

Welcome!

I am excited that we get to come to your school. In this document you will find all the necessary paperwork and information to help this program run as efficiently as possible. Please ensure that all paperwork and permission forms are filled out **prior to us coming**.

As a reminder, this program is once a week for 5 weeks and will take place after school for 2 hours each session. We will start 5-10 minutes after the final bell rings so please encourage students to go directly to the appointed meeting space.

There are several things I need from each participating school.

- Adequate space to hold this class each week. A classroom is sufficient.
 - The ability to show a Power Point presentation each week.
 - **Important! Please make sure a school representative will be available, in person, in case of emergencies. It is required that the individual stays until the end of each day. They will oversee the dismissal of students. I will need to know who the POC will be for each session and a permission slip will need to be filled out for each party.**
 - We need access to the internet. Please provide a guest username and password.
 - Please be prepared to provide a snack for the students. This has proven beneficial in their ability to stay focused on what we are doing.
 - By the 3rd session we will be carving and sanding our CO₂ cars. Please make sure that each student has a mask to wear so they do not breathe in all the dust. This can get messy so if you would like us to move to a gym or lunchroom area, we can do that.
 - Each student should bring a laptop to use each week. They will be using www.whiteboxlearning.com and Kahoot.
 - Please send the roster of who will be attending by **at least the week before** your session starts so that the class can be entered into the computer aided design software we will be using to design the CO₂ cars.
 - The final race will be week 5. Parents are welcome to come and watch. If you choose to invite parents, please let them know the race will not start right after school. It usually takes us about an hour to get done what we need to and set up the track.
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- Please inform the STARBASE team if there is a certain place we should park.
- Please let your office staff know we'll be coming and which room we will meet.
- **Please commit your students to attend all 5 weeks.** It is so important for their success to be there each week. This is a progressive program where each week builds on the previous. It is very difficult to catch a student up if they miss.

Included here are several different forms that need to be filled out and ready for week 1 of the program. You will find...

1. A curriculum map so that you are aware of what is taking place each day.
2. The parent permission form that each student will need to have **by the first day of the program.**
3. Spanish version of the parent permission.
4. The student application. This is the form that you will send home with all of your 6th grade students. Anyone interested in participating will turn this in and you can select **12-15 students** you feel will benefit the most from attending the CO₂ dragster program.
5. Parent information flier that can be sent home to let the parents know what this program is designed to accomplish.
6. A demographic form to be filled out and returned with class roster.
7. Teacher permission form that needs to be filled out and signed by anyone who will be with us during this program.
8. I will also need a class roster. Please return this the week before your session starts. (This will not be included in this file. Please download it from our website and return the completed form.

We do have an Instagram and Facebook account that we update regularly if you or the parents would like to see what the students have been up to.

@ STARBASEHILLAdvanced.

If you have any questions or concerns, please reach out. Again, thank you for allowing us to come to your school and for all your help. It will be a lot of fun!

Thank you,
Chantel Cowdin (Tomahawk)
STARBASE Hill Advanced Coordinator
(801) 586-7492
starbasehill2.0@gmail.com

STARBASE Hill Advanced

STARBASE Hill Advanced is designed to provide an exciting, school-based STEM program for students to collaborate with peers and mentors in immersive STEM activities and solidify students' attachment to and engagement with school. STARBASE Advanced ignites students' passion for innovative STEM investigations and solutions opening the door for future STEM endeavors in college and career fields.

STARBASE Advanced students engage in STEM explorations and activities that establish a concept base for future engineering activities. Topics include: engineering design process, potential and kinetic energy, aerodynamics, Newton's laws, and center of mass. The sessions will culminate in an engineering design challenge and competition amongst their peers, requiring students to use Computer-Aided Design (CAD) software and simulations to design and build a balsa wood CO₂ powered car.

Curriculum Map

| | |
|---|---|
| Session 1 Intro and Engineering Design Process, Newton's Laws, Virtual Design (2 hours) | <ul style="list-style-type: none"> • Engineering Communication • Analyze scientific principles, Inertia, Newton's 2nd Law, • Intro to Whitebox Learning software |
| Session 2 Virtual Engineering Cycle and tool safety (2 hours) | <ul style="list-style-type: none"> • Design, race, and analyze virtual prototypes • Students virtually race • Drag, aerodynamics, and friction • Engage in discussion about the virtual race • Students finalize design and select design for printing |
| Session 3 Prototype Manufacturing and Concept Check (2 hours) | <ul style="list-style-type: none"> • Demonstrate tool safety • Understand the EDP wheel to "Create a Prototype" • Begin initial build session • Concept check: design analysis |
| Session 4 Prototype Manufacturing (2 hours) | <ul style="list-style-type: none"> • Experience "Test", "Communicate" and "Redesign" • Analysis: Reducing the negative effects of motion and improving the positive effects can increase the performance |
| Session 5 Final Competition (2 hours) | <ul style="list-style-type: none"> • Tests, data collection, & redesign • Final touch ups • Judging and final tests |



| | |
|---|----------------|
| Parent Permission | |
| School: _____ | Teacher: _____ |
| 5731 E Ave, Hill Air Force Base, UT - Phone (801) 586-7492 Hill AFB- www.starbasehill.org Facebook/Instagram- starbasehilladvanced | |

Student Information:

Name: _____ Grade: _____

Gender: Male Female Other Military Affiliated? Yes No

Ethnicity: (Circle one) White Hispanic African American Asian Pacific Islander
American Indian Alaska Native Multi-Race Other

Parent's Name: _____ Parent's Email: _____

Emergency Information: The information below is for the district teacher to contact you if necessary.

Emergency Contact: _____ Relationship: _____

Home #: _____ Cell #: _____ Work #: _____

Please note below any medical conditions, ALLERGIES, concerns, or other special issues which STARBASE should be aware

Parent Permission:

This release of liability made by the undersigned, a parent or guardian of a potential participant in the STARBASE Program (hereinafter collectively referred to as "Applicant"), for the purpose of releasing the UT Military Authority, State of UTAH, the United States Department of Defense, the UT STARBASE Academy and any other federal or state governmental entities or corporate sponsors thereof (all collectively referred to hereafter as "Hill Air Force Base Utah") from any and all liabilities in exchange for participation does hereby state: WHEREAS, the said student desires the use of services, grounds, facilities and/or equipment of the Hill Air Force Base Utah for participation in the STARBASE Program does hereby state that: In consideration of the mutual, advantages, benefits and purpose to be achieved thereby; the use of said grounds, facility or equipment for the purpose and activities described is hereby approved, conditioned upon the applicant releasing the Hill Air Force Base Utah and its agents, servants, employees, soldiers and airmen of and from any and all claims, demands, actions, causes of action whatsoever, arising out of or related to any loss, damage or injury, including death, that may be sustained by any person or property arising out of the described activity or any other activities relating thereto conducted by Applicant. The applicant individually and on behalf of the minor child hereby expressly and voluntarily assumes all risks and hazards of injury to the minor child and his or her property resulting from participation in the program to the full extent allowable under federal and state law. In the event of accident, injury, or other medical emergency, the Hill Air Force Utah is authorized to make emergency medical decisions on behalf of Applicant and to release the Hill Air Force Utah from liability for same. I understand that my liability for property damage and personal injuries caused by my child is the same as I am subject to during normal school hours and activities at my child's school. Applicant understands the above terms and conditions and acknowledges that it has carefully read the above statement and willingly complies with the terms and conditions thereof, understanding that it voluntarily assumes all risks and hazards of injury to applicant resulting from participation in the described activities.

Parent/Guardian Signature: _____ Parent/Guardian Printed Name: _____ Date: _____

Photographic Release:

I hereby authorize STARBASE Hill, the Hill Air Force Base Utah and the United States Department of Defense and other federal and state governmental entities and corporations working in conjunction therewith (collectively referred to hereinafter as "STARBASE Hill") to utilize photographs or videos of my child for promotional purposes. I hereby waive any monetary or other rights that I might have to inspect and/or approve the finished product of the advertising, promotional or news copy and consent to its use in whatever way STARBASE Hill deems appropriate. I hereby consent to the release of said photographs to broadcast and print media such as non-governmental newspapers and publications, television, cable or radio stations. I understand that the all rights and title to the released information shall remain with STARBASE Hill or the recipient.

Parent/Guardian Signature: _____ Parent/Guardian Printed Name: _____ Date: _____



Formulario de Permiso de Padre

Escuela: _____ **Profesor:** _____

5731 E Ave, Hill Air Force Base, UT - Teléfono (801) 586-7492
Hill AFB- www.starbasehill.org Facebook/Instagram- starbasehilladvanced

Estudiante/Padre Información:

Nombre del Estudiante: _____ Sexo del estudiante: Masculino Masculina
Nombre del Padre: _____ Otro
La Dirección: _____ Ciudad: _____ Estado: _____ El código postal _____
Teléfono celular: _____ Teléfono de casa: _____ Teléfono de trabajo: _____
¿Alguno de los miembros de la familia inmediata de este estudiante (Padre, Madre, Hermano, Hermana, Tutor) está afiliado a las fuerzas armadas? sí no

Información de emergencia:

STARBASE Hill es considerada una excursión por las escuelas inscritas. Seguimos el procedimiento de viaje de campo para el distrito o cada escuela privada o chárter. La siguiente información es para que el maestro del distrito se ponga en contacto con usted si es necesario. **Nombre de contacto de emergencia:** _____

Relación con el estudiante: _____

Teléfono del residencial: _____ **Teléfono celular:** _____

Teléfono de trabajo: _____

Tenga en cuenta cualquier condición médica, alergias, preocupaciones u otros problemas especiales de los cuales STARBASE Hill debe ser consciente

Liberación de Responsabilidad por Estudiantes:

Esta liberación de responsabilidad es realizada por el abajo firmante, como un participante adulto acompañante/voluntario en el Programa STARBASE (en adelante denominado colectivamente "Aplicante"), con el propósito de liberar a la Autoridad Militar de la UT, Estado de Utah, el Departamento de Defensa de los Estados Unidos, la Academia UT STARBASE y cualquier otra entidad gubernamental federal o estatal o patrocinadores corporativos de los mismos (todos ellos denominados colectivamente en adelante "Hill Air Force Base Utah") de cualquier intercambio por participación. Las STARBASE Hill Screaming Eagles están orgullosamente patrocinadas por el AFSC/EN con aulas ubicadas en el Edificio 460 en la Base de la Fuerza Aérea Hill. Hay más de 60 otras instalaciones de STARBASE en todo el país, pero tenemos la suerte de ser la única STARBASE en todo el estado de Utah. La escuela de su hijo ha sido invitada a participar en el programa STARBASE Hill. STARBASE es un programa práctico centrado en el currículo de Ciencia, Tecnología, Ingeniería y Matemáticas. Los estudiantes experimentarán aplicaciones prácticas del mundo real de los conceptos de matemáticas, ciencias, química y física. Los estudiantes tienen la oportunidad de asistir a una excursión a una de las instalaciones tecnológicas de la Base de la Fuerza Aérea de Hill o experimentar una demostración emocionante en nuestras instalaciones. Un programa de graduación se llevará a cabo en la escuela de su hijo después de que hayan completado el programa. Los amigos y familiares pueden asistir a la ceremonia de graduación para celebrar la finalización del programa STARBASE por parte de su hijo. El maestro de su estudiante le informará la fecha exacta de esta ceremonia. I grant my permission for my child(ren) to participate in the STARBASE Hill program.

Nombre impreso del padre/guardián: _____

Firma del padre/guardián: _____

Fecha: _____

Versión fotográfica:

Por la presente renuncio a cualquier derecho monetario u otro derecho que pueda tener para inspeccionar y/o aprobar el producto terminado de la copia publicitaria, promocional o de noticias y consiento su uso de la manera que el DoD STARBASE o STARBASE Hill considere apropiado. STARBASE Hill, el Departamento de Defensa de los Estados Unidos, el Programa DOD STARBASE y otras entidades gubernamentales y corporaciones federales y estatales que trabajan en conjunto con ellos para utilizar fotografías de mi hijo con fines promocionales. Por la presente doy mi consentimiento para la publicación de dichas fotografías para la difusión y la difusión de medios impresos, como periódicos y publicaciones no gubernamentales, televisión, televisión o estaciones de radio. Entiendo que todos los derechos y el título de la información divulgada permanecerán en STARBASE Hill o el destinatario. Estudiante/Padre Información: Nombre del Estudiante: Sexo del estudiante: Masculino Masculina Nombre del Padre: Otro La Dirección: Ciudad: Estado: El código postal Teléfono celular: Teléfono de casa: Teléfono de trabajo: ¿Alguno de los miembros de la familia inmediata de este estudiante (Padre, Madre, Hermano, Hermana, Tutor) está afiliado a las fuerzas armadas? sí no Información de emergencia: STARBASE Hill es considerada una excursión por las escuelas inscritas. Seguimos el procedimiento de viaje de campo para el distrito o cada escuela privada o chárter. La siguiente información es para que el maestro del distrito se ponga en contacto con usted si es necesario. Nombre de contacto de emergencia: Relación con el estudiante: Teléfono del residencial: Teléfono celular: Teléfono de trabajo: *Tenga en cuenta cualquier condición médica, alergias, preocupaciones u otros problemas especiales de los cuales STARBASE Hill debe ser consciente*

Nombre impreso del padre/guardián: _____

Firma del padre/guardián: _____

Fecha: _____



STARBASE Hill Advanced Student Application



Do you love Science, Technology, Engineering, and Math?

STARBASE Advanced is an immersive, project-based STEM program bringing the fun to you. This after school program meets once a week for five weeks. Each session is two hours. In those five weeks you will learn how to design, explore, build, and race your own CO2 dragster.

Name: _____ Class: _____

Gender: Male Female

Terms & Conditions

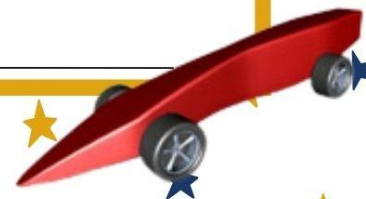
In STARBASE Advanced you will be responsible for your own safety and behavior. You will use various tools, such as: chisels, mallets, shavers, and sanding files. You agree to act in your best behavior, always take safety precautions, and always wear proper personal protection when utilizing tools.

Student Signature: _____

Why do you want to participate in STARBASE Hill Advanced?

Teacher Recommendation

Teacher Signature: _____





DoD **STARBASE**
ADVANCED



A Department of Defense Youth Program

CO2 DRAGSTER

Competition



SIGN UP TODAY



- *Engineering Design Process
- *Newton's Laws of Motion
- *Mass *Drag *Friction
- *Aerodynamics *CAD

LIMITED SPOTS



STARBASEHillAdvanced

THE TEAM FROM STARBASE HILL Advanced WILL BE BRINGING THE FUN DIRECTLY TO YOUR STUDENT'S SCHOOL IN A FIVE WEEK AFTER-SCHOOL PROGRAM. THE CO2 DRAGSTER PROGRAM IS DESIGNED TO FURTHER ENGAGE STUDENTS WITH SCHOOL, AND BUILD LASTING RELATIONSHIPS WITH PEERS AND MENTORS THROUGH TEAMWORK AND COLLABORATION. THE PROGRAM ENDS WITH A FINAL COMPETITION TO FIND THE FASTEST CAR.



Student & School Demographic Information

TEACHERS – PLEASE COMPLETE THIS FORM AND SUBMIT IT WITH YOUR CLASS LIST

| | |
|------------------------|-------------------------------------|
| Teacher: _____ | Class #: _____ |
| Teacher's Email: _____ | Date: _____ |
| School Name: _____ | School NCESSCH #: _____ |
| Address: _____ | City: _____ State: _____ Zip: _____ |
| School Phone #: _____ | Fax #: _____ |

DoD STARBASE is required to collect demographic data on all student participants. The data is used in aggregate form **ONLY** to compile participant statistics for the DoD STARBASE annual report. Using school records, please identify the ethnicity of the total number of students in your class.

| Ethnicity | Number of Students |
|---------------------|--------------------|
| Hispanic/Latino | |
| Non-Hispanic/Latino | |
| Total Students | |

For those students identified as **NON-HISPANIC/LATINO**, provide student race data.
*Note: The total number of students in the chart below **must match** the number identified as Non-Hispanic/Latino in the chart above.*

| American Indian or Alaskan Native | Asian | Black or African American | Native Hawaiian or Other Pacific Islander | White | More Than One Race | Total Number of Students: Non-Hispanic/Latino |
|-----------------------------------|-------|---------------------------|---|-------|--------------------|---|
| | | | | | | |

| Other | Number of Students |
|----------------------|--------------------|
| ESL/ELL | |
| Title 1 Eligible | |
| 504/IEP | |
| Military Dependent * | |

* Military dependents include children of Active Duty, Guard, Reserve and Retired members of the armed services.



| | |
|----------------------------------|-----------------------|
| Teacher/Coach Application | |
| School: _____ | Teacher: _____ |

5731 E Ave, Hill Air Force Base, UT - Phone (801) 586-7492
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| | |
|--|-------------------------------------|
| <u>Teacher/Coach Information:</u> | |
| Name: _____ | Email: _____ |
| Address: _____ | City: _____ State: _____ Zip: _____ |
| Home Phone: _____ | Cell Phone: _____ Work Phone: _____ |
| <u>Emergency Information:</u> | |
| Emergency Contact: _____ | Relationship: _____ |
| Home Phone: _____ | Cell Phone: _____ Work Phone: _____ |
| Insurance Carrier: _____ | Policy Number: _____ |

Teacher/Coach Release of Liability:

This release of liability is made by the undersigned, as a teacher/ coach adult participant in the STARBASE Program (hereinafter collectively referred to as "Applicant"), for the purpose of releasing the UT Military Authority, State of Utah, the United States Department of Defense, the UT STARBASE Academy and any other federal or state governmental entities or corporate sponsors thereof (all collectively referred to hereafter as "Hill Air Force Base Utah") from any and all liabilities in exchange for participation does hereby state:

WHEREAS, the said applicant desired the use of services, grounds, facilities and/or equipment of the Hill Air Force Base Utah for participation in the STARBASE Program does hereby state that: In consideration of the mutual, advantages, benefits and purpose to be achieved thereby; the use of said grounds, facility or equipment for the purpose and activities described is hereby approved, conditioned upon the applicant releasing the Hill Air Force Base Utah and its agents, servants, employees, soldiers, and airmen of and from any and all claims, demands, actions, causes of action whatsoever, arising out of or related to any loss, damage or injury, including death, that may be sustained by any person or property arising out of the described activity or any other activities relating thereto conducted by Applicant or en route to or from these activities. The undersigned Applicant understands and agrees that there are certain risks attendant to these activities by signing this agreement expressly authorizes travel to and from the various activities in Hill Air Force Base Utah vehicles. The Applicant hereby expressly and voluntarily assumes all risks and hazards of injury or death and damage to his or her property resulting from participation in the program to thee full extent allowable under federal and state law. In the event of accident or injury, or other medical emergency, the Hill Air Force Base Utah is authorized to make emergency medical decisions on behalf of Applicant and to releasee the Hill Air Force Base Utah from liability for same. I understand that my liability for property damage and personal injuries caused by me is the same as I am subject to during normal school hours and activities at my school. Applicant understands the above terms and conditions and acknowledges that it has carefully read the above statement and willingly complies with the terms and conditions thereof, understanding that it voluntarily assumes all risks and hazards of injury to Applicant resulting from participation in the described activities.

➔ _____

| | | |
|----------------------------|-------------------------------|-------------|
| Applicant Signature | Applicant Printed Name | Date |
|----------------------------|-------------------------------|-------------|

Photographic Release:

I hereby authorize the Hill Air Force Base Utah, State of Utah, the United States Department of Defense, the STARBASE Program and other federal and state governmental entities and corporations working in conjunction therewith (collectively referred to hereinafter as "Hill Air Force Base Utah" to utilize photographs of me for promotional purposes. I hereby waive any monetary or other rights that I might have to inspect and/or approve the finished product of the advertising, promotional or news copy and consent to its use in whatever way the Hill Air Force Base Utah deems appropriate. I hereby consent to the release of said photographs to broadcast and print media such as non-governmental newspapers and publications, television, cable or radio stations. I understand that all the rights and title to the released information shall remain with the Hill Air Force Base Utah or the recipient.

➔ _____

| | | |
|----------------------------|-------------------------------|-------------|
| Applicant Signature | Applicant Printed Name | Date |
|----------------------------|-------------------------------|-------------|

Social Media Release:

I hereby authorize the Hill Air Force Base Utah, State of Utah, the United States Department of Defense, the STARBASE Program and other federal and state governmental entities and corporations working in conjunction therewith (collectively referred to hereinafter as "Hill Air Force Base Utah") to post photos and or videos taken of me and post them to social media outlets and tag me in said posts.

Applicant Signature: Applicant Printed Name: Date:

➔ _____

| | | |
|----------------------------|-------------------------------|-------------|
| Applicant Signature | Applicant Printed Name | Date |
|----------------------------|-------------------------------|-------------|