Build Your Own Eclipse Coding Device

NASA's Space Communications and Navigation program, called SCaN, uses large antennas on Earth and satellites in space to help exchange important information. Messages are encoded onto radio waves, sent across the galaxy, and decoded after reaching their final destination.

On April 8, a total solar eclipse will be visible from the United States, Mexico, and Canada. A total solar eclipse happens when the Moon passes between the Sun and Earth, completely blocking the face of the Sun. As a result, the sky will darken during the day, as if it was night.

SCaN has received four secret messages from space, and they need your help to decode them. Build an eclipse themed decoding device to celebrate the total solar eclipse and help NASA decode the four secret messages below!

INSTRUCTIONS

1. Cut out the alphabet and code wheels.
2. Place the code wheel on top of the alphabet wheel and stick a prong through the circle in the center of the code wheel to connect the two wheels and create your decoding device.
3. Line up the two wheels as instructed below to help NASA decode four secret messages.

To decode the secret messages below, line up the letter A on the alphabet wheel with the ☁ symbol on the code wheel. Once your coding device is correctly aligned, find each symbol on the code wheel, then find the letter on the alphabet wheel that lines up with each symbol to reveal the four secret messages.

S

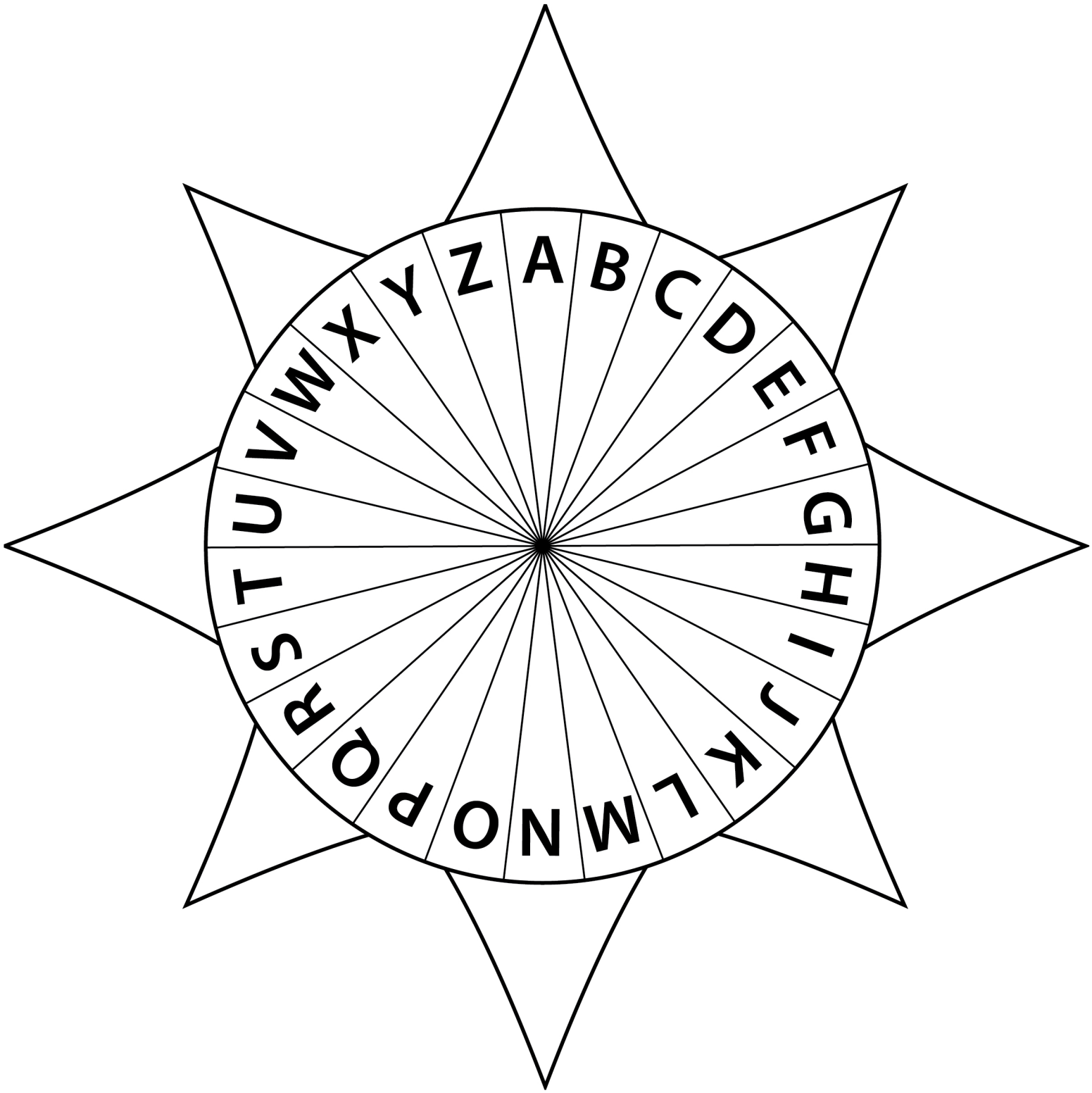
! ☁ @ ♪ & & ❄ @ ♪ !

■ ☁ @ ☁

❄ * ☁ ♫ ♪ !

@ ♥ @ ☁ & ! ♥ & ☁ ✗ ♪ • & ❄ ☼ ! ♪

Alphabet Wheel



Code Wheel