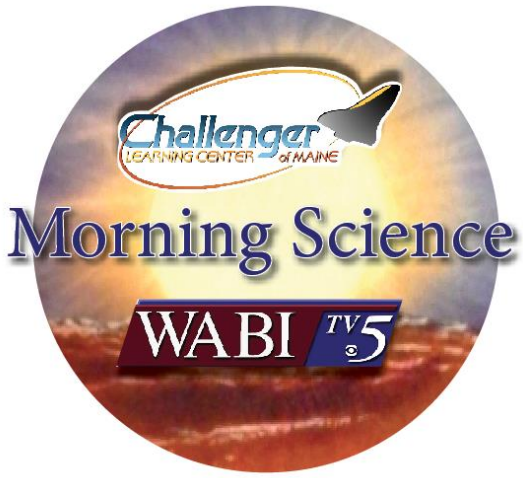

Challenger's Morning Science Segment:

May 15, 2017

Topic: Spinning Blades

Build: Paper helicopter

Credit:

https://www.scienceworld.ca/resources/activities/paper-helicopters

Materials Needed:

Paper traced with helicopter template / Scissors / Paper clip

Building a paper helicopter: Start by printing out the paper helicopter template [http://www.exploratorium.edu/science_explorer/roto_patterns.html] or tracing it onto paper. Cut around the outside border of the template. Then make a vertical cut down the top center. This will create two helicopter blades. Fold the blades down opposite each other on the dotted line. Next, make two horizontal cuts on the solid line below the blades. Fold each side on the dotted line, and up from the bottom to overlap. These folds will create the body of the helicopter. Finally, clasp a paper clip on the bottom of the helicopter to hold the folds together and to act as a weight for the helicopter. Test out your helicopter by throwing it up high into the air, or straight forward, like a dart!

The science [credit: http://www.exploratorium.edu/science_explorer/roto-copter.html**]:**

The two forces acting on the paper helicopter are gravity and air pressure. Gravity pulls the helicopter towards the ground. The air pressure pushes up against the blades as it falls. When the air pushes upward on the slanted blade, some of that thrust becomes a sideways, or horizontal, push. It happens to both blades at the same time, causing a spinning motion. Test out different sized helicopters and different sized weights. Also, fold the blades in the opposite direction and watch the helicopter change rotational direction.

Upcoming at the Challenger Learning Center of Maine: Challenger has teamed up with The Briar Patch Bookstore and Emera Astronomy Center to present the Hidden Figures Project with events scheduled for May 18th / May 31st / June 3rd. Sign up for one event or all three! FMI- www.astronaut.org