

## Geometry Saving the Day

- Using the skills that they learned in Mr. Sheffield's class about catapults and this article about EPOXI mission and video. <https://solarsystem.nasa.gov/missions/deep-impact-epoxi/in-depth/> <https://www.jpl.nasa.gov/videos/epoxi-mission-captures-jets-in-action>
- Students will then plan their own mission to similar to epoxi in which they are trying to hit the comets or meteorites to study/ eliminate them before hitting the planets.
- Asteroid Resource for more facts <https://solarsystem.nasa.gov/asteroids-comets-and-meteors/asteroids/in-depth/#:~:text=Scientists%20continuously%20monitor%20Earth%2Dcrossing,may%20pose%20an%20impact%20danger.>
- Students will use their knowledge of distance, velocity and midpoint to plan this mission.

# Geometry Saving the Day

Name: \_\_\_\_\_ Class \_\_\_\_\_ Date: \_\_\_\_\_



There is an astroid named Mr. Spock in orbit to collide with earth. You have been called upto to use your knowledge of cadapoltes and Epoxi to launch a space missile similar to the Epoxi that will intersect its path at the mid point of the orbit. You must be specific not to miss the astroid. Mr. Spock is located 22,000 kilometers north of the launch pad located on earth and 96,542 west of the lauch pad. The fate of man kind is in your hands.

[Deep Impact Epoxi Articlén-depth/Epoxi Jets In Action Clip](#)

Use your reading to answer these problems.

What was Epoxi main objective? To probe beneath the surface of a comet

What was its launch site? Cape Canavrlle, FL

What are comets driven by? Carbon dioxide

In 2010 what comet was being studies and what was discovered? Comet Hartley 2 that two lobes of Hartley were different compositions.

Plan your launch:

What is your being launch pad on earths coordinates: ( 0 , 0 )

What is Mr. Spocks Coordinates: (96542, 22,000)

How far away is the Mr. Spock spoke astroid from your location?

94001.90

At what point must you aim to make the missile hit the astroid in orbit to earth?

48271, 11,000

What needs to be the velocity of the missile to achieve this distance?  
And what is the distance the missile needs to travel?

\_\_\_\_\_

For their mission they will need to refuel at a half way point to achieve maximum velocity. For this you will need to go back through your plan and place a refueling station in the galaxy to complete their missions successfully.

Where would this location be? \_\_\_\_\_

What are the coordinates? ( , )

