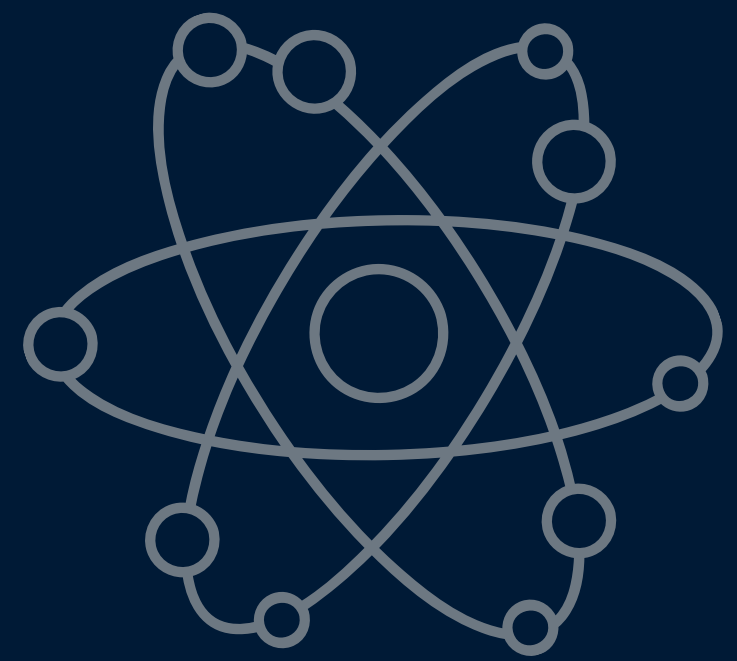
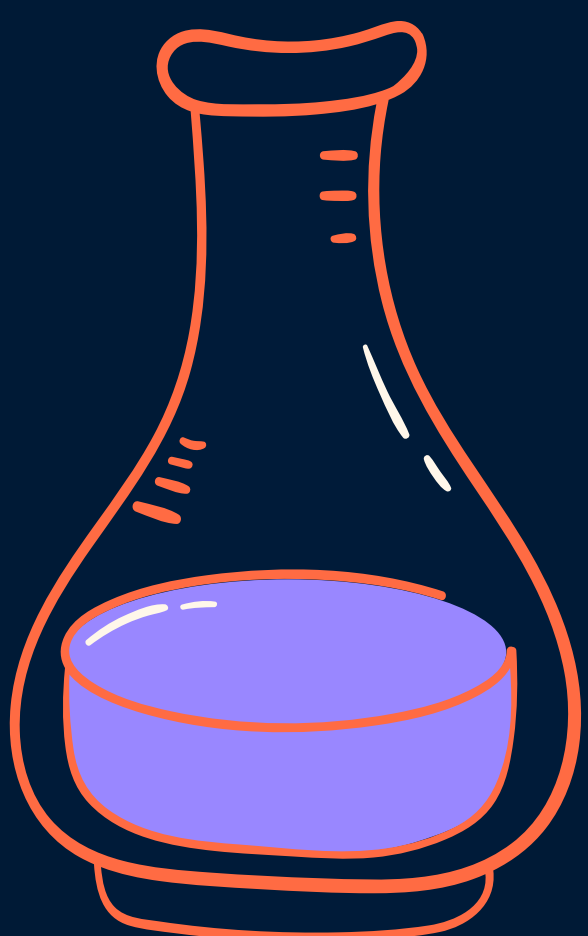


HES HSA presents

STEM Fair

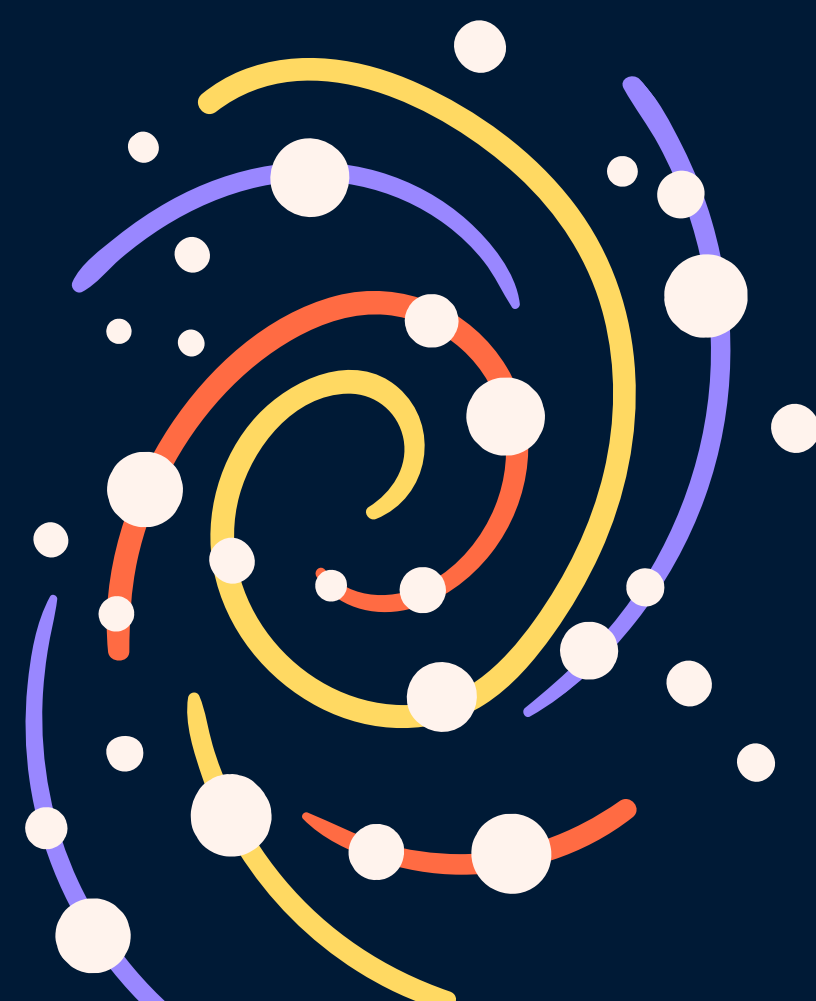


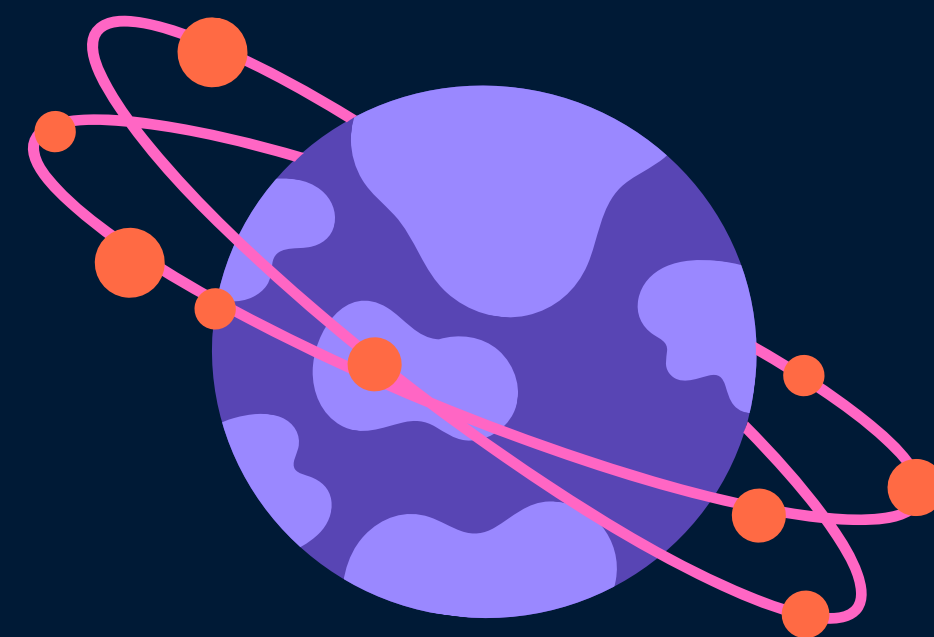
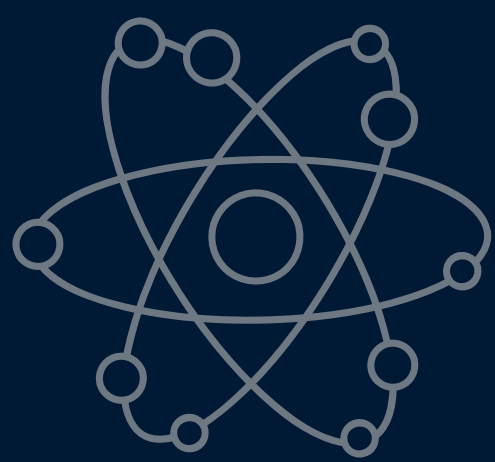
Information &
Rules



FOR EVENT DETAILS &
DEMO VIDEOS VISIT

www.hesha.org/stemfair





What is STEM?

STEM stands for Science, Technology, Engineering and Mathematics. The STEM Fair is our annual science event where kids can participate in our STEM Challenges as well as hands-on activities. The purpose of the fair is to cultivate a curiosity and love of science and all the other disciplines that are part of STEM.

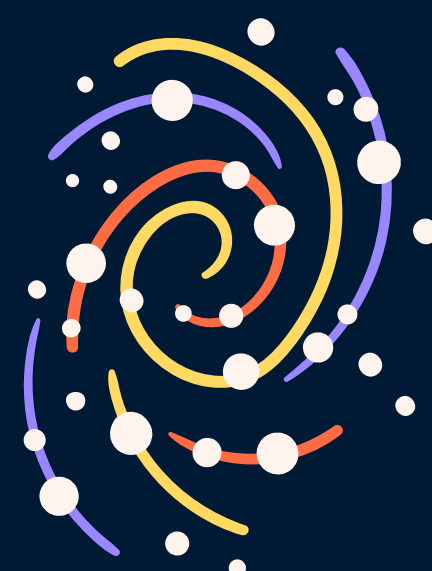
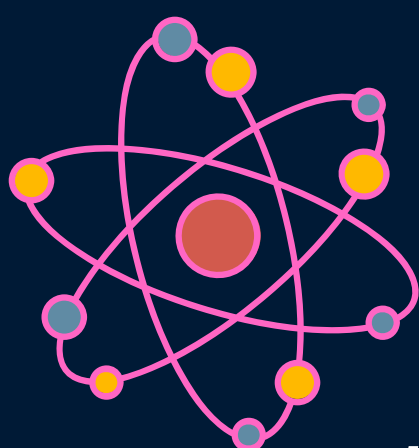
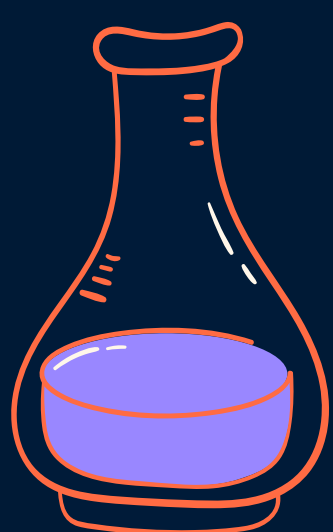
Continue reading for rules for both the Sled Racing & Bridge Breaking stations.

Participation Basics

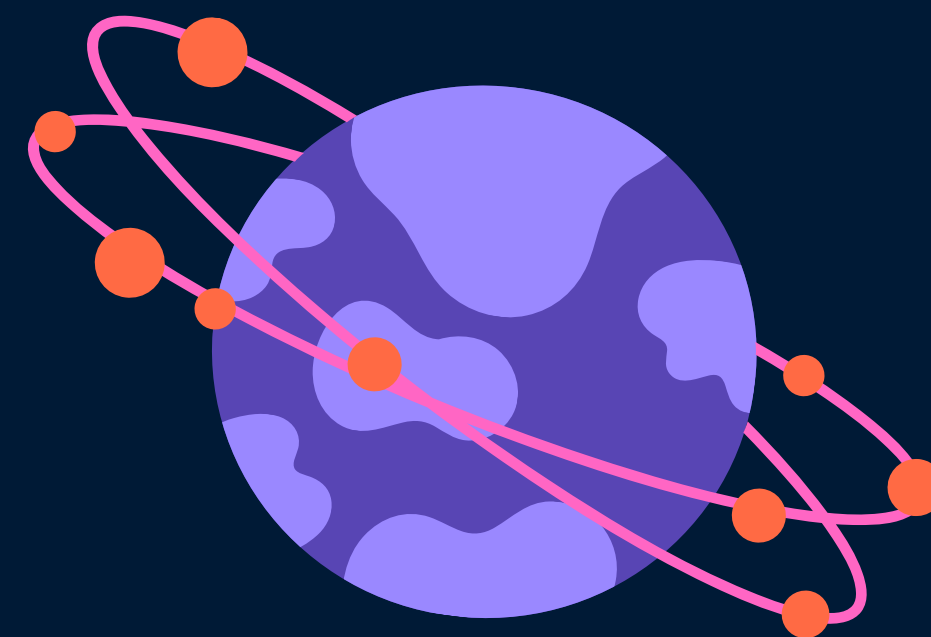
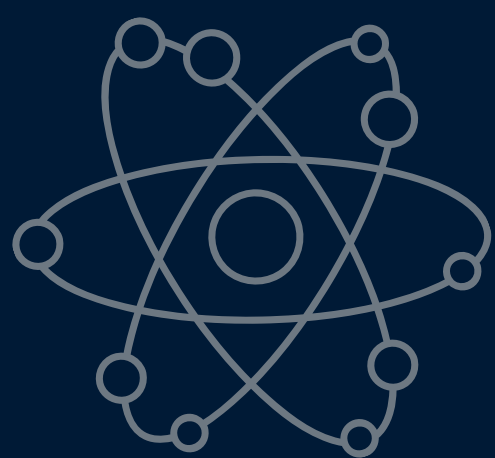
All HES students (K-4) are encouraged to participate in the STEM Fair.

Registration will occur through [community_pass](#). You must register in order to participate in the bridge breaking or sled racing stations. You can register for either station, or both. Registration needs to be completed for each student participating.

Families that only want to visit the fair and take part in hands-on activities that do not require pre-registration, no registration is needed. Simply arrive at the school at the start of the fair and enjoy!



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Volunteers

Do you work (or have a hobby) in a STEM related field? Would you be interested in creating and running a station at the STEM Fair? Maybe running a station isn't for you, but you're willing to volunteer for a short shift during the fair?

These events are a great opportunity to get involved with the HSA and our larger HES community! All volunteer sign ups will occur via Konstella. Watch there for more details and please consider signing up!

Challenge #1: Bridge Breaking Station

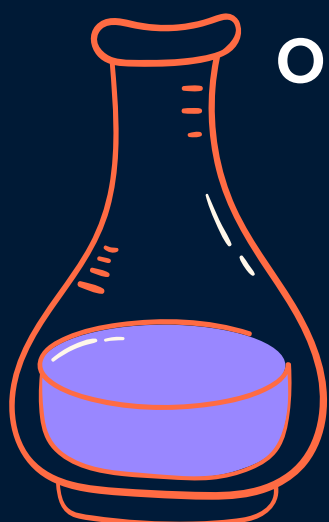
Popsicle Stick Bridge (individual, group or family)

Can you build the strongest bridge using only popsicle sticks? In this fun challenge, students bring in a bridge built at home following the rules below. How much weight can these bridges hold? [Sign up](#) and find out!

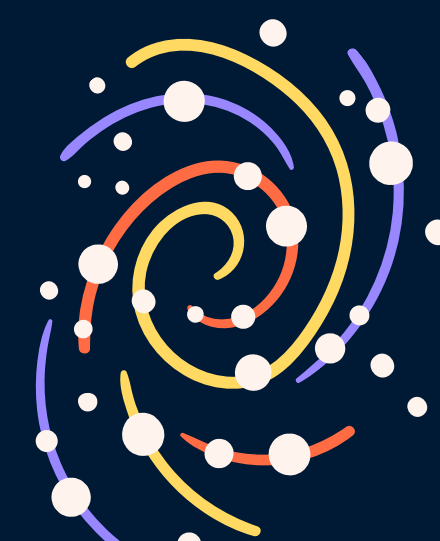
Goal: To build the strongest possible bridge using wooden Popsicle sticks.

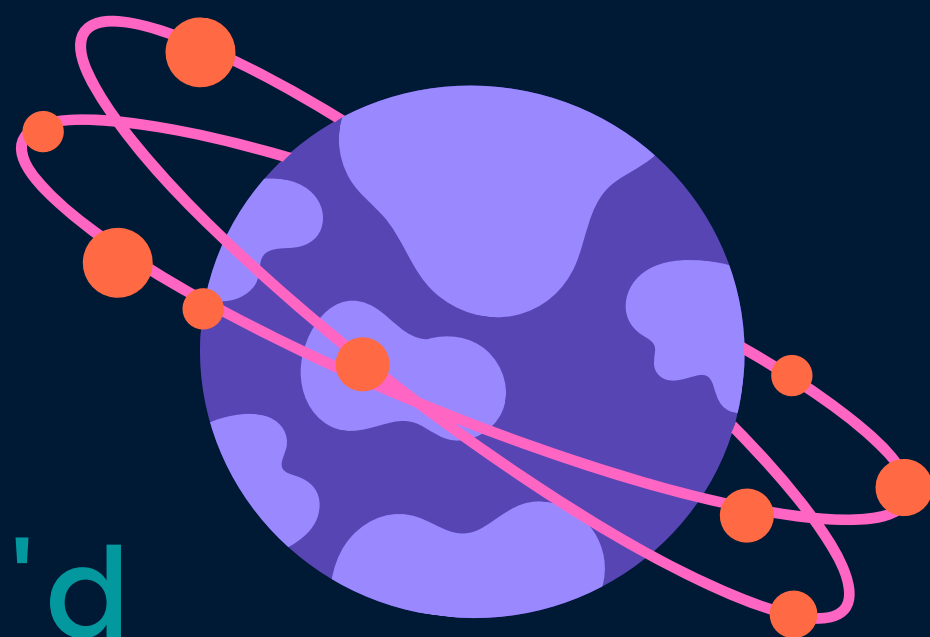
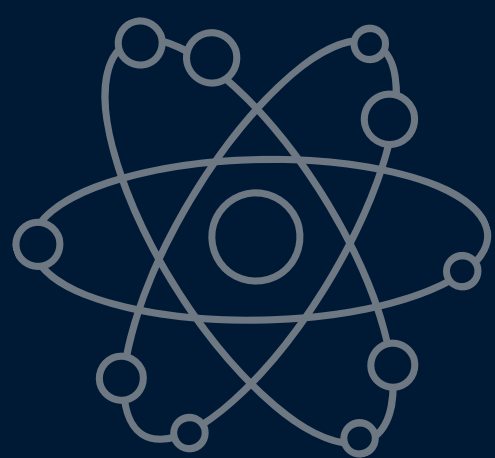
Materials:

- No more than 200 [Popsicle sticks](#) Also available at craft stores (4 1/2 x 3/8 x 1/12 in.)
- Elmer's [white school glue](#)
- Popsicle sticks can be colored with markers, but NO paint or stain.



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Bridge Breaking Station cont'd

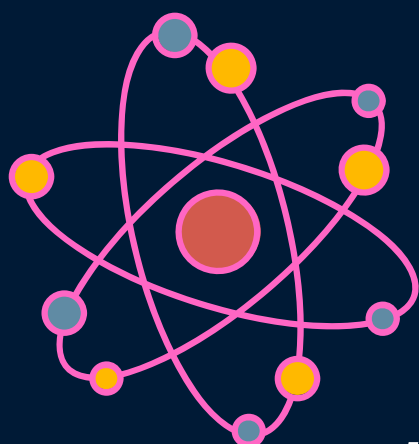
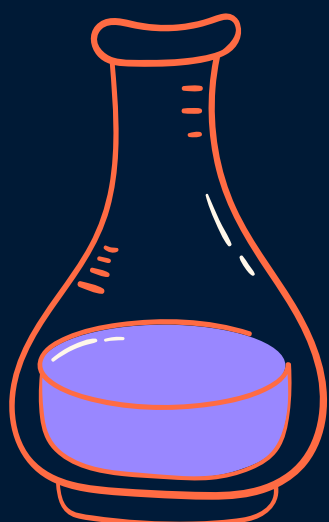
Dimensions/ Specifications:

- The bridge must span a 14" gap – this means that it should be at least 16" long at the base.
- The bridge must have a driving deck to allow for a matchbox car to cross.
- The bridges can have a truss system on top or below the driving deck.
- Total height at tallest point should be no higher than 6"
- Total width of bridge at widest point should be no more than 6"
- Glue on your bridge must be fully dried

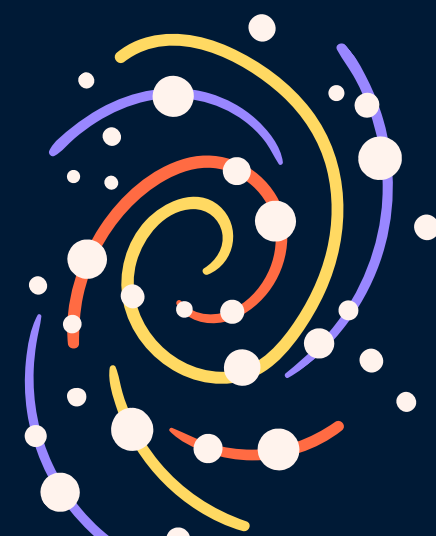
Contest Rules: Participants must register in advance using [community_pass](#). No walk-ins will be allowed.

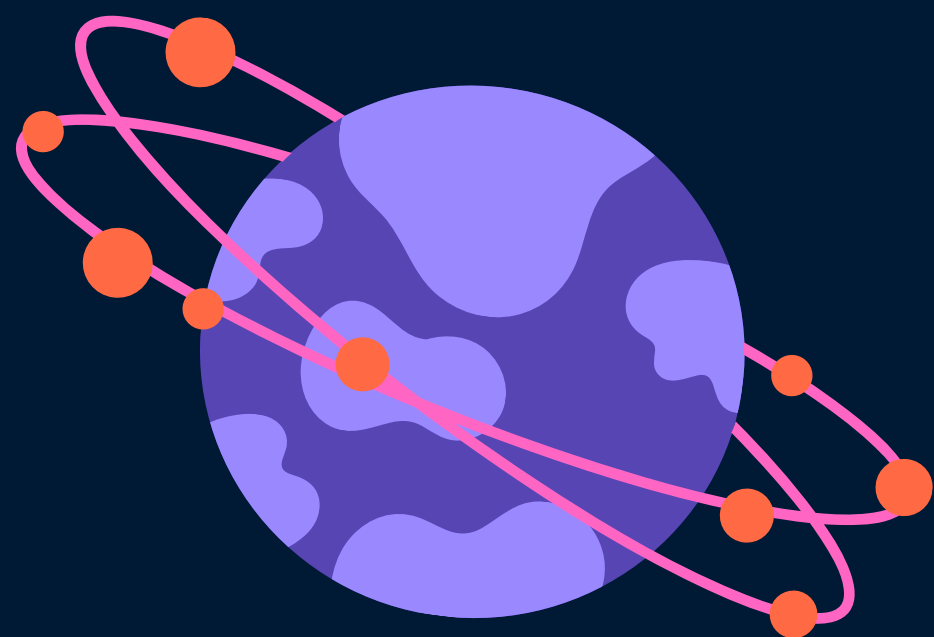
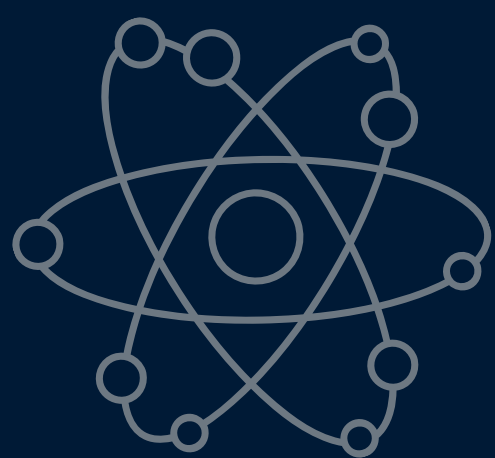
Prior to check in- your child should clearly label their bridge (using a permanent marker) with their first and last name. Upon checking in, the bridge will be examined for compliance with the rules. Please double check the dimensions of your popsicle sticks for the safety of our volunteers, we may not be able to break your bridge if you do not follow the specifications listed above.

During judging, test loads will be applied to the bridge deck using our HES Bridge Breaker, until the bridge breaks or buckles by 2". The weight that breaks the bridge is the breaking load. All bridges will be destroyed during testing!



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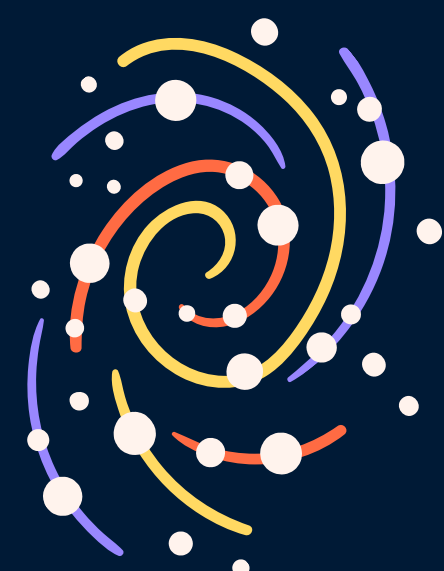
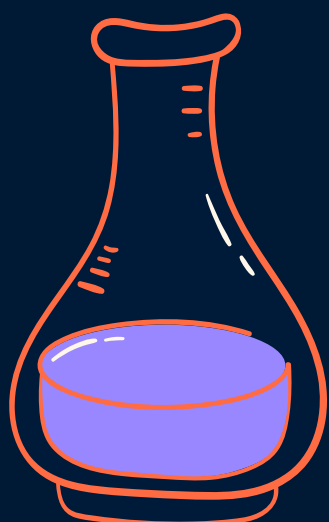
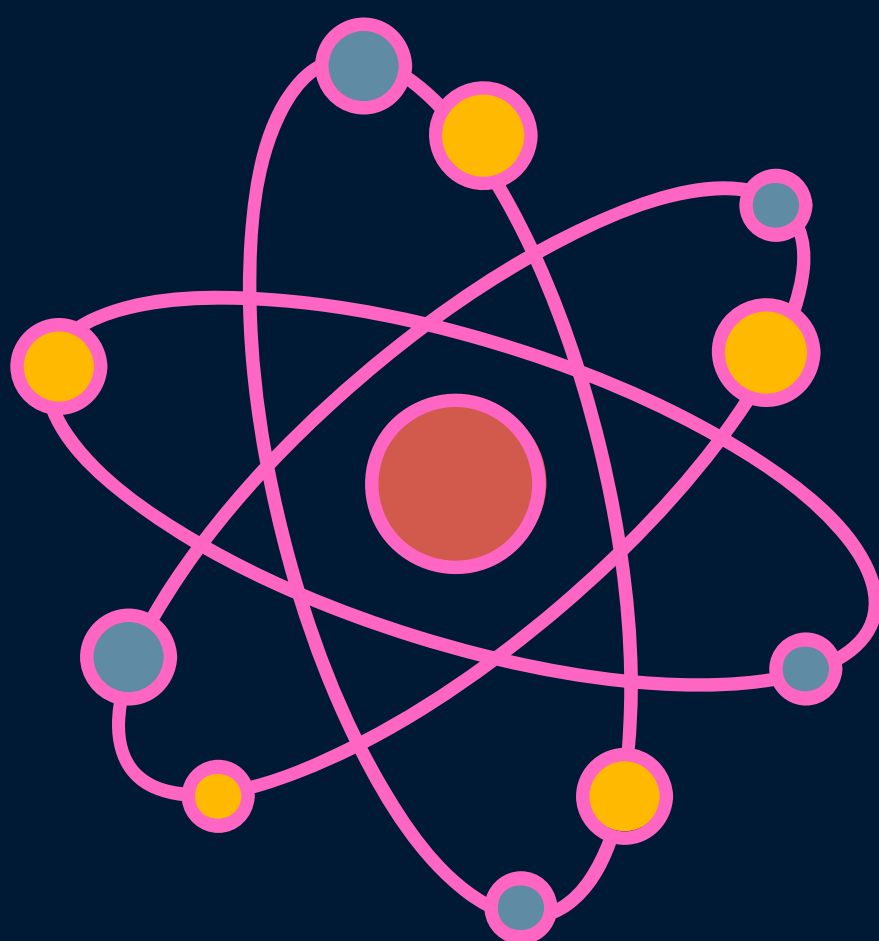
Challenge #2: Sled Racing Station

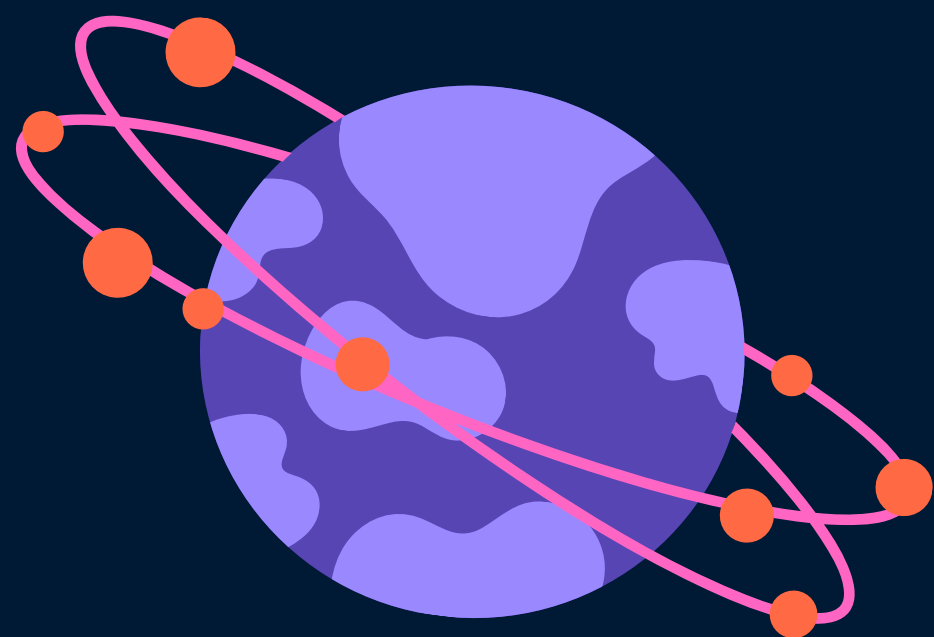
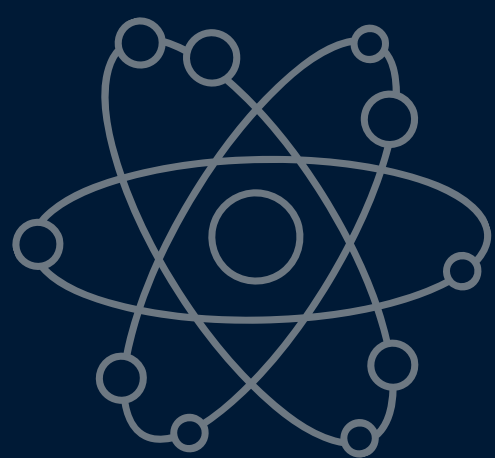
Can you build the fastest sled to go down Mount Star (otherwise known as an angled table or board)? In this fun challenge, students bring in a sled built at home following the rules below. How fast can these sleds go? How would they do in a competition with other sleds?

[Sign up](#) and find out!

Goal: To build a fast sled using the materials below. You will have three timed chances to have the sled race down the mountain. An additional station will be set up if participants who are already done want to race friends and classmates.

Materials: You are free to use any materials. Exceptions would be any prebuilt parts. Some example materials are: index cards, card stock, thin cardboard, cereal boxes, plain paper, tape weights, bottle caps, straw, string, play-doh, craft sticks, marbles, glue, paper clips, binder clips, fabric, wax paper, cotton balls, aluminum foil, pencils, paper towel rolls, etc. No limits as long as you build the sled.





Sled Racing Station cont'd

Dimensions/ Specifications: The overall sled cannot be heavier than 4 ounces. There are 2 tracks: the first is 3.5" wide, the second is 7" wide. Sleds must be narrow enough to move down the track.

Contest Rules: Participants must register in advance using [Community Pass](#). No walk-ins will be allowed.

Prior to check in- your child should clearly label their sled (using a permanent marker) with their first and last name. This will be important to facilitate sled check-in. Upon checking in, the sled will be examined for compliance with the weight and no pre-built parts requirement.

Each sled will be tested and timed three times. While we will try to give all sleds back at the end of the challenge, it is possible that the sled could become damaged during the testing. Racing sleds at the additional track is only allowed after the participant has finished the timed challenge.

