



Museum Staff and Education Guide

Contents

Acknowledgements.....3

Exhibition Overview

 Who is this guide for?4

 Brain science and the importance of caregivers4

 Goals of the *AlegreMENTE / Happy Brain* Exhibition.....7

 Accessibility10

Welcoming Multicultural Audiences

 Cultural inclusion in the exhibition..... 11

 Science of racial bias in early childhood 13

 Reflection questions..... 14

Sample Floor Plan..... 15

Exhibit Descriptions..... 16

Activities and Exhibit Extensions..... 21

Resources 25

Procedures and Daily Maintenance30

Appendix: Print Masters

 Charadas de animales / Animal Charades 33

 Búsqueda de imágenes / Picture Search 35

 Answer Key: Búsqueda de imágenes / Picture Search 36

 Contar y Buscar / Count and Search 37

 Answer Key: Contar y Buscar / Count and Search..... 38

Acknowledgements

Developed, produced, and circulated by Oregon Museum of Science and Industry



This exhibition was supported by the Science Education Partnership Award (SEPA) program of the National Institute of General Medical Sciences (NIGMS). The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institute of Health (NIH).

Additional support provided by Vroom®, a program of the Bezos Family Foundation

Creative Partners

Illustration:

Johanna H. Kim

Technology:

DGTL.

Glowbox

Special Thanks

Mt. Hood Community College Head Start

Ready, Set, Go! Program at Metropolitan Family Service

Exhibition Overview

AlegreMENTE | Happy Brain invites visitors to celebrate early childhood connections in a whimsical storybook forest alive with human and animal families of all kinds. In this bilingual, Spanish and English exhibition, kids play while adults learn about how simple, everyday interactions build skills in children that support healthy brain development for lifelong benefits.

The 1,500-ft.² exhibition encourages parents and caregivers to support children's brain health through exhibits that are vehicles for adult-child interactions. Caregivers explore alongside their children, discovering they are already equipped with everything they need to support early brain development and build healthy connections with 0–5 year-olds.

See the OMSI website for information about the exhibition tour, rental information, marketing materials, photos, and virtual tour:

<https://omsi.edu/products/alegremente-happy-brain>.

Who is this guide for?

This guide is primarily for museum staff, including educators, docents, and volunteers, to provide a resource regarding the content and design of the exhibition and how staff may facilitate and enhance visitors' experiences. The guide may also be useful to preschools, day care centers, and other organized groups to prepare their staff for their visit.

Brain science and the importance of caregivers

The exhibition grounds itself in foundational brain science, which points to the long-term outcomes of early childhood experience.¹ Early childhood from birth to age 5 is a time of remarkable and critical brain development. Babies are born with a nearly complete set of brain cells, or neurons—close to 100 billion. Brain building after birth focuses on making connections between neurons. During these first years of life, up to one million connections grow per second. Each of a child's experiences causes neural connections to grow and neurons in the brain to fire signals along

¹ National Scientific Council on the Developing Child, *The Timing and Quality of Early Experiences Combine to Shape Brain Architecture: Working Paper #5* (report, Center on the Developing Child at Harvard University, 2004). <http://www.developingchild.harvard.edu>.

pathways of connections. Repetition reinforces and strengthens these pathways. The neural connections and pathways that are more active grow stronger, while unused connections fade away. This is the “wiring” of our brains that lays the foundation of our individual brain architecture.

While making and reinforcing connections is the essential work of a young child’s brain, making and reinforcing strong, positive adult-child connections is the essential work of an adult caregiver. Decades of research indicate that playful, loving interactions and relationships with adults supports and enhances brain development in young children.² Responsive back-and-forth interactions, known as **serve and return**, help build young brains in particular. Young children “serve” by giving a cue (such as smiling or reaching toward something) and their caregivers “return” by responding and encouraging continued interaction.³ For example, a child who hears people speaking from birth begins to learn the sounds, how to pay attention, and then to recognize the meaning of words and to vocalize. When caregivers respond positively to signs that the child is listening and to their baby babble, the child feels secure and knows they are communicating. The relationship between child and caregiver strengthens, reinforcing the child’s brain development and innate sense that caregivers are their source of learning.*

² National Research Council and Institute of Medicine, *From Neurons to Neighborhoods: The Science of Early Childhood Development*, Committee on Integrating the Science of Early Childhood Development. Jack P. Shonkoff and Deborah A. Phillips, eds. Board on Children, Youth, and Families, Commission on Behavioral and Social Sciences and Education (Washington, D.C.: National Academy Press, 2000).

³ National Scientific Council on the Developing Child, *Young Children Develop in an Environment of Relationships: Working Paper No. 1* (report, Center on the Developing Child at Harvard University, 2004), 1, www.developingchild.harvard.edu.



*Please note: The exhibition only addresses what is considered typical neurodevelopment. Due to the highly varied nature of development in children with disabilities and neurodivergence, the exhibit development team and project advisors decided that addressing all kinds of brain development was more than a 1,500-sq.-ft. exhibition could address adequately. If visitors have questions about their children's individual development, we recommend referring them to a pediatrician or other trusted health care provider.

Goals of the *AlegreMENTE* | *Happy Brain* Exhibition

AlegreMENTE's mission is to share powerful foundational ideas with parents and caregivers in ways that are relevant to their everyday lives and that support and encourage their brain-building practice in the exhibition and at home. Based on the importance of serve and return and of relationships between children and their caregivers, strategies for the adult audience in the exhibition are a means toward benefitting young children. Messages of loving interaction and connection appear throughout the exhibition in words, images, illustrations, and experiences.

Encouraging adult-child interactions

Exhibit experiences are based on serve-and-return behaviors, such as following each other's leads, taking turns, engaging in dialogue, or exchanging questions and answers. For example, at the "Cuéntame un cuento / Tell Me a Tale" exhibit (shown on the next page), adults and children can take turns selecting and arranging illustrated discs to make up a story. Activities like this lend themselves to back-and-forth interactions and are as simple, open-ended, and as universal for North American audiences as possible. To encourage families to continue brain building after their visit, activities are also familiar and easily repeated at home.

The exhibits in *AlegreMENTE* have twelve characteristics that support interactions between caregivers and children:

- Wide variety of materials available
- Easy for adult to figure out
- Easy for child to figure out
- Open space with clear sight lines
- Controlled exits (only in Piscina / infantil / Infant Pool for infants and toddlers)
- Plenty of materials available
- Seating
- Acoustic treatment to reduce ambient noise
- Labels primarily use pictures or photos
- Tables and chairs designed to accommodate adults
- Other (this item allows for flexibility and evolution of this list)

These characteristics come from the Adult Child Interaction Inventory, which emerged from a study at Boston Children’s Museum (see Resources section).

Messaging in the exhibition that encourages adult-child interactions draws in part from Vroom®, an organization OMSI partnered with to create content. Vroom offers science-based resources for parents and caregivers to build young brains in their everyday lives. Vroom’s Brain Building Basics™ is a resource parents and caregivers can use to do so, made up of five elements:



Mira / Look

Síguelo / Follow

Conversa / Chat

Túrnense / Take Turns

Extiende / Stretch



Vroom also developed over 1,000 simple activities known as Vroom Tips™. Six of these activities appear in the exhibition, customized with the name, “Energiza el cerebro / Brain Booster.” Each Brain Booster also has a “Science Boost”—a renaming of the Brainy Background™ for each Vroom Tip—which describes how a child is developing skills in doing the activity with their parents and caregivers. Brain Boosters appear on exhibit labels marked by a badge-like graphic and one or two of Vroom’s Brain Building Basics like the example above.

Supporting caregivers

The exhibition avoids messages that convey pressure or judgement. Instead, an asset-based approach affirms the value of caregivers' existing knowledge, skills, experiences, and identities as resources for their learning. Caregivers' simple interactions with their children and their everyday experiences are in fact the foundation of how they act as brain builders.

Caregivers have a universal need to take a break from the hard work of caring for young children, to be able to rest and recharge. At the same time, caregivers need to keep their children within sight at all times, even during rest breaks. Due to this need, we recommend a floor plan that positions tall components with wall panels on the perimeter of the exhibition and short components in the center, if possible.

Communicating the science of early brain development

Conversations about early childhood brain development present many opportunities to promote the long-term benefits to children and society at large. At the same time, messaging can run the risks of misinterpretation and political polarization. Researchers and advocates for early childhood policy and education (e.g., Frameworks Institute and Harvard Center for the Developing Child) have studied and outlined effective messaging about early childhood and brain development. Doing so is meant to promote the benefits to children and society and to avoid pitfalls and polarization around a topic that reaches a deeply personal level for many. Especially in light of newly published research, recommendations by Frameworks Institute encourage centering messages on much of the foundational brain science found in *AlegreMENTE* (see Resources section).

Accessibility

The experiences in *AlegreMENTE | Happy Brain* are designed to be physically accessible and comfortable for both young children and adults. Seating and exhibits designed with adults' comfort in mind invite them to be part of the experience rather than observers on the sideline. Likewise, step stools make exhibits accessible for younger and smaller children to interact with caregivers and each other. The ample seating allows for rest, comfort, flexibility, and for people of different sizes to have eye contact and to reach activities together. These design characteristics help draw adults into the fun and support the brain building, serve-and-return interactions in the exhibit environment.

AlegreMENTE exhibits are fully wheelchair accessible and designed to ADA (Americans with Disabilities Act) standards. In addition, the exhibits have multisensory features that make them more accessible and enjoyable for everyone. All exhibits with sound have adjustable volume (inside locked access panels, see Technical Manual).

One exhibit of note is the semi-enclosed “Rinconcito de historias / Story Nook.” Some accessibility considerations include access for wheelchair users and older adults, rest from sensory overload, and the balance between feeling secluded and included. The exhibit includes a padded armrest and repositionable cushions that enhance comfort and ease of ingress and egress. The space has an overhead interior structure that helps to reduce visual and auditory stimuli. Additionally, the space is deep enough for a wheelchair or stroller user to come side-by-side with someone sitting on the bench, but not so deep as to completely separate occupants from the rest of the exhibition. One to three visitors (more if there are a few small children in the group) may sit apart from the stimulating environment and feel like they have a cozy spot all to themselves.

Welcoming Multicultural Audiences

North America is diverse racially, culturally, and ethnically. In 2018, Latinos were the fastest growing and the youngest demographic group in the United States, comprising more than a quarter of the child population.⁴ In order to be more welcoming and inclusive of this group, the focus audience for this exhibition is Latino/-a/-x adult caregivers and their families. Because of this focus, the exhibition was developed with bicultural content, Spanish-English bilingual text, and Latino human characters prominent throughout the illustrations.



Cultural inclusion in the exhibition

Bilingual text

The title, *AlegreMENTE* is a play on words. In Spanish, “alegre” means “happy,” and “mente” means “mind,” while “alegrememente” means “joyfully.” *AlegreMENTE* is also the primary title of the exhibition rather than Happy Brain to signal to the focus audience that the experience is meant to be welcoming especially for Latinos and native Spanish speakers. The exhibition bilingual text intentionally places Spanish text above or to the left of English text (see example on the next page). Informal conversations with visitors at *AlegreMENTE*’s first two venues (in Portland, OR and San Jose, CA) have shown that this Spanish-first approach to bilingual text elicited very positive feedback from Latino visitors. Some expressed they felt like the experience was “for them.”

⁴ “Racial and Ethnic Composition of the Child Population,” Child Trends, 2018. <https://www.childtrends.org/indicators/racial-and-ethnic-composition-of-the-child-population>

Illustrations

The exhibits feature prominent illustrations created especially for *AlegreMENTE* to communicate with visitors. These original illustrations convey particular behaviors, relationships, identities, and emotions relevant to the exhibition's goals. This is why, for example, there are illustrations of same-sex and multiracial parents, children crying, and adults napping—for inclusiveness in the representations of identity and experience.

The illustrated characters also model intended adult and child interactions at each exhibit activity instead of instructional labels. For example, in “Uno encima de otro / Stack It Up” (shown below), visitors can play with discs and cylinders that stack onto rocking bases. This is shown in the accompanying illustration by an adult holding a baby who reaches for a tabletop toy resembling the exhibit. Exhibit labels contain activity suggestions and describe how activities promote brain development, but the labels do not play a prescriptive role. Instead, the illustrations show examples of what visitors may do at each exhibit. This strategy has the benefit of communicating well to speakers of any language, increasing the cultural and linguistic accessibility of the exhibition.



Science of racial bias in early childhood

Representations of people and their relationships in *AlegreMENTE* are multiracial and multicultural. Because of the window of time in early childhood for establishing a child's brain architecture, talking about and acknowledging race and inclusion is important even for children under five years old. Many adult caregivers believe young children do not and are not able to understand race.⁵ Research has shown, however, that infants can recognize racial difference and preschoolers can show racial bias. From the American Academy of Pediatrics:

Children learn about racial differences and racial bias from an early age and learn from their first teachers—their parents [and caregivers]—how to deal with and react to these differences.

The process of learning racial bias is a lot like learning a new language (e.g., a child raised bilingual vs. a child who starts learning Spanish in junior high). Biology determines a critical early learning period as well as a later window where learning is much harder.

- **As early as 6 months**, a baby's brain can notice race-based differences.
- **By ages 2 to 4**, children can internalize racial bias.
- **By age 12**, many children become set in their beliefs—giving parents a decade to mold the learning process, so that it decreases racial bias and improves cultural understanding.

*But like language immersion, children exposed to society will gain fluency in racial bias even if their parents do nothing.*⁶

⁵ "Adults Delay Conversations about Race Because They Underestimate Children's Processing of Race," by Jessica Sullivan, PhD; Leigh Wilton, PhD, Skidmore College; and Evan P. Apfelbaum, PhD, Boston University, *Journal of Experimental Psychology: General*, published online Aug. 6, 2020. Accessed Jan. 21, 2022 <https://www.apa.org/news/press/releases/2020/08/children-notice-race>

⁶ "Talking to Children about Racial Bias," by Ashaunta Anderson, MD, MPH, MSHS, FAAP & Jacqueline Dougé, MD, MPH, FAAP, American Academy of Pediatrics, [healthychildren.org](https://www.healthychildren.org/English/healthy-living/emotional-wellness/Building-Resilience/Pages/Talking-to-Children-About-Racial-Bias.aspx). 2019. Accessed Jan. 21, 2022 <https://www.healthychildren.org/English/healthy-living/emotional-wellness/Building-Resilience/Pages/Talking-to-Children-About-Racial-Bias.aspx>

Reflection questions

The following questions are meant for you to reflect on the diverse identities and needs of your audiences and how you welcome and serve them. Think about the exhibition and in relation to it, how your museum can offer an experience in which all children and their families feel like they belong.

- What culturally specific communities does your museum serve? Do you have staff or volunteers that identify with and/or belong to those communities?
- What languages do your museum's communities speak? Can any of your staff or volunteers communicate in those languages? What simple phrases could your staff learn to help visitors feel welcome (e.g., hello, welcome, thank you for visiting)?
- How are your audiences reflected in the exhibition (images, activities, etc.)? If the exhibition doesn't represent one of your local audiences, how might you tailor the experience for them? What are some things you could do to enhance the relevance and inclusivity of the exhibition while it's at your museum?

Sample Floor Plan

Below is a suggested floor plan for *AlegreMENTE / Happy Brain* installed in a 1,500-square-foot space. Many arrangements are possible for your facility, though we recommend a floor plan that allows clear sightlines so caregivers can find their children easily.

1. Gráficos en la entrada de la exhibición | Entrance Graphics
2. Fuente de sabiduría | Fount of Wisdom
3. Iluminando el cerebro | Lighting Up the Brain
4. Piscina infantil | Infant Pool
7. Cuéntame un cuento | Tell Me a Tale
10. Un espacio para compartir | A Space to Share

11. Uno encima de otro | Stack It Up
12. Cara feliz | Show Me Happy
14. Fiesta alegre | Happy Dance
15. Gráfico ambiental | Environmental Graphic
16. Rinconcito de historias | Story Nook
17. Recursos de Vroom | Vroom Resources

*Numbers correspond to component numbers in the instruction manual.

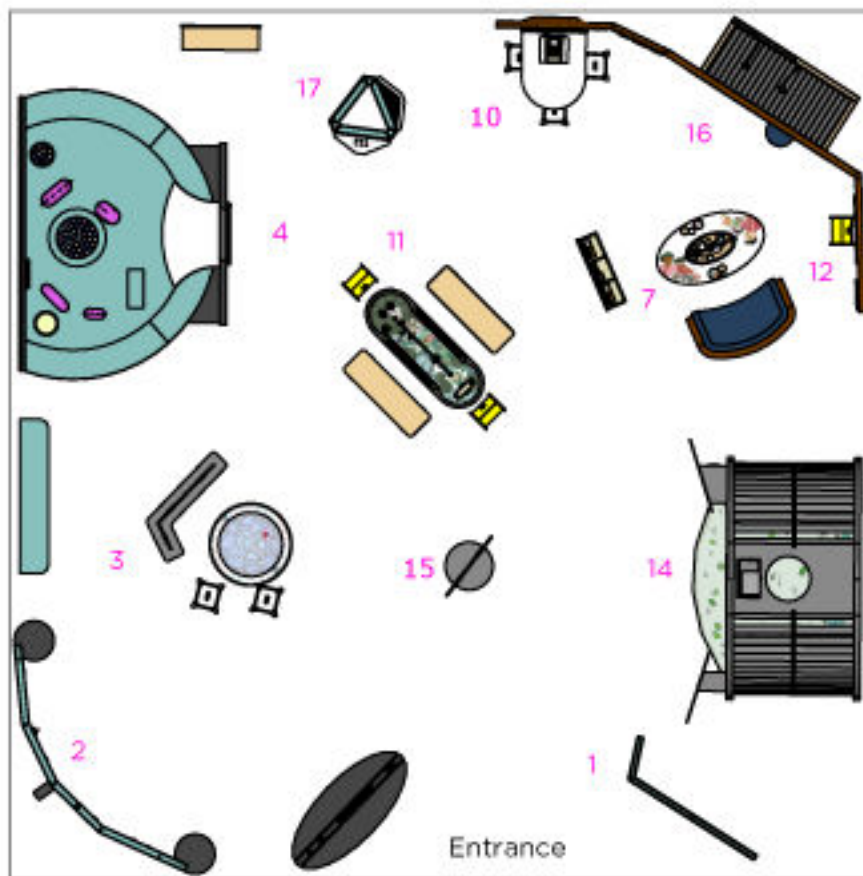


Exhibit Descriptions

Gráficos en la entrada de la exhibición | Entrance Graphics

Title graphic, welcome graphic, and acknowledgements.



Fuente de sabiduría | Fount of Wisdom

While caregivers learn about the basics of brain development in 0–5-year-olds, children play with buttons, sounds, and lights at their height just below the adult content. Vroom® Brain Building Basics™ share five simple techniques that support adults in their role as brain builders. A surprise mirror reinforces that caregivers already have everything they need to lovingly build brain health in kids!



Iluminando el cerebro | Lighting Up the Brain

Children and caregivers play together on a tilt table, rolling a ball back and forth on a surface that represents brain cell connections. The surface lights up along the path of the ball to call attention to connections between children and their caregivers, as well as between brain cells. Once all connections have been made, lights and sounds indicate a job well done! Simple messages along the lighted paths highlight the brain-building value of serve and return.



Piscina infantil | Infant Pool

The enclosed space, soft furnishings, and high contrast graphics make this the perfect place for infants and just-walking toddlers. A see-through spinner filled with beads on the wall mimics the sound of running water. Children can play with balls within the space, which includes a cushioned mini-pool and toys such as handheld mirrors and shakers (staff may choose to store the loose toys or make them available). Visitors can use a shoe cubby to store shoes they've taken off.



Brain Boosters (best for age 0-1)
Visión del bebé | Baby Vision
Miradas a los ojos | Eye Gazing



Cuéntame un cuento | Tell Me a Tale

The comfy seat for this exhibit is a perfect place to read together from some of the board books stored in the two book bins. At the table, “story stones” provide the opportunity for visitors to explore the benefits of language-rich environments by oral storytelling and practicing vocabulary. Each story stone has an image of a familiar object and the words for it in Spanish and English. Families take turns using the story stones to create unique stories. Caregivers and children benefit from practicing the skills of creativity and working together.

There are four sizes of story stone discs (2.75, 3.5, 4.25, and 5.0 inches diameter). The sizes have no purpose other than variety of shape.



Brain Booster (best for age 4-5)
Cuéntame un cuento | Tell Me a Tale



Un espacio para compartir | A Space to Share

This drawing area invites families to share their favorite activity that they do together. Separate prompts for adults and children encourage each individual to work on their own drawing. When creating their drawings and sharing them with one another, families can develop their connections to each other while building children's language, social emotional, and fine motor skills.

Tip: Seed the board with example drawings and always have a few that remain up to encourage visitor contributions.



Uno encima de otro | Stack It Up

Children and caregivers create and test structures at this activity table using custom-made toys. Slots on both sides of the table allow visitors to roll discs down ramps that make the discs “disappear”, “reappear”, then end up in a special storage cavity. Rolling, rocking, and stacking enthrall kids and allow caregivers to support early STEM learning, cognitive development, and intergenerational engagement through exploring pattern, shape, and cause and effect.



Brain Booster (best for age 2-4) *Uno encima de otro | Stack It Up*



Cara feliz | Show Me Happy

Visitors spin the emotion wheel and make faces together, reflecting each emotion in the mirror. Children learn to recognize emotions in facial expressions. Discovering how faces express feelings is a foundation for understanding the perspectives of others—an important skill at school and in life.



Brain Booster (best for age 18 months–3 years)
Cara feliz | Show Me Happy



Fiesta alegre | Happy Dance

This full-body interactive encourages adults and children to dance and move their bodies to joyful music together, along with animal and human families. Leaves, flowers, and other forest items fall or grow on the screen, which respond when visitors interact with them. Caregivers can be Brain Builders with simple calls to action that appear onscreen, like taking turns copying each other's movements.



Brain Booster (best for age 1–3)
Imita al bailarín | Dance Copy Cat



Rinconcito de historias | Story Nook

The Story Nook is a semi-enclosed, cozy space for caregivers and children to rest, reflect, read, and bond. It has soft seating, can provide a sense of privacy for people nursing little ones, and offers lower light and noise levels. Caregivers can read about the benefits of learning more than one language in early childhood.



Recursos de Vroom® | Vroom® Resources

Vroom Tips™ share the science of early brain development and ideas for things they can do anytime, anywhere to build their children's brain health for a lifetime. One side of this kiosk shares take-home and digital resources. Visitors can scan QR codes with their mobile devices to open each website. Another side focuses on Vroom video tips, in both Spanish and English, which show parents and caregivers and children modeling activities. The third side of the kiosk features buttons at kid-height that illuminate animal graphics.

Vroom materials you may make available to audiences can be found as free downloads (www.vroom.org). All are available in Spanish and English, and many are available in 15 additional languages. Contact Vroom if there is a particular language for your local audiences that you are looking for. You may also want to use the kiosk to offer info on local resources, programs, and events to promote.

Recommended Vroom materials for the kiosk:

- Info cards
- Brain Building Basics™ (flyer)



Activities and Exhibit Extensions

Museum Activities

See Appendix for print masters and answer keys.

CHARADAS DE ANIMALES / ANIMAL CHARADES

This is a facilitated activity for ages 3 years and up. Visitors act out the animals found in the exhibition, while other visitors try to guess what the animals are.

To play:

Images of the animals are printed on cards (see Appendix B for the copy master). Hand out one for each player. Tell the players not to show their cards to anyone. Tell visitors it's OK to make sounds, but they can't use words. The first person to guess what's on the card gets to go next. If someone has had a turn already, ask them to pick someone who has not.

Tips:

- Set the example by picking a card and letting visitors guess what you are pretending to be.
- Encourage participation from adults and kids.
- For young children, you may need to help by whispering some ideas for them to act out.
- Here are some things to suggest to visitors when they are trying to figure out how to act out a card:
 - Where does your animal live? Does it live in the water, in a tree, or underground?
 - What does your animal eat?
 - What shape is your animal?
 - How does your animal move? Does it walk, fly, gallop, or swim?

SCAVENGER HUNTS

Búsqueda de imágenes / Picture Search

Buscar y contar / Counting Search

In the picture search and the counting search, parents and caregivers can take an active role. These unfacilitated activities support interactions and conversations when adults and children search together. Also, those who know how to read can help non-readers and pre-readers.

*Note: Depending on the arrangement of exhibits, some images in the search activities may not be visible. These are more likely to be on large wall surfaces on the back sides of some exhibits, such as the title graphic, Piscina infantil / Infant Pool, and Fiesta Alegre / Happy Dance.

Tips:

- If available, provide clipboards and pencils (the exhibit has a supply of colored pencils).
- If there is a picture that can be found in more than one place, reveal one of those places and give hints about where else the others are.
- Offer caregivers ways to adapt the activity to be developmentally appropriate. For example:
 - Caregivers may do the tallying in the counting search.
 - Babies: Caregivers can use the activity sheet to search and narrate. Follow the baby's gaze to talk about what the baby is interested in (see the Brain Booster in the Piscina infantil / Infant Pool).
 - Babies and toddlers: A caregiver can ask a child while looking at an image, "Where is the cat? Can you point at the cat?"

Exhibit Extensions

UN ESPACIO PARA COMPARTIR / A SPACE TO SHARE:

Try some alternative prompts by setting table tents, posting on the wall, or using other temporary signage. This is one of the easiest ways to tailor the experience for your local audiences. Keep in mind what will be relevant and inclusive for your visitors and what families could easily draw and have conversations about. For example, is there a community event or celebration approaching? Maybe there is something interesting in the natural environment or a local place of interest that your visitors could draw and chat about together. Some more general ideas include drawing ...

- ... something from your favorite story.
- ... someone special.
- ... a special place.
- ... your favorite meal.
- ... your favorite thing about summer / autumn / winter / spring.

FIESTA ALEGRE | HAPPY DANCE:

Provide toys and props that can enhance the experience, such as musical instruments, scarves, and ribbons for children and their caregivers to dance with.

CUÉNTAME UN CUENTO | TELL ME A TALE:

Consider additional foods, objects, and activities of which you could print images and laminate to enhance the storytelling. Choices could be geographically or culturally specific for local audiences. If you want sizes to match the discs in the exhibit, they are 3.25, 4.0, 4.75, and 5.5 inches in diameter.

VROOM TIPS™:

There are many opportunities to use Vroom Tips in *AlegreMENTE*. Free printable Vroom Tip sheets are available online at [vroom.org](https://www.vroom.org). The tips are searchable in a variety of different ways, including age ranges and content. Content areas most appropriate to the exhibition include: Feelings, Inside, Literacy, Math, Physical, Science, and World. You can also search for tips in 17 languages (Vroom plans to add more languages over time).

Vroom Tip sheets:

<https://www.vroom.org/vroom-materials?tab=Vroom%20Tip%20Sheets#PrintableMaterials> (accessed 4/22/2022)

Resources

The resources listed here may be useful to museum staff, educators, and caregiver audiences. Local organizations and programs may also offer resources relevant to your museum's audiences.

Web Resources

Center on the Developing Child, Harvard University

<https://developingchild.harvard.edu/>

Extensive research and resources for early childhood professionals, advocates, and policy makers on the science of early childhood. Several of their resources are available in Spanish and multiple other languages in the growing Translation Library:

<https://developingchild.harvard.edu/translation/>

Frameworks Institute

<https://www.frameworksinstitute.org/>

Research and resources for communicating about contemporary social issues, including early childhood topics. The resource for communicating about early brain development is “Communications Guidance: How to Talk about the Latest Research on Early Brain Development.”

<https://www.frameworksinstitute.org/publication/communications-guidance-how-to-talk-about-the-latest-research-on-early-brain-development/>

Healthy Children

Spanish <https://healthychildren.org/spanish/paginas/default.aspx>

English <https://healthychildren.org/English/Pages/default.aspx>

Parenting website from the American Academy of Pediatrics with health information and recommendations for ages pre-birth through teen and young adult years. (QR codes for both URLs are on the graphic panel of the Vroom® Resources exhibit.)

Mind in the Making

<https://www.mindinthemaking.org/>

Trainings modules and other resources for early childhood practitioners, parents, and caregivers based on the science of early childhood development and building children's life skills. Resources include:

- Book Tips—tips for reading well-known children's books together and building children's life skills, for ages infant through school age.
- Skill Building Opportunities—one-page guides that answer common questions about childhood behaviors for parents and professionals.

Talking is Teaching

Spanish <https://talkingisteaching.org/hablar-es-ensenar>

English <https://talkingisteaching.org>

Campaign out of Too Small to Fail, focused on language-rich ways to promote early learning as a foundation for young children's success in school and beyond. Resources include tip sheets, book recommendations, and social media for content themes such as art, healthy habits, seasons, feelings, and more.

Vroom®

Spanish <https://www.vroom.org/es>

English <https://www.vroom.org/>

YouTube channel <https://www.youtube.com/user/joinvroom/>

Parenting and awareness resources, all available in Spanish and English. Many are available in 15 additional languages. Free resources include:

- Flyers on the science of brain building
- Vroom Tips™ sets with brain-building activities for different age ranges and content areas
- Videos of Vroom Tips in action

- Posters
- Vroom by Text™, an SMS service
- Mobile app (see below)

Vroom also worked with the Association of Children’s Museums to develop decals with brain-building tips for often overlooked spaces, like bathrooms and stairways. The decals are available free to any interested museum.

Zero to Three

Spanish <https://www.zerotothree.org/espanol>
 English <https://www.zerotothree.org/>

Resources for parents and caregivers, early childhood professionals, and advocates, focused on babies and toddlers up to age three. (QR codes for both URLs are on the graphic panel of the Vroom Resources exhibit.)

Mobile Apps

Babies on the Homefront

<https://www.zerotothree.org/resources/series/babies-on-the-homefront-app>

Zero to Three’s free, downloadable app is designed specifically for military and Veteran parents of young children. The app is available in both Spanish and English for Apple and Android devices.

Vroom® App

<https://app.vroom.org/>

This app offers over 1,000 daily Vroom Tips™ for brain building anytime, anywhere. Tips that users receive are based on a child’s age. The app is available in both Spanish and English for Apple and Android devices, and many tips are available in at least 15 additional languages.

Books & Other Reading

Brain Science

Bright from the Start: The Simple, Science-Backed Way to Nurture Your Child's Developing Mind from Birth to Age 3, Jill Stamm, New York, NY: Gotham Books, 2007.

From Neurons to Neighborhoods: The Science of Early Childhood Development, National Research Council and Institute of Medicine, Committee on Integrating the Science of Early Childhood Development. Jack P. Shonkoff and Deborah A. Phillips, eds. Board on Children, Youth, and Families, Commission on Behavioral and Social Sciences and Education. Washington, D.C.: National Academy Press, 2000.

Mind in the Making: The Seven Essential Life Skills Every Child Needs, Ellen Galinsky. New York, NY: William Morrow & Co., 2010.

Shared Discoveries: Positive Parent-Child Relationships and Child Development, Helen Hadani. Sausalito, CA: Center for Childhood Creativity, 2014.

Thirty Million Words: Building a Child's Brain, Dana Suskind. New York, NY: Dutton, 2015.

Early Childhood and Museums

Adult Child Interaction Inventory

<http://evergreeneresearch.com/index#/acii>

This tool, consisting of observation and interview instruments and a guide to use them, is useful for projects in which adult caregivers are key to their children's informal learning experiences. The study from which it was created focused on STEM (science, technology, engineering, and math) learning experiences in a children's museum, but it can be useful for broader purposes, as well. The report on the research study by Lorrie Beaumont is *Developing the Adult Child Interaction Inventory: A Methodological Study*. (Boston, MA: Boston Children's Museum, 2010).

"Brain Research and Children's Museums," Association of Children's Museums, themed issue, *Hand to Hand* 31, no. 4 (Winter 2017/2018).

Family-Inclusive Language Chart

<https://www.margaretmiddleton.com/resources>

Simple, one-page chart. It has recommendations for language to avoid and what to use instead, in order to include all families regardless of who is part of the family and how they are related to each other.

"Focusing on Adult Learning to Put the Youngest Learners First," Cecilia Nguyen and Victoria Coats, *Exhibition* 41, no. 1 (forthcoming Spring 2022). OMSI team members wrote this article about *AlegreMENTE / Happy Brain* and how the team designed the exhibition with adult caregivers in mind. Part of the article found its way into the Exhibition Overview and Welcoming Multicultural Audiences sections of this guide.

Growing Young Minds: How Museums and Libraries Create Lifelong Learners

<https://www.ims.gov/publications/growing-young-minds>

The Institute for Museum and Library Services published this document in 2013, outlining its commitment to early learning and a call to action for museums and libraries to play a stronger role in young children's education.

Welcoming Young Children into the Museum: A Practical Guide, Sarah Erdman, Nhi Nguyen, and Margaret Middleton. Routledge, 2021.

Exhibit Procedures and Daily Maintenance

As needed, call OMSI's Traveling Exhibits Technical Manager for assistance at 503.797.4660.

Opening

- Make sure all computer-based and electronics turn on and work properly.
- Make sure all lights turn on and work properly.
- Make sure the drawing area has enough paper and colored pencils. Sharpen pencils.
- Make sure all exhibit surfaces and the exhibition area are clean.
- Account for all props and books and place in the storage bins.

Throughout the Day

- Clean the tabletops, especially in the drawing area. Use a soft, lint-free, non-abrasive cloth dampened with water (or Method All-Purpose Cleaner if water is not sufficient) to clean the surface. Dry the surface immediately with a soft, lint-free, non-abrasive cloth.
- Refresh the stock of paper and colored pencils in the drawing area.
- On busy days, take down drawings throughout the day to allow room for afternoon creations.
- Make sure Fiesta Alegre / Happy Dance floor is clear to limit trip hazards.
- Pieces may travel—sort them into correct stations throughout the day.

Closing

- Clean up paper, pencils, and books
- Look through the visitor-posted drawings and remove anything inappropriate.
- Pieces that have traveled—return to proper components.

- Arrange stools and cushions:
 - Stepstools (yellow)
 - White stools
 - Booster seats
 - High chair
 - Blue cushioned ottoman
 - Couch and Story Nook cushions

General Cleaning

Please see the Cleaning section of the Instruction Manual for general cleaning instructions.

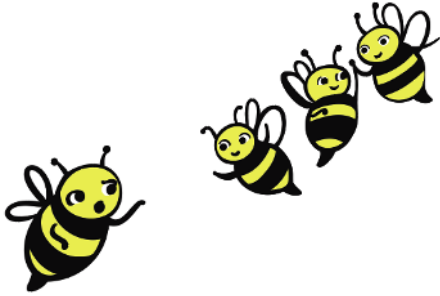
NOTE: Never stack stools on the exhibit components during floor cleaning. The stool legs can damage the surfaces.

Appendix

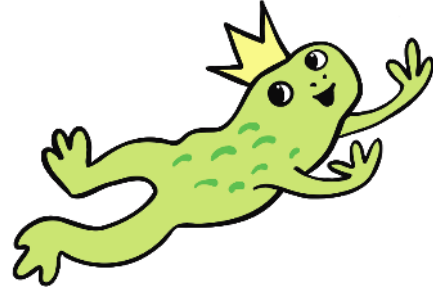
Print Masters & Answer Keys

Print Master — Charadas de animales | Animal Charades

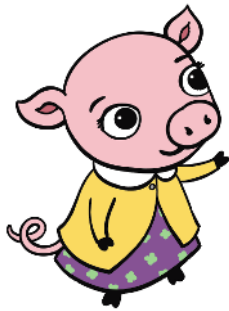
Print cards onto card stock. Cut out the cards along the dotted line. Laminate for durability.



Abeja
Bee



Rana
Frog



Cerdo
Pig



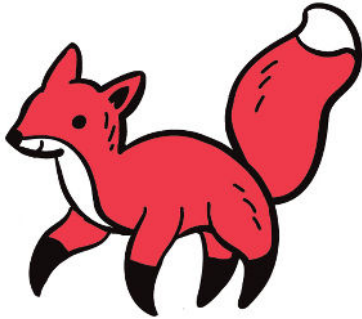
Hormiga
Ant



Mariposa
Butterfly



Ave
Bird



Zorro
Fox



Búho
Owl



Gato
Cat



Ardilla
Squirrel



Conejo
Rabbit



Pájaro carpintero
Woodpecker

Búsqueda de imágenes | Picture Search

Encuentra estas imágenes en la exposición.

Find these pictures in the exhibition.



Ardilla / Squirrel



Piñata



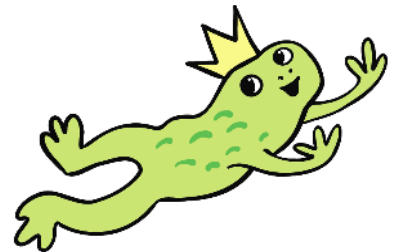
Bebé / Baby



Pastel / Cake



Planta / Plant



Rana / Frog



Zorro / Fox



Duerme / Sleep



Enojado / Angry

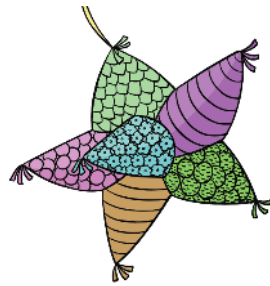
Búsqueda de imágenes | Picture Search

HOJA DE RESPUESTAS | ANSWER KEY



Ardilla / Squirrel

Vroom® kiosk tree panel, upper right side of tree



Piñata

Fiesta alegre / Happy Dance, inner wall left side (also the title with different colors)



Bebé / Baby

Piscina infantil / Infant Pool entry, left



Story Nook wall, left of seating space

AND



Cuéntame un cuento / Tell Me a Tale, tabletop

AND disc

Pastel / Cake



Planta / Plant

Book bin base, right side



Rana / Frog

Fuente de sabiduría / Fount of Wisdom, lower left



Zorro / Fox

Vroom kiosk cabinet under video screen (also with different colors on Fiesta alegre / Happy Dance, inner wall right side)



Duerme / Sleep

Couch base, back side







Enojado / Angry

Cara feliz / Show Me Happy wheel

Buscar y contar | Count and Search

Cada vez que vea uno de estos elementos, haga una marca de recuento junto a su imagen. Ver cuál tiene más al final!

Each time you see one of these items, make a tally mark next to its picture. See which one has the most at the end!

 <p>Gato Cat</p>	
 <p>Abuela Grandma</p>	
 <p>Maracas</p>	
 <p>Ratón Mouse</p>	

**Nota: Dependiendo de la disposición de las exhibiciones, algunas imágenes pueden no ser visibles.*






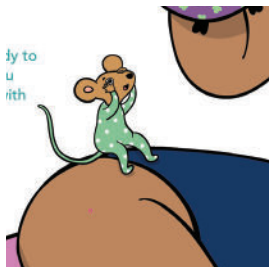
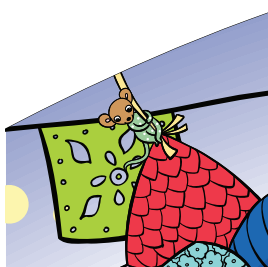
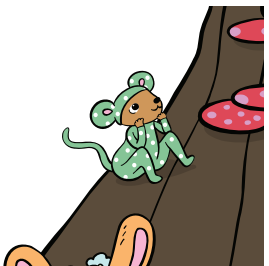

Conteos e imágenes no incluyen las animaciones proyectadas en Fiesta alegre / Happy Dance.

**Note: Depending on arrangement of exhibits, some images may not be visible.*

Counts and images do not include the projected animations in Fiesta alegre / Happy Dance.

 <p>Gato Cat</p> <p>13 total</p> <p>(not counting front-and-back duplicates)</p>	<p>Title graphic (front & back)</p> 	<p>Fuente de sabiduría / Fount of Wisdom</p> 	<p>Piscina infantil / Infant Pool wall (front & back)</p> 
	<p>Story stones table (2)</p> 	<p>Story stones: feliz / happy</p>  <p>feliz happy</p>	<p>Story stones: gato / cat</p>  <p>gato cat</p>
	<p>Fiesta alegre / Happy Dance entrance, right</p> 	<p>Fiesta alegre / Happy Dance outside back wall</p> 	<p>Book bin</p> 

	<p>Un espacio para compartir / A Space to Share wall (front & back)</p> 	<p>Recursos de Vroom® / Vroom® Resources, tree side</p> 	<p>Piscina infantil / Infant Pool bench base, inside right</p> 
 <p>Abuela Grandma</p> <p>7 total</p> <p>(not counting front-and-back duplicates)</p>	<p>Title graphic (front & back)</p> 	<p>Fuente de sabiduría / Fount of Wisdom</p> 	<p>Piscina infantil / Infant Pool entrance</p> 
	<p>Story stones: curioso / curious</p> 	<p>Story Nook above book bin</p> 	<p>Fiesta alegre / Happy Dance entrance panel, left</p> 
	<p>Fiesta alegre / Happy Dance outside back wall</p> 		

 <p>Maracas</p>	<p>Title graphic (front & back)</p> 	<p>Bienvenidos / Welcome graphic (front & back)</p> 	<p>Story stones: maracas</p>  <p>maracas maracas</p>
<p>5 total</p> <p>(not counting front- and-back duplicates)</p>	<p>Fiesta alegre / Happy Dance entrance, left side</p> 	<p>Fiesta alegre / Happy Dance outer back wall</p> 	
 <p>Ratón Mouse</p>	<p>Back of book bin</p> 	<p>Piscina infantil / Infant Pool wall (front & back)</p> 	<p>Fiesta alegre / Happy Dance title</p> 
<p>5 total</p> <p>(not counting front- and-back duplicates)</p>	<p>Freestanding graphic (front & back)</p> 	<p>Story stones: pijamas / pajamas</p>  <p>pijamas pajamas</p>	