• This slide should be on screen as participants enter the room.
• Start workshop on time—do not wait for “stragglers”
• Welcome participants as they enter room
• Do NOT do participant introductions unless the workshop group is a very small one (less than 10 people). Introduce self and briefly explain teaching experience and current position.
• The activity that you will do today was developed by the Life Sciences Learning Center at the University of Rochester. We found that teachers wanted access to the activities that we developed even after our grant support had ended.
• To provide for sustained dissemination, we formed a small spin-off company called Science Take-Out. Explain that Science Take-Out is a small company that manufactures and sells hands-on science kits for middle or high school biology students.
• Because this workshop is supported through a grant from the National Institutes of Health, it is important that we collect data from workshop participants.
• Please fill in the participant card during the workshop.
• Use the space at the bottom and the back of the card to provide comments on the workshop or the kits used during the workshop.
• When we do hands-on workshops we ask you to switch between two hats as you work—your student hat and teacher hat.
• We want to you work with partners to experience the kit by completing the activity.
• We encourage you also have conversations about how you might integrate this into your curriculum and/or support your students.
• If you have questions, please call me over while you are working on the activity.
• Also, you may find me interrupting to provide further explanation as you work.
• Distribute 1 kit and 1 student instructions to each pair of teachers.
• Every kit comes with a sheet with a colored quick guide and safety instructions. Teachers should keep this colored sheet in the kit bag if they plan to refill the kit.
• Each kit comes with one student instruction handout. Teachers may make additional copies if their students are working in teams.
• For today, you will be working in teams of 2.
• One of you should use the student instructions in the bag. The other person should use the additional handout that we have provided.
Part 1: Are you PTC taste blind?
• Students use PTC taste paper to determine if they can or cannot taste PTC paper.
Part 2: PTC Tasting and the Nervous System

• Students match sentences in a reading passage with the appropriate illustrations.
Part 3: PTC Inheritance: A Family Pedigree Chart

- Students analyze a pedigree for PTC tasting in a family.
- You do not need to have taught pedigrees before you do this part. Our field test teachers were asked to NOT provide prior instruction related to pedigrees before using the kit.
Part 4: PTC Inheritance – Genetic Testing for the Family

- Students conduct simulated genetic tests to determine the genotypes of family members.
- This is particularly helpful for developing the concept that heterozygotes have two different kinds of PTC tasting genes.
Part 5: Taste Receptors and Evolution

- Students explore the evolutionary advantages and disadvantages associated with the ability to taste PTC.

- These NOT included in your student handout.
- Some field test teachers wanted them included and others said they would not use them.
- We opted to put Part 6 and Part 7 in the teacher information so that teachers could use them as optional extensions.
• One copy of the Teacher Information is provided with each order.
• The teacher information includes: Summary, Core Concepts, Kit Contains, Teacher Provides, Time Required, Reusing, and information of refill kit contents.
• Additional materials needed for this lab are safety goggles, scissors, tape or glue, and paper towel (for clean up).
• Refills are available for the kits so that basic kit contents can be reused.
• The teacher information includes hints for reusing kits and information on what is included in a refill kit.
Consider following up with inquiry

Do you like broccoli? Or, are you a "picky eater" who does not like broccoli? Circle the statement that best describes you.

<table>
<thead>
<tr>
<th>I like uncooked broccoli</th>
<th>I don't like uncooked broccoli</th>
</tr>
</thead>
<tbody>
<tr>
<td>It does not have a bitter taste</td>
<td>It has a bitter taste</td>
</tr>
</tbody>
</table>

Research Question: Is there a correlation between the ability to taste PTC and the avoidance of (not liking) broccoli?

Correlation: a relationship between two variables which tend to occur together.

It is easy to add an inquiry component after completing this lab kit. Have your class design and conduct an experiment to answer the research question.
• The kit you used today is available from Science Take-Out as a completely assembled student kit.
• Please explore the website to learn about other STO kits.
• You can download the complete teacher instructions so that you can see what you are buying.
You have a brochure that includes information on other Science Take-Out kits and a price list. Visit the Science Take-Out website to get further information for each kit. At the website, you can download the teacher information for each kit to help you decide which kits you would like to purchase.

Science Take-Out kits are available as:

- **Individual Assembled Kits** like the kits you used in this workshop
- **Unassembled Packs** that contain all supplies needed to make 10 kits
- **Refill Packs** that contain supplies needed to refill the consumables for 10 kits
• Science Take-Out has received an NIH Small Business grant. Support from this grant will allow us to field test Science Take-Out kits
• If you would like to be a field test teacher, indicate this by circling yes on your participant card. We will add you to our email list for field test teacher recruitment.
• Science Take-Out has received an NIH Small Business grant. Support from this grant will allow us to field test Science Take-Out kits
• If you would like to be a field test teacher, indicate this by circling yes on your participant card. We will add you to our email list for field test teacher recruitment.
• Encourage teachers to write comments on the back of the participant survey card.
• Please remember to collect participant feedback cards!!