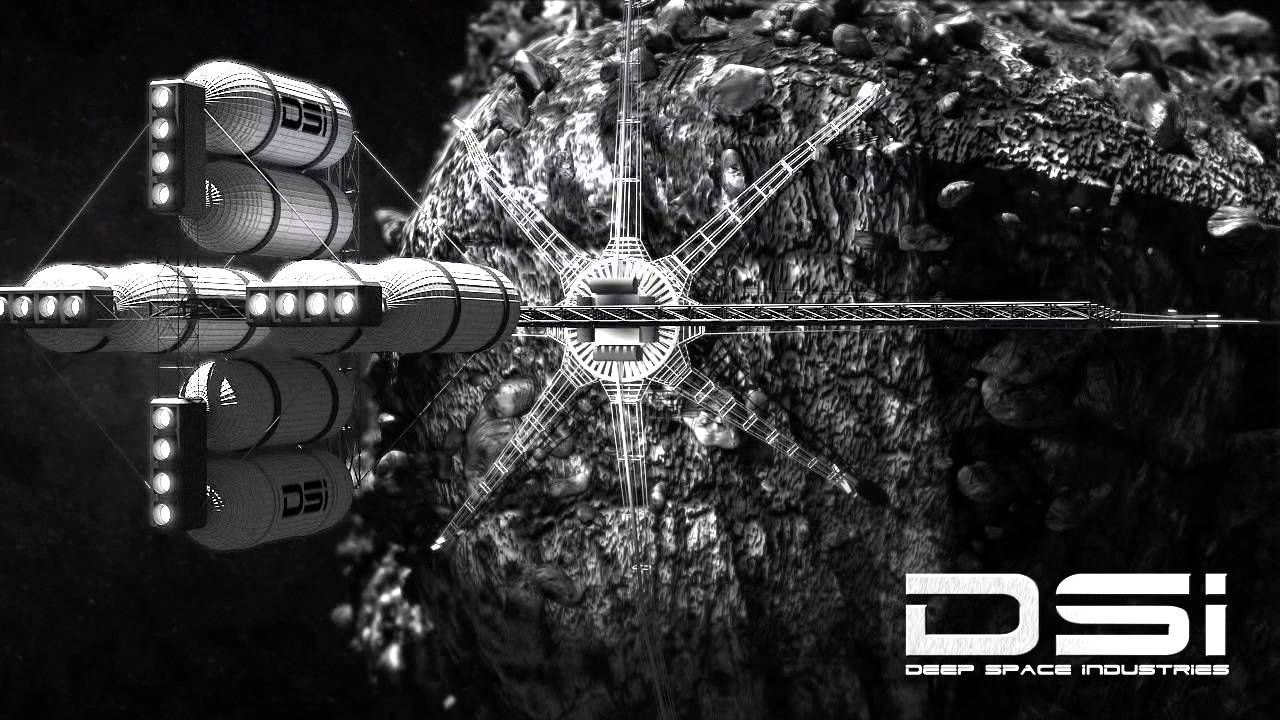
**Asteroid Mining** 

Our human population is growing faster than ever. With almost 8 billion people on the planet, we need massive amounts of resources to meet everyone's needs. Resources on Earth are not infinite; eventually, we will run out. Mining of those resources is often costly, hazardous to human life, and devastating to the environment. We need a better solution.

Mining asteroids is one solution. Scientists have discovered that asteroids contain many of the resources that we need and could be mined without harming Earth. While asteroid mining may seem like an outlandish suggestion at first, some companies have already started to seriously explore the possibility of mining asteroids, including some in the Puget Sound region.

In this project, you will investigate the challenges, decisions, risks, and rewards faced by these companies.

There are three phases of your team’s work:

1. Prospecting: You will need to choose a prospecting method to determine which asteroids you might mine and the resources you might expect to find there. You will be able to purchase a map, use spectroscopy, or send a probe.
2. Harvesting: You will need to choose the size of the harvester.
3. Processing: You will need to build a processor capable of separating the valuable ore from the less valuable substrate.

The choices you make at each of these phases has rewards and risks. Riskier plans may yield greater rewards… or might result in no ore at all. Plan carefully, and good luck!

**Tentative Timeline:**

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| --- | --- | --- |
| **Day** | **Task** | **Deliverable(s)** |
| 1 | Project introduction, team operating agreement | Team operating agreement |
| 2 | Background & explore in functional groups:   * prospecting methods * asteroid types * processing methods | Progress report  Individual notes  Outline of cost, potential reward, and risks of each method |
| 3 | Develop plan for prospecting, harvesting, and processing in teams | Asteroid mining plan - prospecting and harvester sections |
| +1 | Risk and Reward | Gross return summary |
| 4 | Present prospecting plan | Remainder of Asteroid mining plan  Advertisement: visual, written, oral |
| 5 | Design processor | Processor initial design and budget |
| 6 | Build processor | Processor and budget |
| 7 | Build processor, test, refine | Progress report and budget |
| 8 | Process harvested material and redesign | Design analysis  Redesign and updated budget sheet \*time permitting |
| 9 | Reflection and analysis | Final analysis  Individual reflection |
| 10 | Elevator Pitch | Elevator Pitch speeches |