Imagine a population of creatures called starburstians with gloved hands that live in the wild and can eat only starburst candies. There are 4 different types of gloved hands that can be present in their population (much like different hair or eye colors are seen in humans). The types of gloved hands are shown below.

- large gloves
- small gloves
- latex gloves
- no gloves

As the population of starburstians grows, they are not all able to survive because there are not enough wild starbursts to go around. In the following activity, you will see what happens to the starburstians in their struggle for survival.

**Predict:** What do you predict will happen when the starburstians with different glove types compete for survival? Explain what will happen to each of the four glove types and why.

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**Instructions**
1. Start with two people in large gloves on, two with small gloves on, two with latex gloves on, and two with no gloves on. These 8 people will stand in a large ring with their backs facing toward one another, while the ground between them is scattered with starbursts.
2. The starburstians have 30 seconds to unwrap as many starbursts as they can with their gloves on as possible. If a starburstian unwraps 3 starbursts, they have eaten enough to survive. If they unwrap 5 starbursts, they have gained enough additional energy to reproduce (so they can pick one friend to join them and represent their offspring- this friend must wear a similar pair of gloves!)
3. Fill in the table on the next page to keep track of the starburstians that remain after each generation!
3 Starbursts = Survival  5 Starbursts = Reproduce

<table>
<thead>
<tr>
<th>Generation</th>
<th>Large Gloves</th>
<th>Small Gloves</th>
<th>Latex Gloves</th>
<th>No Gloves</th>
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</table>

**Observer Metacognitive Log:** Record at least three observations or questions below! What do you see? What difficulties are the starburstians having? How are their populations changing?

Did the results that you saw match up with your predictions on the previous page? Describe whether the results matched your predictions and if they didn’t explain what was wrong with your original prediction.

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**Questions for Thought**
1. Compare the ease with which differently gloved starburstians were able to get resources (unwrap starbursts). Explain what this has to do with the final populations that were observed in the table above.

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2. If a starburstian was born with gloves that made it hard to unwrap its starbursts, did they use different strategies to obtain their resources? What were they?

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3. Is there a way for the starburstians to change the glove type that they were born with (without taking the gloves off)? How is this similar to inherited characteristics in the real world?

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4. What if the starburstians had lived in a different environment, where their starbursts were already unwrapped? How would this have changed the survival rates seen after 3 generations? **Remember**, the starburstians are still competing for a limited number of starbursts.

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