. They may also feel uncomfortable moving in the space if they can't see easily.

**See intervention ideas** regarding lighting in *Section VII of the CAIS Environmental Intervention Strategies*.

### **VIII. Texture as An Environmental Intervention Concept**

**Texture** is another concept. **Sounds** seem louder when they bounce off shiny, tiled walls and floors, so that background noises like running water, music, and fans, might sound especially loud to this person and make it hard for them to hear your reassuring voice.

Watch this person to see if they can hear you well enough. If light is reflected off a surface (for example, there is glare), then noise is also likely reflected. **Glare** can make the floor look wet and slippery and the sink or tub hard to see.

Textured walls, rubberized floors, and towels on racks can help **absorb** both **sound** and **light**.

Note the walls, ceiling, floor, and large objects in the room. Are they smooth, hard, and shiny? Do they reflect light and noise? Do pictures hanging on the wall have nonglare glass?

A goal of using cloth and other textures on the surfaces in the room is to reduce noise and light reflection. Texture also **adds interest** and is **stimulating** to touch.

**See intervention ideas** regarding texture in *Section VIII of the CAIS Environmental Intervention Strategies*.

### **IX. Privacy as An Environmental Intervention Concept**

**Privacy** is the last concept in the *CAIS Environment Questions to Ask* and *CAIS Environmental Intervention Strategies*.

A person's **modesty** and **dignity** are very important. Mistakes, emotions, and cognitive needs can be embarrassing and upsetting, and a person may need space and time to rest and be alone.

Keeping doors closed, discussing their needs in a private room, and respecting their needs for their own space and possessions may help this person feel as respected and dignified as possible.

**See intervention ideas** regarding privacy in *Section IX of the CAIS Environmental Intervention Strategies*.

## **V. ILLUSTRATION OF INDIVIDUALIZING THE CAIS THROUGH SIMILAR INTERVENTION CONCEPTS**

### **Example: Individualized by Similar Concepts**

All the CAIS Questions and Interventions are **individualized** to a person, time, and setting, so that you can adapt the environment to support this particular person's **specific cognitive strengths and needs**.

You might sometimes use only one or some of the four parts of the CAIS Questions and Interventions. You can be more thorough and can even more directly address a person's individual cognitive abilities with environmental modifications by first using the Cognitive Abilities CAIS.

Once you have completed the *Cognitive Abilities Questions to Ask* and reviewed the resulting cognitive intervention suggestions from the *Cognitive Intervention Strategies*, you will understand better this particular person's specific cognitive strengths and needs.

Then you can use the suggested interventions from the *Environmental Intervention Strategies* to even more closely **tailor** your **adaptations** of the **environment to this person**. One of the ways to increase the precision of the individualization is described in this section.

In this section we illustrate an **expanded use** of interventions that can increase your ability to individualize your approach to a particular person. This can **increase the precision** and effectiveness of the interventions and reduce the time and effort needed to create a less stressful and more comfortable situation for both you and this person.

#### **Five Ways the CAIS is Individualized:**

1. The **questions** are structured to consider this person in this setting at this time as the reference for response.
2. **Answers** to the **questions** in the *CAIS Questions to Ask* are specific to a particular person in a particular setting at this time.
3. Identification of specific **intervention** strategies in the *CAIS Intervention Strategies* are **determined by the answers** to the questions in the *CAIS Questions to Ask*.
4. **Similarities between concepts** referred to or identified in the suggested interventions as relevant to this person in the *CAIS Cognitive Abilities Questions to Ask*, and concepts (that is, subheadings) identified as relevant to this person in the *CAIS Questions to Ask* in the **other three parts** of the CAIS (that is, in the *Environment*, *Communication*, or *Task CAIS*). These similarities identify the interventions likely to be the **most** effective among the interventions likely to be **effective** for this particular person.
5. **Similarities between specific intervention** strategies suggested in the *CAIS Cognitive Intervention Strategies* and specific intervention strategies suggested in the *CAIS Intervention Strategies* in the **other three parts** of the CAIS (that is, in the *Environment*, *Communication*, or *Task CAIS*) identify the interventions likely to be the **most** effective among the interventions likely to be **effective** for this particular person.

Listed in the box above are **five ways** all the CAIS *Questions to Ask* and *CAIS Intervention Strategies* in each of the four parts of the CAIS are **individualized** to a particular person, time, setting, and situation. These are explained in the section called “BB. Individualized: The CAIS Questions and Intervention Strategies” in the “II. Instructions” part of the “Complete Instructions and Introduction for the CAIS Questions to Ask and CAIS Intervention Strategies” in Volume II and on the IMP website at <https://www.improvingmipractices.org>

# 5 above is described and illustrated in Chapter 4 as a way to further individualize the CAIS. It is a simpler way than #4 (that is described here) in that #5 simply compares specific interventions.

#4 in the box is another way to further individualize (to increase the precision of) the CAIS. It suggests **comparing** the **intervention concepts** (that is, the subheadings of sections in the CAIS) in the interventions suggested for a particular person from the *Environmental, Communication, or Task Intervention Strategies*, with those concepts generally referred to or identified in the interventions suggested for this person from the *Cognitive Intervention Strategies*. **Similarities** in these concepts identify interventions that will likely be especially **important** for **this particular person**.

**Examples** of the *I. Contrast* intervention concept in the *CAIS Environmental Intervention Strategies* are used below to demonstrate the #4 way (listed in the box above) that the CAIS Interventions are individualized.

This #4 way of individualizing **applies to all four parts** of the **CAIS** (Cognitive Abilities, Environment, Communication, Task and Daily Routines), but this illustration below will **compare** intervention **concepts** (that is, the subheadings) from the *Environmental Intervention Strategies* with the concepts referred to or identified in the suggested interventions from the *Cognitive Intervention Strategies*. The interventions and concepts that are compared are those that are specifically suggested for this particular person. The illustration is described below.

To illustrate, we will use examples from the **Environmental** Interventions listed under **Question B** in the *I. Contrast* section, and from the **Cognitive** Interventions listed under **Question K** in the *II. Comprehension/Perception* section.

In these two sections and questions, you will see similarities in the concepts identified as relevant in the interventions suggested for this person. In the *Environmental Intervention Strategies* the concept of contrast is in the wording of the subheading of the *I. Contrast* section. That is, the word “Contrast” is specifically used. The idea of and the word “contrast” appear in the suggested interventions in the *Cognitive Intervention Strategies*. This is where the similarities are found.

### **Example: Concepts in the Cognitive Interventions and the Environmental Interventions**

Let's assume you have already answered the questions in the *CAIS Cognitive Abilities Questions to Ask* about a particular person.

As you read the specific intervention strategies suggested in the *CAIS Cognitive Intervention Strategies* (found in Volume II) that are generated or triggered by your responses of “No” or “1” or “2” about this person in the Cognitive Abilities Questions, you will see references to one or more of the nine **environmental intervention concepts** (that is, the subheadings) in the *CAIS Environmental Intervention Strategies*.

Then you can look in the *CAIS Environmental Intervention Strategies* for interventions listed under those specific environmental concepts (that is, the subheadings) to learn more details about how to implement them.

This will be especially valuable when the interventions suggested in the triggered *Cognitive Intervention Strategies* refer to changes to make in the environment and to concepts that are also concepts triggered in the *Environmental Intervention Strategies*. That is, those interventions are under the same concepts (subheadings) triggered by your “No” or “1” or “2” responses to the Environment Questions. This will indicate exactly how (in which concepts) the environment is falling short in supporting the cognitive needs of this particular person.

This will **narrow** the suggested **interventions** down to those that are very **specifically needed most** by (and therefore likely to be most helpful for) **this particular person**.

### **Example: Comprehension/Perception in the Cognitive Interventions**

For example, let's say you answered “No” for this particular person to Question K in the *II. Comprehension -Perception Phase* of the *CAIS Cognitive Abilities Questions to Ask Yes/No Response Format*, “Does this person accurately recognize where objects are relative to other objects?”.

Look at the intervention suggestions under **Question K** in the *II. Comprehension/Perception* section of the *CAIS Cognitive Intervention Strategies* that were triggered by your response of “No”.

Note interventions #7 and #11.

## **II. COMPREHENSION/PERCEPTION**

**Look for ways to help this person recognize and understand information received through the senses, by helping them to more easily:**

- Understand what they see and hear
- Recognize where an object or sound is in space

.....

**K. Does this person accurately recognize where objects are relative to other objects?**

**STRATEGIES:**



.....

7. Make an object that is important to this person **stand out** from other objects.

**EXAMPLES FOR #K.7:**

- *Make the important object colorful.*
- *Increase the light-dark **contrast** between the important object and other objects.*
- *Place a colorful place mat under a plain plate to draw this person’s attention to the plate and to help them see exactly where it is.*

.....

11. Ensure the area surrounding an object (including yourself and parts of your body) **contrasts** with the object so the location of the object is more easily and accurately seen.

**EXAMPLES FOR #K.11:**

- *Make sure the chair is lighter or darker than the floor.*
- *Make the light switch lighter or darker than the wall behind it.*

**Example: Contrast in the Environmental Interventions**

Consider again **Question B** in the *I. Contrast* section of the *CAIS Environmental Intervention Strategies*. This is the question with the interventions used earlier in the description of the Contrast intervention concept.

- I. Contrast* Question B: “Are there contrasts that highlight objects this person might need or want to use?”

As we saw earlier, these interventions under Question B suggest how to make an object stand out from (that is, **contrast** with) other objects and from the area surrounding the object.

Here are two of those interventions we saw earlier.

**B. Are there contrasts that highlight objects this person might need or want to use?**

.....

3. Increase the color or light-dark differences between an object and the wall or surface behind it to make an object draw this person’s attention and easily see its location.

.....

5. Increase the light-dark difference between objects.

**EXAMPLES for #B.5:**

- *A white pill in a small dark dish.*
- *A colorful toothbrush on a plain neutral colored shelf.*
- *A colorful washcloth on a white sink.*

If these interventions under Question B in the *I. Contrast* section of the Environmental Interventions were triggered by a “No” response to Question B in the Environment Questions, then these **triggered interventions** would likely be **most effective** for this **particular person**, since they were also triggered in the *CAIS Cognitive Intervention Strategies*.

That is, your responses to the *Cognitive Abilities Questions to Ask* indicated this person had **difficulty** knowing **where objects** were relative to other objects. This triggered suggested

interventions in the *Cognitive Intervention Strategies* that indicated **contrasting** important objects could help this person more easily know where the objects are.

On the other hand, your responses to the **Environment Questions to Ask** indicated the environment did not have enough contrast in important objects. So, the suggested interventions in the *Environmental Intervention Strategies* indicated increasing the contrast among objects and increasing the number of important objects that are contrasted would help this environment be more supportive of this person's cognitive needs and allow them to more easily find or notice objects that are important. They also suggested how to do that.

The similarities between the concepts identified in the *Cognitive Intervention Strategies* and the *Environmental Intervention Strategies* (that is, contrast, in this illustration) indicate that the kind of help this person specifically needs, is also the kind of help their environment is not providing well enough.

So, intervention suggestions that will be high priority for you to use for this person would be those that increase contrast between an important object and the area or other objects surrounding it. These interventions will likely be the most successful and efficient in helping this person locate the objects they need or want.

With respect to our ongoing illustration used throughout this chapter, these interventions can help this person reach out for (and accurately aim for) the washcloth you are offering them when you are inviting them to wash their arm.

## VI. SUMMARY AND LOOKING AHEAD

### **Chapter 3: Summary**

Chapter 3 described how to look at various aspects of a person's **environment** to see how to adapt it to build on this person's cognitive strengths and accommodate their cognitive needs.

Tips about the environment to make it easier for a person to perform tasks and to understand and interact with their environment and other people more easily were discussed. Examples from the *CAIS Environment Questions to Ask* and the *CAIS Environmental Intervention Strategies* were given to illustrate how the CAIS is structured.

It also explained one of the five ways the CAIS is **individualized** that compared the relevance to intervention **concepts** in the interventions **suggested** for a particular person across the four parts of the CAIS. It gave examples from the CAIS *I Contrast* Environmental Interventions.

A supportive environment **informs, stimulates, and energizes** this person and it helps this person feel and be **safe and comfortable**.

An environment that is not supportive for this person will likely cause this person to be frustrated, distressed, and possibly withdrawn. An unsupportive environment can also make you work harder to relate to and assist this person and cause you unnecessary stress.

The tips and interventions suggest how to make the environment more supportive.

### **Chapters 4 and 5: Looking Ahead**

Chapter 4 looks at issues and gives tips for adapting your **communication** to a person's cognitive strengths and needs. It also gives examples from the *CAIS Communication Questions to Ask* and the *CAIS Communication Intervention Strategies* to illustrate how the CAIS is structured. It explains and illustrates another one of the five ways the CAIS is **individualized** by comparing suggested intervention **strategies** across the four parts of the CAIS.

Chapter 5 looks in more detail at how the **task** is set up to see how you can change it to make a task easier and more pleasant for a particular person. It gives tips regarding various aspects of a task and daily routines, and examples from the *CAIS Task and Daily Routines Questions to Ask* and the *CAIS Task and Daily Routines Intervention Strategies* to illustrate how the CAIS is structured.

## **VII. ADDITIONAL RESOURCES**

### **Original Sources**

1. Weaverdyck, S.E. (1990) "Neuropsychological Assessment as a Basis for Intervention in Dementia". Chapter 3 in N. Mace (Ed.) *Dementia Care: Patient, Family, and Community*. Baltimore, Md.: Johns Hopkins University Press.
2. Weaverdyck, S.E. (1991) "Assessment as a Basis for Intervention" and "Intervention to Address Dementia as a Cognitive Disorder". Chapters 12 & 13 in D. Coons (Ed.) *Specialized Dementia Care Units*. Baltimore, Md.: Johns Hopkins University Press.

### **Resources About the Environment and the CAIS**

For more information about the environment and cognitive abilities and the CAIS that is easily accessible and easy to read see:

1. The Michigan **Improving MI Practices (IMP) website** at this link: <https://www.improvingmipractices.org> Many resources regarding the brain, mental health, and cognition are on this IMP website. This website also has this entire three-volume manual including this Chapter 3, the entire CAIS Questions and Intervention Strategies, and the CAIS online course that is described below.
2. The "**Description of the Environment CAIS: CAIS REVIEW**" (including the "**CAIS REVIEW**") at the end of this chapter. Except for the added content and emphasis on **Part 2** of the CAIS Questions and Interventions that focuses on the **Environment**, most of the content is a brief overview of the descriptions of the entire CAIS in Volume II.
3. The *CAIS Questions to Ask* and *CAIS Intervention Strategies* and instructions for all four parts: Cognitive Abilities, **Environment**, Communication, Task and Daily Routines

in Volume II. The CAIS Questions and Intervention Strategies are questions you ask yourself to understand a person’s cognitive abilities and how well their environment, task and daily routines, and your communication with them support this person’s cognitive strengths and needs. It provides suggestions of intervention strategies that address this particular person’s specific cognitive strengths and needs. The entire **CAIS Questions and Intervention Strategies** are available in an **interactive format** and as pdf documents on the IMP website at <https://www.improvingmipractices.org>

4. **CAIS Handouts of Information and Suggestions** (43 total) in Volume I. These can be distributed as handouts. They are additional resources on a variety of topics with more in-depth information about the brain, cognitive abilities, and intervention and support strategies. There is a list of the CAIS handouts that are especially relevant to the **environment** (and this **Chapter 3**) below. All 43 handouts are available at the end of this Volume I and on the IMP website at <https://www.improvingmipractices.org>
5. The five-session **CAIS curriculum**, called the “**CAIS Educational Series: Understanding and Supporting a Person’s Cognitive Abilities: Session 3 Understanding the Environment**” in Volume III, for you to use informally or to present more systematically as an instructor. The sessions and content can be used **informally for your own learning**, or for **sharing** or **advising** in a one-on-one conversation, with a family, or a small group setting. They can also be used more systematically as a presentation to a class, meeting, or an audience in any other venue. Sessions 1-5 address the brain, cognitive abilities, the environment, communication, and the task, respectively. These sessions encourage asking “Why?”. They include **informal questions** to ask that are similar to those more formally structured in the *CAIS Questions to Ask*. Each one-hour session has a script, objectives, PowerPoint slides, handouts, and evaluation forms. The entire curriculum of five one-hour sessions is available on the IMP website at <https://www.improvingmipractices.org>
6. **CAIS Handout #13 “Understanding the Environment: Questions to Ask”**. This is an adaptation of the handout from Session 3 of the CAIS Educational Series curriculum described above. Both of these handouts are on the IMP website at <https://www.improvingmipractices.org>
7. The **Online Course** of five one-hour modules called “Beyond Behavior: Cognitive Abilities and Intervention Strategies (CAIS)”, including **Module 3: The Environment**”. The online course explores concepts and gives examples and tips from the *CAIS Questions to Ask* and *CAIS Intervention Strategies*. It also **shows how to use** each of the four parts of **the CAIS**. Each of the five modules address the brain and cognition, cognitive abilities, the environment, communication, and the task and daily routines, respectively. The **title** and **content** of each **module** in the online course **correspond** to the title and content of each **chapter** in Volume I, each part of the **CAIS** in Volume II, and each **session** of the curriculum in Volume III. The content and context in each of the three volumes and online course, while similar, **treat the topics differently**, because they each have a different focus and **purpose**. Each of the three volumes of the manual provide **additional content** and **tips** that can help you better **understand** and more easily **apply** the information in the modules of the online course. **Chapter 3** goes into **more**

**depth** than the online course and provides additional tips and content related to the **environment**. The online course is for anyone who interacts with a person (particularly a person living with cognitive challenges or distressing behavior), assists with a task, or advises someone who does. You do not need specialized expertise or training to use the CAIS or to take the online course. The entire online course is available for you to view or take on the **IMP website** at <https://www.improvingmipractices.org>

### **Handouts of Information and Suggestions Especially Relevant to the Environment**

The CAIS Handouts of Information and Suggestions are available at the end of this Volume 1. They might be particularly helpful and informative. They can be read and distributed as handouts. There is a complete list of all the CAIS handouts available (**43 handouts** total), called “**CAIS Handouts: Information and Suggestions for Improving Everyday Life and Reducing Distress by Supporting Cognitive Abilities**”.

The CAIS Handouts that are especially relevant to topics covered in this chapter, including the environment are listed below. The number before each handout below refers to the number of the handout in the CAIS Handouts list. These are all available on the Improving MI Practices website at <https://www.improvingmipractices.org>

#### **A Partial List of CAIS Handouts Especially Relevant to this Chapter 3:**

- #5. **Recognizing Cognitive Abilities:** Suggestions for Recognizing Evidence of a Person’s Cognitive Strengths and Needs: 6 pages (CAIS.Handout.5.Recognizing.Cognitive.Abilities.4.22.20.pdf)
- #8. The **Brain** and **Cognitive Abilities:** Handout One from Session One of the CAIS Educational Series: 8 pages (CAIS.Handout.8.Brain.Cognitive.Abilities.4.22.20.pdf)
- #11. Domains to Explore: Suggestions of **Information to Gather** as you Consider How to Help: 2 pages (CAIS.Handout.11.Domains.to.Consider.4.22.20.pdf)
- #12. Helping a Person with a **Task:** Suggestions for **Adapting** the Environment, Communication, and the Task and **Why:** 16 pages (CAIS.Handout.12.Helping.Task.4.22.20.pdf)
- #13. Understanding the **Environment: Questions** to Ask: Handout from Session Three of the CAIS Educational Series: 6 pages (CAIS.Handout.13.Questions.Environment.4.22.20.pdf)
- #14. **Features** of the **Environment** to Consider and Why: Nine Aspects that Affect Cognitive Abilities: 4 pages (CAIS.Handout.14.Features.Environment.4.22.20.pdf)
- #22. **Four Factors** and Basic Concepts for **Intervention:** Suggestions for Assisting a Person by Addressing their Cognitive Abilities: 2 pages (CAIS.Handout.22.Tips.Four.Factors.4.22.20.pdf)
- #29. **Visual-Spatial** Interventions: Suggestions for Helping a Person by Addressing their Visuospatial Abilities: 4 pages (CAIS.Handout.29.Visuospatial.4.22.20.pdf)
- #30. **Vision** and **Hearing** Interventions: Suggestions for Helping a Person by Addressing their Cognitive Abilities: 2 pages (CAIS.Handout.30.Vision.Hearing.4.22.20.pdf)
- #34. **Sleep** Interventions: Suggestions for Helping a Person by Addressing their Cognitive Abilities: 6 pages (CAIS.Handout.34.Sleep.Tips.4.22.20.pdf)

#37. **Dementia with Lewy Bodies Interventions:** Suggestions for Helping a Person Living with DLB: 4 pages (CAIS.Handout.37.Tips.Dementia.LewyBodies.4.22.20.pdf)

#38. **Frontotemporal Dementia Interventions:** Suggestions for Helping a Person Living with FTD: 5 pages (CAIS.Handout.38.Tips.Frontotemporal.Dementia.4.22.20.pdf)

## VIII. DESCRIPTION OF THE ENVIRONMENT CAIS: CAIS REVIEW

This is a **brief review** or reminder of the CAIS descriptions presented in Volume II.

The description below is adapted to the **Environment CAIS**.

Except for the added information and emphasis on **Part 2** of the CAIS Questions and Interventions that focuses on the **Environment**, most of the content below between the tags “**CAIS REVIEW BEGINS HERE**” and “**CAIS REVIEW ENDS HERE**” is **similar** to the “CAIS REVIEW” content at the end of Chapters 2, 4, and 5.

If you have already read this “CAIS REVIEW” content in other chapters or read the complete description and instructions in Volume II (in the section under the title of “Complete Instructions and Introduction for the CAIS Questions to Ask and CAIS Intervention Strategies”), then you can feel free to **read** this “CAIS REVIEW” below with the **environment** specifically **in mind**, review it to **refresh** your **memory**, or use it for **later reference**.

In this “CAIS REVIEW” content, information that is **NOT in the other chapters** will say “**PLEASE NOTE**” in front of it.

### **CAIS REVIEW BEGINS HERE**

Below (in the box) is a list of the topics and subheadings in this CAIS REVIEW.

**Topics (and subheadings) in this CAIS REVIEW:**

- A. The Cognitive Abilities and Intervention Strategies (CAIS) Questions to Ask and Intervention Strategies
- B. Goal and Structure of the CAIS
- C. Cognitive Abilities
- D. Address the Causes
- E. The CAIS Questions
- F. The CAIS Interventions
- G. Based on Brain and Cognition: But Anyone Can Use
- H. Individualized to Any Person in Any Setting
- I. Similar Process in all Four Parts of CAIS

**A. The Cognitive Abilities and Intervention Strategies (CAIS) Questions to Ask and Intervention Strategies**

This is a brief description of the CAIS. The complete **description** in **Volume II** is more detailed and generic, and applies to **all four parts** of the CAIS.

The words “**Questions**” and “**Interventions**” or “**CAIS**” will frequently be used here to refer to the “*Cognitive Abilities and Intervention Strategies (CAIS) Questions to Ask*” and the “*Cognitive Abilities and Intervention Strategies (CAIS) Intervention Strategies*”.

The **CAIS Questions to Ask** and **CAIS Intervention Strategies** for all four parts of the CAIS are in **Volume II**.

The CAIS can also be found both in an **interactive** format and as pdf documents on the **Improving MI Practices (IMP) website** at **<https://www.improvingmipractices.org>**

For a **description** and **instructions** regarding the CAIS see in Volume II:

1. The “Complete Instructions and Introduction for the CAIS Questions to Ask and CAIS Intervention Strategies”. These are **detailed** and **in-depth** to provide more **complete** information regarding all four parts of the CAIS
2. A **list** and **outline of steps** to take for using the CAIS included in the “Complete Instructions and Introduction for the CAIS Questions to Ask and CAIS Intervention Strategies”.
3. The “Brief Instructions and Introduction” **before each part** of the CAIS. These are **brief** instructions that pertain to each part of the CAIS.
4. **Page 1** of the Questions to Ask Response Formats in each part of the CAIS. These instructions are brief but more **specific**.

**Chapters 2-5** in Volume I illustrate how each of the four parts of the CAIS is structured. **This Chapter 3** discusses concepts and **issues** about the **environment** with respect to cognitive

abilities and uses **examples** to **illustrate** how the *CAIS Environment Questions to Ask* and *Intervention Strategies* are structured.

### **B. Goal and Structure of the CAIS**

The goal of the **CAIS** is to help you interact more easily with a person and to help this person and you feel comfortable and competent, by understanding and addressing this person's **cognitive abilities** (that is, this person's **cognitive strengths** and **cognitive needs**). The primary objective is to generate ideas of specific **intervention** or support strategies that might be especially effective with a **particular person** by supporting this person's specific **cognitive strengths** and **needs**, even as these cognitive strengths and needs **change over time**.

The CAIS suggests ways you can support a person's cognitive abilities, which in turn can nurture this person's quality of life, and increase their ability to **think, communicate, perform tasks, and interact** with their **surroundings**. The goal is to **reduce** frustration, **distress**, and **distressing situations** for this person and for you, and help you and this person enjoy your time together.

There are **four parts to the CAIS Questions to Ask** and the *CAIS Intervention Strategies*. Each part is the topic of one of four chapters in this Volume I:

1. Cognitive Abilities in Chapter 2
2. The Environment in Chapter 3
3. Communication in Chapter 4
4. The Task and Daily Routines in Chapter 5

Each of the four parts of the CAIS has a set of **questions** and **intervention strategies**.

It **doesn't take more time** to use most of these questions and interventions during a task or interaction, in fact they can decrease the time, once you learn them. It does take **being alert** and **watching** this person while you are observing or assisting them.

While there is a systematic format and structure to the CAIS, there is no strictly formal way to use the CAIS Questions and Interventions. **You can adapt** them to the needs and preferences of you and the person you are relating to.

These **CAIS Intervention Strategies** can be **added to interventions you already use**. They can expand your pool of intervention options.

The CAIS questions and interventions are specific, **practical, concrete**, and **easy** to use for **anyone** who relates to a person with cognitive strengths and needs in **any setting**. They can be helpful in any unusual or usual situation, including everyday living and routines.



There are **many more cognitive abilities, questions, and interventions** that could have been included in all the CAIS Questions and Interventions. You can add more questions and interventions that are helpful.

Even **if you don't assist** with some of the **tasks** described or referred to in the CAIS and in these chapters, the concepts and techniques (and all the questions and interventions) illustrated by the tasks will **apply** to nearly **any task, interaction, or situation** you do encounter. The tasks used as examples are often particularly **difficult** and illustrate complex emotional, social, physical, and cognitive aspects of a task or interaction that can make them challenging, and also relevant to most other tasks..

### **C. Cognitive Abilities**

Each of us has a unique pattern of cognitive strengths and needs. This is because each of us is unique with respect to which parts of our brain work well and which parts don't work as well.

The *CAIS Cognitive Abilities Questions to Ask* identify which of a particular person's **cognitive abilities** are strong and which need additional support.

The CAIS **Intervention Strategies** address this person's specific cognitive needs and strengths identified by the questions. The interventions **use, build, and rely on** this person's specific cognitive **strengths**, and **support, nurture, adapt to, or compensate** for this person's specific cognitive **needs**.

For example, in a situation where a task **requires** this person to use a **cognitive ability** that is **weaker** for them or harder to use, this person may not be able to do the task. Or they may become confused, fatigued, irritated, or overwhelmed. The interventions suggest ways to support the weaker cognitive ability or to perhaps compensate for it. They may suggest that you **modify** (support it) or **perform** for this person (compensate for it) the **parts** of the task that rely too heavily on this person's weaker cognitive ability. The same example would apply to their environment and to your communication with this person.

By addressing cognitive abilities, these intervention strategies improve this person's ability to do tasks, to interact with other people and their environment, and to feel comfortable. This in turn reduces distress, distressing situations, and behavior that creates distress.

### **D. Address the Causes**

These questions and interventions can help **avoid a trial and error** method of intervention by suggesting specific interventions that **address** the **causes** of **distress** and **reasons** a person may have **difficulty** doing a **task** or **interacting** with their environment and other people.

They suggest ways to address the mismatch between a particular person's cognitive abilities (their strengths and needs) and the requirements of the task, environment, or interactions this person encounters.

Because they address **the causes**, (including this particular person's difficulty using a cognitive ability that a task requires) the CAIS interventions are likely to be **more effective** than many other interventions **with this person and situation**.

A person's quality of life can be improved greatly when their cognitive abilities are supported and encouraged, and their difficulties and distress are addressed.

### **E. The CAIS Questions**

Each of the four parts of the CAIS (that is, Cognitive Abilities, Environment, Communication, and Task and Daily Routines) has a set of **CAIS Questions to Ask**.

You might choose to ask the questions in only **one part** of the CAIS. Or you might choose to ask the questions in **more** than one of the **parts**. The questions in each part of the CAIS are individualized to the person you are observing and trying to understand and help.

To be more **thorough** and as **individualized** as possible to a particular person, you would ask the questions in the **Cognitive Abilities** part **first**, and then in each of the other **three parts**. This allows you to have a better understanding of this particular person's cognitive abilities (their cognitive strengths and needs) first, so you can better understand **how well** this person's environment, your communication, and their tasks are **supporting** the cognitive abilities of this particular person.

Once a person's cognitive strengths and needs are identified by using the **CAIS Cognitive Abilities Questions to Ask**, you can use the CAIS Questions to look at the environment, communication, and the task to see how they can each be adapted to this person's particular cognitive strengths and needs.

The **Environment** CAIS helps you recognize how well this person's environment supports this person and their cognitive abilities by **asking yourself** a series of **questions** using the CAIS Environment Questions. They explore how changes in the brain and cognitive abilities might be causing this person to perform a task, interact with their environment, and communicate with other people **more easily some times than other times**. They help clarify how certain aspects of the environment might **help or hinder** this person, and how they may **decrease or increase stress and distress** for both **you and this person**.

The questions in all four parts of the CAIS are questions to **ask yourself**, NOT to ask the person you are observing and whose cognitive abilities you are trying to understand and support. **You ask yourself** the questions and **you answer** them.

These questions are designed to be asked regarding a **particular person**, since each person has unique needs, strengths, and desires, and therefore, unique preferences and requirements of the environment.

It is helpful, but not necessary to ask the questions while this person is **engaged in a task**. It can be any task, but sometimes a task that is typical for them is easier to observe and interpret. It is best to observe (and ask these questions) during the **entire time** of the task.

They should also be asked **frequently** enough to accommodate changes in this person's needs, strengths, and desires.

Each time you ask the questions, you can use one of **two response formats** to record your responses: A **Yes/No** and a **Four Point Response Format**. These allow you to respond with a "Yes", "No", or any number from 1 to 4. Brief **instructions** are on the first page of each response format.

Your response of "No" or "1" or "2" to each question directs you to a list of intervention ideas regarding that question in the *CAIS Environmental Intervention Strategies*. **For every question** in the *CAIS Questions to Ask* there is a **list of intervention ideas** in the *CAIS Intervention Strategies*.

**PLEASE NOTE:** There is a set of **additional instructions** for only the **environment CAIS** that gives more explanation, elaboration, rationale, examples, and detail about the environment Questions. If you would like clarification regarding a question you can find these additional instructions in **Volume II** (and on the IMP website at <https://www.improvingmipractices.org>). Otherwise, the instructions on the first page of the *Environment Yes/No* and *Four Point Response Formats* may be sufficient.

#### **F. The CAIS Interventions**

These intervention or support strategies suggest how to **modify aspects** of the **environment** in order to support this person's cognitive strengths and needs.

The interventions for each question are **not listed in order** of priority or likely success rate. When you read through all of them, **select those that make sense** to you regarding this person at this time and in this setting or situation. **Try using** them, then **evaluate** their effectiveness by noting the results.

These interventions are suggested to help this person feel more comfortable and competent, and communicate and perform a task more easily. They can help prevent and reduce distress and distressing situations, including **your own stress** and **distress**.

#### **G. Based on Brain and Cognition: But Anyone Can Use**

The questions and intervention strategies are based on **brain functioning** and **specific cognitive abilities**. However, you do not need to know anything about the brain or cognition to use them. There is a minimum of technical language. You can ask these questions and use these interventions whether you are a friend, family member, healthcare provider, direct care partner (caregiver) or assistant, lawyer, bank teller, or an employee in a restaurant. You may have **just met** this person and have a specific task to do with this person, or you may be with this person **24 hours a day**.

#### **H. Individualized to Any Person in Any Setting**

The CAIS and all the concepts and intervention or support strategies described in these three volumes can be used by **anyone**, with **any person**, in **any setting**, and at **any time** regardless of what this person is doing. They can be helpful during **any** observation, communication, or task.

The questions and interventions can be used with any person regardless of their age, health, cognitive abilities, or level of independence. They can be used with a person with **any brain disorder** or **no brain disorder**. If this person is living with a brain disorder, it can be at any level of severity. Since we all have cognitive strengths and needs and none of us has a perfect brain, **we can all benefit** from the CAIS even in casual everyday life, to increase our ability to communicate, perform tasks, and interact with our surroundings.

This is **because** the **CAIS questions** and **interventions** are **individualized** to a particular **person** and **their cognitive abilities**, regardless of this person's **situation**, even as a setting or circumstances and these cognitive abilities **change over time**.

This means the questions and intervention strategies can be used in any **setting** in any **room** in any **building**, for example, a private home, an office, residential setting, long-term care, gathering space, or a store.

They can be used with any **unusual** or **usual situation, interaction, or task**. The task could be for example, a **leisure** activity such as playing a game, doing crafts or hobbies, or conversing; an **abstract** task such as making a decision or learning how to get to a store; or a **concrete** task such as doing a household chore, preparing food, washing hands, dressing, eating, using the toilet, or showering.

Remember to ask yourself these CAIS questions and update your interventions **frequently** enough to accommodate not only changes in a person's cognitive abilities (their needs and strengths) and desires, but changes in your communication, their environment, task, and situation as well.

The CAIS instructions in Volume II list **five ways** the CAIS questions and interventions are individualized. An explanation and elaboration are available in the "Complete Instructions and

Introduction for the CAIS Questions to Ask and CAIS Intervention Strategies” in Volume II and on the IMP website at <https://www.improvingmipractices.org>

**PLEASE NOTE:** Only this chapter explains #4 of the five ways the CAIS is individualized, though the explanation also applies to the CAIS Communication and CAIS Task and Daily Routines. This explanation is under the heading “V. Illustration of Individualizing the CAIS though Similar Intervention Concepts”.

### **I. Similar Process in all Four Parts of CAIS**

The process of using the Environment Questions and Interventions is **similar** to the process used with the Questions and Interventions in the other parts of the CAIS (regarding cognitive abilities, communication, and the task).

**PLEASE NOTE:** The environment also needs to be carefully **evaluated for safety**. These CAIS questions and interventions focus primarily on cognitive abilities and do not attempt to address all aspects of safety.

***CAIS REVIEW ENDS HERE***