TACIB News!

California State University, Fullerton
http://tacib.weebly.com

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TACIB 101

"The goal of Transforming Academic and Cultural Identidad through Biliteracy (TACIB) is to improve students' understanding of and identity toward STEM fields."

-Dr. Mark Ellis

Transforming Academic and Cultural Identitdad through Biliteracy (TACIB) has set out to increase mathematics and science achievement and engagement among middle grades students in Anaheim at Price Elementary, Sycamore Junior High and South Junior High schools. Not only is it impacting the lives of these students, but it also involves college students, Student Fellows, who are studying to be future teachers and work 10 hours/week alongside our Teacher Fellows to support students' learning of math and science. The TACIB Teacher Fellows, teachers of math and science in Anaheim, are using a dual language and culturally/community relevant approach to engage students in learning math and science in ways that promote a stronger connection to these subjects. The goal is for students to see math and science as part of their lives. We also have a group of Faculty Mentors, professors of math and science at Cal State Fullerton, who work with Teacher Fellows to make connections between middle school learning and college preparation in math and science. Our project involves so many different individuals—students, parents, future teachers, current teachers, and professors!

Check out our Website !

On the TACIB website you can read all about the TACIB project, meet all the members of the TACIB team, read the latest news on our project, and be up to date on our upcoming events!

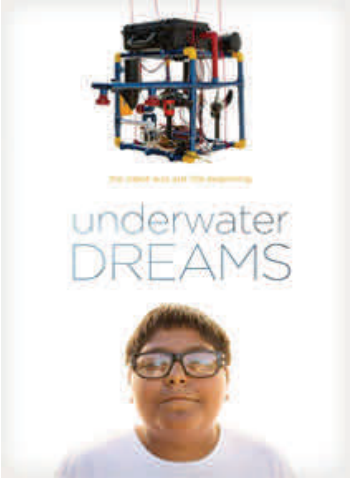
TACIB.Weebly.com

Upcoming Events!

Pumpkin Launch

- Presented by the Discovery Cube, come and join us on **November 1st, 2014** at Cal State Fullerton to watch some Pumpkins fly through the sky ! This is a **FREE** event. Visit the TACIB website for registration link and detailed information.

Underwater Dreams Movie



On October 2, 2014, the TACIB team was able to have the documentary *Underwater Dreams* shown at a local AMC movie theater for TACIB students from Price Elementary, Sycamore Junior High School, and South Junior High School. Students along with their parents came to watch the film free of charge! The movie depicts the experiences of a group of Latino high school students from immigrant families who built an underwater robot and entered a national robotics competition in 2004. Not only did they win the competition, defeating college teams including MIT, but they also gave hope to future students from their low-income Phoenix neighborhood to pursue interests in STEM (Science, Technology, Engineering, Math). For more information on the film, or to request a screening at your local movie theater visit **http://www.underwaterdreamsfilm.com/**

What Happens to "Left Over" Stars? TACIB Mentor Dr. Jocelyn Read Explains!

Jocelyn's original article can be found at http://www.ligo.org/magazine/LIGO-magazine-issue-2.pdf (page 32).

Ever curious about astronomy? Well, we have an expert on our TACIB Team ! Dr. Jocelyn Read, one of our TACIB Faculty Mentors, wrote an article titled *How does it work? Weird stuff in tiny stars*, where she gives readers a simple way to understand "compact binary coalescence."

There are some tiny but heavy stars that are left over after normal stars die. Imagine our whole sun – hundreds of hundreds of our worlds – forced down to fit inside a city. We don't know exactly what's inside such tiny stars because the stuff there is pretty weird, but we have some ideas.

Just like we fall to the ground on our world, stuff in space will fall toward heavy things. Sometimes, after a really big normal star dies, the left-over stuff falls in toward the middle of that star until it disappears. The star gets so small that if light tried to go away from it, moving straight out and as fast as anything can go, it would still end up falling back toward the middle, never to be seen again. We sometimes call these dark stars.

Sometimes two of these tiny or dark stars go around each other, like our world goes around the sun. When they go around really fast and close together they make waves in space and time that we try to see from our world. As the waves go out the stars move closer and closer together. They go around faster and the waves get bigger, until the stars hit each other.

The way that the waves look can tell us how the stars were turning and how heavy they were. The stuff inside the tiny stars gets moved around when they're very close together, so different kinds of stars make different waves. Also, when two stars hit each other, sometimes they make a new star which sends out more waves, or sometimes everything falls together to make a bigger dark star. If we see these space-time waves, the way they look at the end will tell us something about the weird stuff in these tiny stars.

Questions or Story Ideas?
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