



LIGHTHOUSE
for the **BLIND**
ST. LOUIS, MO.

Space Camp is an exciting adventure yet is also an intense and action packed week. Space Camp (SCIVIS) is quite different from a recreational “camp”. Campers will occasionally spend hours in lectures and training for missions and other adventures. Days are long and kids need to be able to keep focused for long periods of time. Please see the “Space Camp Programs” list of activities that campers will participate in to consider if your child would be qualified.

The travel demands required of students attending Space Camp involve negotiating a variety of environments. They must travel within the very large Space Camp campus as well as the dorm facility and remain oriented on occasional community excursions. Campers must be able to walk for long distances and long periods of time. While campers typically travel as a group with counselors, chaperones and other students present, each camper is encouraged to be as independent as possible in these settings. If your child uses a cane for any kind of travel, they will be required to travel with their cane at all times while attending Space Camp.

Your child will need to have the necessary independent organization, personal hygiene and social skills to be away from home for one week. They will need enough personal initiative to attempt new challenges and willingness to interact positively with blind and visually impaired peers. There may also be pre-camp activities that require participation.

To be able to attend Space Camp, a camper must be able to complete all tasks listed below

INDEPENDENTLY. Campers should be able to wake up and be prepared to leave the dorm within 45 minutes. **If your child is not independent in these skills, you may want to begin practicing them so he/she will be independent at the time of Space Camp (September). If your child attends camp and does not possess these skills, it may jeopardize their opportunity to attend Space Camp in the following years.**

Independent Skills Required to Attend Space Camp:

Clothing

Dress Self: button/zippers

Tie/Velcro shoes

Pack suitcase or assist in packing

Be familiar with own clothes (identification)

Independent use of a lock

Personal Management

Wash & style own hair

Independent showering & hygiene (deodorant)

Independent toileting

Brush teeth

Eye care (prosthetics)

Use of personal supplies (female protection)

Knowledge of medications

Independent Thinking

Choose appropriate clothing (weather, activities)
Pack day bag for outing

Orientation & Mobility

Sighted Guide
Independent Cane Skills
Soliciting help when appropriate

Sleepovers (may need to climb ladder to bunk beds)

Practice packing for overnight
Go to sleep independently

Money Management

Storage of money
Carry a wallet with \$ and ID

Social Skills

Can meet new friends & maintain friendships
Age appropriate behavior when away from parents
Have some interest in space & academics

Eating

Appropriate use of utensils (knife for cutting)
General social etiquette
Can open packages (condiments, milk cartons)

SPACE CAMP PROGRAMS- *Please review each program to determine if your child will be qualified to participate.*

SPACE CAMP (Grades 4-6)

- Must be able to independently dress self and prepare for a full day of activities usually beginning at 7:00 am and ending at 9:30pm
- Must be able to walk 5-10,000 steps per day
- Must listen to 10 hours of history
- Must perform 8 hours of experiments with a team
- Must construct a rocket and launch it
- Must actively participate in astronaut simulators
- Must attend 3 hours of mission training
- Must be able to read (in large print or Braille) scripts
- Must participate in two 2-hour space missions
- Will view I-MAX or 3-D movies

SPACE ACADEMY (Grades 7-9)

- Must be able to independently dress self and prepare for a full day of activities usually beginning at 7:00 am and ending at 9:30pm
- Must be able to walk 5-10,000 steps per day
- Must listen to 10 hours of history
- Must perform 8 hours of experiments with a team
- Must be able to read (in large print or Braille) scripts
- Must participate in two 2-hour space missions
- Must participate in 14 hours of robotics
- Will view I-MAX or 3-D movies
- Must actively participate in teamwork activities
- Must actively participate in Jet Fighter Simulations
- Must participate in Land Survival activities

ADVANCED SPACE ACADEMY (Grades 10-12)

- Must be able to independently dress self and prepare for a full day of activities usually beginning at 7:00 am and ending at 10:00pm
- Must be able to walk 5-10,000 steps per day
- Must actively participate in Space Suit Theory and Design
- Must actively participate in Space Physiology
- Will participate in Scuba Space Walk Training (*certain medical restrictions may prohibit the trainee from Scuba diving.)
- Must actively participate in Aeronautic Design
- Must actively participate in Jet Aircraft Simulations
- Must actively participate in Orbital Mechanics

MACH 1 AVIATION CHALLENGE (Grades 4-6)

- Must be able to independently dress self and prepare for a full day of activities usually beginning at 7:00 am and ending at 10:00pm
- Must be able to walk 5-10,000 steps per day
- Must listen to 10 hours of history
- Will view I-MAX or 3-D movies
- Must actively participate in Flight Simulators:
- Must actively participate in Take-off and landing
- Must actively participate Navigational training
- Must actively participate in Teamwork
- Must actively participate in Air to ground training
- Must actively participate in Aviation principles:
- Must actively participate in Forces of Flight
- Must actively participate in Aviation Weather
- Must actively participate in Control Surfaces
- Must actively participate in Propulsion
- Must actively participate in water survival skills

MACH 2 AVIATION CHALLENGE (Grades 7-9)

- Must be able to independently dress self and prepare for a full day of activities usually beginning at 7:00 am and ending at 10:00pm
- Must be able to walk 5-10,000 steps per day
- Must listen to 10 hours of history
- Will view I-MAX or 3-D movies
- Must actively participate in Flight Simulators
- Must actively participate in Low Ropes Course
- Must actively participate in Lake Activities
- Must actively participate in Shelter Building
- Must actively participate in Fire Building
- Must actively participate in Seal Op's
- Must actively participate in Escape and Evasion

MACH 3 AVIATION CHALLENGE (Grades 10-12)

- Must be able to independently dress self and prepare for a full day of activities usually beginning at 7:00 am and ending at 10:00pm
- Must be able to walk 5-10,000 steps per day
- Must listen to 10 hours of history
- Will view I-MAX or 3-D movies
- Must actively participate in Flight Simulators
- Must attend Classroom Lectures on Fire building, Finding Food and Water and Shelter Building
- Must actively participate in Lower Ropes Course
- Must actively participate in Tower and Repel
- Must actively participate in Tower and Zip Line
- Must actively participate in Pamper Pole
- Must actively participate in Seal Op's
- Must actively participate in Escape and Evasion
- Must actively participate in Parachute Drop
- Must actively participate in Helo Dunker



IMPORTANT

PROCESS FOR REGISTRATION

1. Fill out the Lighthouse Application for a scholarship to Space Camp.
2. Include **the email address** that you want the registration invitation sent to
3. Attach a current eye report to the application
4. When complete, mail to
Lighthouse for the Blind-St. Louis
Attn: Angie Yorke **OR Email to: ayorke@lhbindustries.com**
10440 Trenton Avenue
Saint Louis, Missouri 63132
5. The Lighthouse application **MUST BE** submitted to the Lighthouse by September 1, 2022.
6. **After the Lighthouse receives completed applications, you will receive an invitation by email to complete the online registration. You will complete ALL information at this time, and then registration is complete.**
7. If you do not receive an invitation after completing the paperwork, contact Angie Yorke ASAP. (There is a possibility that applications get lost in mail).
8. You must complete both a Lighthouse for the Blind Scholarship Application and ALL online registration required by Space Camp, or scholarships will not be granted.

COVID & OTHER HEALTH ISSUES



IMPORTANT

Another caveat to SCIVIS 2022 will be students attending will need to prepare to leave the program if they have any symptoms of COVID. There will be no onsite testing or isolation. **This is non-negotiable and a requirement of Space Camp.** This means that parents/guardians must be prepared to pick their child up as chaperones will not have vehicles. You should not send your child to camp if you cannot pick them up if they become ill. Participants that do not comply with Space Camp requirements will be excluded from future program participation.

- **What safety protocols are in place in response to COVID-19?**

- We will continue to review the guidance provided by the CDC regarding the safe operation of camps and will make adjustments where deemed appropriate.

- **Will you require face masks?**

- The use of masks will be required if warranted by the CDC guidance for the community level of Madison County, AL. If the camper is immunocompromised or high risk for severe disease, it is suggested that you contact your healthcare provider for guidance on whether they need to wear a mask and take other necessary precautions. Masks are optional for any camper or staff member even when not required. Face shields are NOT allowed as a replacement for a mask but may be worn in addition to a mask.
- Masks may be required indoors if warranted due to exposure to a COVID-19 positive or symptomatic person

- **What happens if my child becomes ill during camp?**

- A camper with a fever of 100.4 OR COVID-like symptoms will be sent home.
- Campers will not be sent offsite for COVID testing or medical evaluation unless urgent or nursing judgment deems the situation necessary or the issue is clearly not related to an acute illness (twisted ankle, etc).
- If a camper is sent home, an authorized parent/guardian/emergency contact should be in route within 8 hours of decampment notification.

- **What happens if my child is exposed to a COVID-positive camper, staff member or Rocket Center visitor while at camp?**

- Space Camp will follow the guidance provided by the CDC and American Camps Association as follows:
 - If the camper is fully vaccinated for COVID-19 and has no symptoms, he or she is welcome to remain at camp but will have to wear a mask while indoors per CDC guidance.
 - If the camper is not vaccinated and has been exposed, you will need to pick him or her up from camp to provide mandatory isolation in accordance with CDC guidelines. If the camper has had COVID-19 in the last 90 days, he or she may remain at camp if not exhibiting symptoms.
 - Campers or staff members with COVID-19 symptoms are required to leave camp for the required isolation period regardless of vaccination status.

- **What if someone in contact with my camper presents with COVID-19 symptoms?**

If anyone in contact with my camper (teammates or staff in close contact) presents with symptoms, the team will be asked to mask indoors for the remainder the session to reduce risk of spread.

LIGHTHOUSE FOR THE BLIND SPACE CAMP SCHOLARSHIP APPLICATION

SEPTEMBER 17- SEPTEMBER 23, 2022

We will leave a day earlier this year to permit adequate travel time.

APPLICATION DEADLINE: SEPTEMBER 1, 2022

Please note: All campers must be 9-18 years of age to be able to participate.

*Students must be in the 4th grade or older to attend camp.

Personal Information

Please Print Clearly

Name _____

Address _____ City _____ State _____ Zip _____

Phone _____

Birth Date _____ Age at time of camp _____ Biological Sex M F

Grade at time of camp _____ School District _____

Email to receive invitation to register _____

Parent/Guardian Information:

Name _____

Address _____ City _____ State _____ Zip _____

Day Phone _____ Evening Phone _____

Email to receive invitation to register _____

Emergency Contact Information:

Emergency contact: _____ Relationship _____

Day Phone _____ Evening Phone _____

Visual Classification *(Please check one. If you are not sure, please estimate) :*

- B1:** No light perception in either eye up to light perception, but inability to recognize the shape of a hand at any distance or in any direction.
- B2:** From ability to recognize the shape of a hand up to visual acuity of 20/600 and/or a visual field of less than 5 degrees in the best eye with the best practical eye correction.
- B3:** From visual acuity above 20/600 and up to visual acuity of 20/200 and/or a visual field of less than 20 degrees and more than 5 degrees in the best eye with the best practical eye correction.
- B4:** From visual acuity above 20/200 and up to visual acuity of 20/70 and a visual field larger than 20 degrees in the best eye with the best practical eye correction.

Eye Condition: _____

Please attach to this application any information on eye condition that chaperones need to know to assist your child and provide a safe environment.

There are certain rides (simulators) that may cause harm to people with certain eye conditions. Please see the attachment and list any concerns below. Does your child have an eye condition we should be aware of?: Yes No

If “yes” please explain: _____

What Space Camp Program do you wish to attend? **(See pages 3 and 4 for program info. You must choose a program to participate in).**

Any known food allergies we should be aware: Yes No

If yes, please explain: _____

Any known allergies to plants, bees, outdoors, etc? If yes, please explain and let us know if the participant will require any assistance: _____

Is the participant taking any medications we should be aware: Yes No

If yes, please explain and let us know if the participant will require any assistance: _____

Are there any health or injury issues we should be aware: Yes No

If yes, please explain: _____

Has the participant ever spent the night away from home before? Yes No

T-Shirt Size : Youth Small Youth Medium Youth Large OR
Adult Small Adult Medium Adult Large Adult XL

Travel Plans: All participants must have their own transportation to and from Lighthouse for the Blind. Once participants arrive at Lighthouse for the Blind, transportation will be provided to Space Camp by chartered bus.

- Details on arrival and departure times will be shared with you in the future.

Participants must:

1. Display behaviors that allow them to function in a group setting that does not affect other group members Must not display defiant behavior (this includes refusing to stand in a line, refusing to participate in a variety of activities, and refusing to abide by bedtime). If a child has disciplinary problems at camp, they will not be able to apply the following year again.
2. Not possess a medical problem that requires a nurse for constant supervision.
3. **Parents must disclose ALL necessary information that will allow us to provide a safe environment for the week. This includes ANY issues that may arise behaviorally or medically. Please attach this information to the application.**
4. Campers may jeopardize their opportunity to attend in the following years if they display the following:
 - Defiant or conduct disorders
 - Have mobility limitations that prohibit them from ambulating 1/2 mile or inability to participate in the activities.
 - Does not have the independent and organizational skills required for participation (see list for more details)

Release

This application must be completed in FULL.

General Liability Waiver:

I, _____, being the parent/legal guardian of _____, do hereby consent to his/her participation in voluntary functions sponsored and/or organized by the Lighthouse for the Blind – St. Louis. I understand that he/she is responsible for his/her behavior. I do hereby waive and release, the Lighthouse for the Blind – St. Louis, their service partners (including schools) and/or sponsors of any project, event, or function, from all claims and liabilities, of any kind whatsoever, arising from, whether directly or indirectly, my child/ward’s participation in Lighthouse for the Blind – St. Louis, and or functions.

Transportation Liability Waiver:

I do hereby consent to The Lighthouse for the Blind – St. Louis providing transportation (in commercially procured and private vehicles) for my child/ward if necessary. I do hereby waive and release the Lighthouse for the Blind – St. Louis, their service partners and/or sponsors of any project or function, from all claims and liabilities, of any kind whatsoever, arising from, whether directly or indirectly, my child/ward’s involvement in transportation services provided by the Lighthouse for the Blind – St. Louis.

Release to Seek Medical Treatment*

In the event of a medical emergency, I do hereby consent to the Lighthouse for the Blind – St. Louis releasing my child/ward to the nearest, most appropriate medical professional available. I understand that the Lighthouse for the Blind – St. Louis will notify me of such an event immediately after they have sought proper medical treatment for my child/ward at the following phone number: _____.

*If your child/ward has a chronic or recurring medical condition, for which emergency treatment is not necessary, please address your child’s/ward’s needs in the appropriate area of this application.

Photo Release

I hereby grant permission to use my child’s/ward’s likeness in a photograph in any Lighthouse for the Blind publications, including website entries, without payment or any other compensation. I understand and agree that these materials will become property of the Lighthouse for the Blind – St. Louis and will not be returned.

By signing below, I indicate that I understand and agree to the items above.

Participant’s Signature

Parent’s/Guardian’s Signature (if under age 18)



LIGHTHOUSE *for the* BLIND

SAINT LOUIS

RISK ACKNOWLEDGMENT, RELEASE, AND LIABILITY WAIVER AGREEMENT **RELATING TO CORONAVIRUS / COVID-19**

I, the undersigned parent or guardian of a child who is a participant in the Lighthouse for the Blind **SPACE CAMP**, (the “Program”), enter into and agree to become legally bound by this RISK ACKNOWLEDGMENT, RELEASE, AND LIABILITY WAIVER AGREEMENT RELATING TO CORONAVIRUS / COVID-19 (the “Agreement”) and acknowledge and agree to the following as conditions of my child’s participation in the Program.

1. On or about March 11, 2020, Coronavirus Disease 2019 (“COVID-19”) was declared a pandemic by the World Health Organization, and that the United States Centers for Disease Control and Prevention has stated, “the best way to prevent illness is to avoid being exposed to this virus.”
2. I am aware of the contagious nature of COVID-19, and have voluntarily chosen to allow my child to participate in the Program.
3. Lighthouse for the Blind employees will be exposed to multiple persons, and employees could be exposed to COVID-19.
4. Although precautions may be taken to reduce the likelihood of transmission of COVID-19, there are no promises, guarantees or expectations that my child will not become infected with COVID-19.
5. By allowing my child to participate in the Program, I am exposing my child, other persons, and myself to the risk of becoming infected with COVID-19, which may result in serious personal injury, illness, permanent disability, and death.
6. I understand the risk to my child of becoming exposed to or infected by COVID-19 may result from the actions of, inaction of, or negligence of, including, but not limited to, myself, other persons, employees, Program participants, and parents or guardians.
7. I assume any and all risks associated with my child’s participation in the Program; and accept personal responsibility for any injury to my child or myself, including, but not limited to, personal injury, illness, disability, death, damage, loss, liability or expense, of any kind or nature, that I or my child may suffer arising out of or in connection with my child or myself becoming exposed to or infected by COVID-19 while my child is participating in the Program.
8. I agree to indemnify, defend, and hold The Lighthouse for the Blind, their employees, service partners and/or sponsors of any project or function harmless from any and all claims, demands, actions, damages, costs, expenses, fines, covenants and compensation whatsoever, whether for property damage, personal injuries or death, whether now known or unknown, foreseen or unforeseen, patent or latent, arising directly or indirectly from or in connection with the undersigned’s child’s participation in the Program. It is the intention of this

acknowledgement and waiver to hold myself responsible for the payment of any and all claims of any nature and character (arising from the matters described above), including claims in any way attributed to or asserted against the Lighthouse for the Blind or which the Lighthouse for the Blind may be required to pay.

9. The undersigned, for himself or herself, assigns, heirs, successors or agents intending to be legally bound, does hereby release, remise and forever discharge the Lighthouse for the Blind, its employees, service partners, and/or sponsors of any project, both individually and in their respective capacity from any and all claims, demands, actions, damages, costs, expenses, fines, covenants, and compensation whatsoever, whether now known or unknown, foreseen or unforeseen, patent or latent, which the undersigned claims or asserts against the Lighthouse for the Blind, its employees, service partners, and/or sponsors of any project relating to the undersigned's child's participation in the Program, from the beginning of time through the date of this Agreement and thereafter.

10. I agree to pick up my child from Space Camp Sick Bay if called. I agree to have a plan to be en route within eight hours of decampment notification. I understand if I do not comply with this, my child will be excluded from future program participation.

11. I represent and warrant that I have carefully read and fully understand all of the provisions of this Agreement, knowingly and voluntarily agree to all of the terms set forth in this Agreement, and acknowledge that in entering into this Agreement, am not relying on any representation, promise or inducement made by the Lighthouse for the Blind.

Participant's Full Name _____

Parent/Legal Guardian Name (printed) _____

Parent/Legal Guardian Signature _____

Date _____

Proposed Simulators for use in the US Space and Rocket Center Program for Visually Impaired Children

1/6 Microgravity Chair

This chair is designed to simulate the moon's gravitational pull. The chair can move both vertically and horizontally. Vertical height is controlled by a counselor. Protective gear includes helmet and seatbelt.

The movement of this chair is extremely gentle. This presents no greater risk for a visually impaired child, regardless of the cause of visual impairment, than it would for a sighted child.

5 Degrees of Freedom Chair: This chair is designed to simulate movement in a frictionless environment. Movement in 5 different directions is possible, including: forward/backward, side-to-side, roll, pitch and yaw. Protective gear includes helmet and safety straps. Excursion of the chair is in great part controlled by the counselor.

Movement of this chair is gentle with no rapid acceleration or deceleration. This simulator incurs no greater risk for a visually impaired child than for a sighted child.

Manned Maneuvering Unit-1 G Trainer (MMU): This unit simulates a manned maneuvering unit operating in the micro-gravity of space. Similar to the 5 Degrees of Freedom Chair, motions include forward/backward, side-to-side, roll, pitch and yaw. Although inversion was previously an option, it is no longer allowed. Protective gear includes helmet and safety straps.

Use of this simulator involves slow positional changes with no inversion or rapid acceleration changes. Movement in large part is controlled by a counselor. This simulator incurs no greater risk for a visually impaired child than for a sighted child.

Multi-Axis Trainer (MAT): This unit simulates a tumble spin experience during reentry into the earth's atmosphere. The MAT does not spin more than twice in the same direction, but does produce inversion. There are rapid accelerations and decelerations. Theoretically there is no shifting of the inner ear fluid and therefore no vertigo with resultant nausea or vomiting is produced. Protective gear includes hand and foot restraints as well as a 5-point harness.

This trainer produces rapid but mild changes in direction. Dizziness and nausea may result despite an intact vestibular or inner ear system. There is minimal head restraint and therefore precaution must be exercised in children with poor head control. Otherwise, there is no increased risk for the visually impaired child than for a sighted child. Theoretically, vestibular disturbance is inhibited by an intact visual system. Nausea and disorientation may persist in children with extremely limited vision.

Space Shot: This unit simulates the rapid acceleration of a rocket escaping earth's gravity. There is rapid acceleration and a slow deceleration. Safety precautions include a seat belt and a protective padded bar which fits over the shoulders. At the top of the ride as acceleration ends, campers experience a hard jolt as falling down into a padded seat.

This unit poses no greater safety risk for visually impaired children than it does for sighted children. The rapid acceleration and the jolt against the seat bottom may be more problematic in children with muscular-skeletal disease, in particular, poor muscle tone and head control.

Centrifuge: The Centrifuge is a simulator, which produces a rapid circular motion. This ride was unavailable. However, the instructional manual states that a 3g force (between 150lbs - 450lbs) is generated over a 15-minute ride. The subject will experience chest pressure. Breathing may be mildly impaired. As long as the head is still, dizziness or vertigo are usually not encountered. However, with head movement (i.e. lifting the head up) prolonged nausea and vomiting may ensue.

Although the simulator itself appears to pose no increased risk for a visually impaired child as compared with a sighted child, prolonged vomiting following the ride can cause unacceptable increase in intraocular pressure. This would pose a risk

of vision loss to children with end stage glaucoma. In addition, children with proliferative diabetic retinopathy or other retinal vascular anomalies would be at increased risk for intraocular hemorrhage. Vitreous hemorrhage may require a surgical procedure. Therefore, children with proliferative diabetic retinopathy, and stage glaucoma, or other retinal vascular anomalies may be at risk for vision loss from prolonged vomiting after riding this simulator.

Other considerations: Specific eye diseases

Retinal detachment

The question of risk has been raised specifically for children with a history of retinal detachment repair. Following successful retinal reattachment, the retina is stable or more stable than prior to surgical repair. It is unlikely that any of the above simulators pose a significant risk of retinal detachment. One exception is children with intraocular silicone oil or intraocular gas. In these children, positioning is essential for successful retinal reattachment. These children should not be inverted and in many cases should not lie on their backs. It is unlikely that these children would be participating in space camp activities since this would likely occur in the immediate post-operative period.

Although several eye conditions predispose retinal detachment, the simulators discussed above should not significantly increase the risk of detachment. A greater risk is associated with extracurricular activities (i.e. contact sports).

Glaucoma

Risks for children with glaucoma include prolonged inversion and persistent vomiting. Both of these conditions increase intraocular pressure. This should only be a problem in children with end stage glaucoma.

Eye Trauma

The risk of vision loss from eye trauma is of common concern in visually impaired. Protective eye wear would be appropriate for those children who have eye surgery (i.e. glasses with plastic safety lenses). To decrease the risk of trauma it would be helpful to provide counselors with a brief description of each child's visual dysfunction. The significance of general classes of visual impairment could be included in counselor training sessions. Examples include children with retinitis pigmentosa who function quite well under bright illumination but who rapidly become visually impaired with decreased environmental lighting. In these children, limited peripheral vision may preclude them from seeing common objects at floor level (i.e. trash cans). Children with extreme light sensitivity (i.e. achromotopsia) function quite well with decreased room illumination. However, in bright sunlight vision impairment increases dramatically and therefore mobility becomes more difficult, particularly in unfamiliar environments.