**Starlab** is a 50-minute immersive presentation that takes place inside an inflatable planetarium. It is designed to build on NGSS-based curricula.

*NGSS: Next Generation Science Standards*
Needs

We bring all materials and equipment. Access to 110-volt electricity is required.
Space Requirements

A planetarium fits in an accessible room with at least 25´ by 25´ of open space and 11´ of vertical clearance; all sessions are taught in that room.
Goals: Celestial Motion

We reinforce how the view of the current night sky is largely determined by the relative motion of the Earth and the other planets.
Goals: Lunar Phases

Special attention is paid to the motion of the Moon and the resulting phases observed from Earth, demonstrated with the model sky and computer simulations.
Goals: Stars

We'll try our hand at identifying some constellations in the sky, paying close attention to the differences in color and magnitude of the stars and learning what these properties can tell us about a shining ball of gas.
Goals: Galaxies

Learn that our Milky Way Galaxy is one of billions of other galaxies, each made of billions of stars and planets that form these galaxies because of the gravitational forces between them.
Goals: Scale of the Universe

Attempt to imagine just how BIG the universe is by learning about the general size of and distance to objects in our Solar System and beyond!
Program Details

• Can only be booked for school groups during the school year.
• Can only be booked for grade(s) studying program content:
  – In Massachusetts, optimal for 6th grade
  – Varies in other New England states based on individual district adaptations of NGSS
Program Details

- Capacity is one class (25 students) per session.
- Up to four sessions can be taught per day with a single educator and planetarium.
- Five to eight sessions can be taught per day with two educators teaching simultaneously in two planetariums in a full size gym.
Social Story

If any students need extra preparation for out of the ordinary activities, we can provide a **social story** PDF highlighting what happens during Starlab presentations.
NGSS Connections

- 6.MS-ESS1-1a. Develop and use a model of the Earth-Sun-Moon system to explain the causes of lunar phases and eclipses of the Sun and Moon.

- MS-ESS1-2. Explain the role of gravity in ocean tides, the orbital motions of planets, their moons, and asteroids in the solar system.

- MS-ESS1-3. Analyze and interpret data to determine scale properties of objects in the solar system.

- 6-MS-ESS1-5. Use graphical displays to illustrate that Earth and its solar system are one of many in the Milky Way galaxy, which is one of billions of galaxies in the universe.
NGSS Scientific and Engineering Practices

- Asking questions and defining problems.
- Planning and carrying out investigations.
- Using mathematics and computational thinking.
- Developing and using models.
- Analyzing and interpreting data.
- Constructing explanations and designing solutions.
## 2019 – 2020 Prices

<table>
<thead>
<tr>
<th>Sessions per Day</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Session</td>
<td>$450</td>
</tr>
<tr>
<td>2 Sessions</td>
<td>$525</td>
</tr>
<tr>
<td>3 Sessions</td>
<td>$600</td>
</tr>
<tr>
<td>4 Sessions</td>
<td>$675</td>
</tr>
</tbody>
</table>

No mileage fees charged in New England in 2019-20 School Year.
# 2019 – 2020 Prices

<table>
<thead>
<tr>
<th>Sessions per Day</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 Sessions*</td>
<td>$750</td>
</tr>
<tr>
<td>6 Sessions*</td>
<td>$825</td>
</tr>
<tr>
<td>7 Sessions*</td>
<td>$900</td>
</tr>
<tr>
<td>8 Sessions*</td>
<td>$975</td>
</tr>
</tbody>
</table>

*Requires a full-size gym and two planetariums.

No mileage fees charged in New England in 2019-20 School Year.
Middle School Starlab

For information/reservations:

mos.org/travelingprograms
travelingprograms@mos.org
617-589-0354