SEASONS
Session 5: Earth's Tilted Axis

1. Model a Year

Model Earth orbiting the Sun, using the Seasons sheet on your table as a guide.
Note: Be sure to always point your Earth's axis in the direction indicated by the instructor.

- ☐ Place your team's Seasons Sheet on the table. Match the orientation of the seasons on the sheet to the signs hung around the room. Place a ring on the Seasons sheet. Place your Sun on the ring.
- ☐ Each team member should stand around your table at one of the season positions marked on the sheet. Each team member should represent a different season.
- ☐ Summer team member:
  - ☐ Hold Earth on the side of the Sun that represents Summer. Orient the tilt of Earth's axis in the direction indicated by the instructor.
  - ☐ Holding the dowel that represents Earth's axis, move Earth through your season to model how Earth orbits around the Sun during Summer.
  - ☐ Pass Earth to the Fall team member, always keeping the axis pointed in the correct direction.
- ☐ Fall, Winter, and Spring team members:
  - ☐ Take turns repeating the steps above during your season. Fall team member will model Earth's orbit during Fall, then pass Earth to Winter team member, and so on.
  - ☐ Make to complete a full Year by passing Earth through every season and back to Summer.

2. Model a Day at Different Times of Year

- ☐ Summer team member: Rotate Earth at the Summer position, so your Lego person experiences both night and day. All teammates should make sure that the axis orientation remains correct.
- ☐ Fall team member: Rotate Earth at the Fall position, so your Lego person experiences both night and day. All teammates should make sure that the axis orientation remains correct.
- ☐ Pass and repeat for the other two seasons.

3. Observe from the Model

When Earth experiences **Summer** in the Northern Hemisphere:

1. The Northern Axis is tilted **towards** (< towards / away from >) the Sun.
2. The Southern Axis is tilted **away from** (< towards / away from >) the Sun.
3. To see the Sun at midday, Lego person must look **up** (< up / ahead >), **high** (< high / low >) in the sky.

When Earth experiences **Winter** in the Northern Hemisphere:

1. The Northern Axis is tilted **away from** (< towards / away from >) the Sun.
2. The Southern Axis is tilted **towards** (< towards / away from >) the Sun.
3. To see the Sun at midday, Lego person must look **ahead** (< up / ahead >), **low** (< high / low >) in the sky.