**MISO Survey Data Flow Chart**

### Required Consent
- **Student and teacher**
- **Student and parent consent for students under 18 and teacher**

### Objectives
- **Students:** How do students feel about learning STEM content and future career paths?
- **Teachers:** How confident are teachers about teaching STEM related content?
- **Students:** How has student academic achievement changed over time?
- **Teachers:** To what extent do teachers attain professional growth and remain in-field?

### Variables of Interest
- **Surveys developed by MISO Project Team to measure:**
  - **Student:** STEM Attitudes, Interest in STEM Careers, and 21st Century Learning Skills
  - **Teacher:** Confidence and Efficacy in teaching STEM, Attitudes toward 21st Century Learning and Teacher Leadership, Frequency of Student Technology Use, and STEM Career Awareness (NC State K12 STEM Outreach Programs)

### Data Sources
- **S-STEM and T-STEM Survey Tools**
- **Existing NC education database that includes:**
  - Students: academic progress, attendance, course taking, growth and proficiency by academic subject, grade promotion and retention, transfer, dropout, and graduation status;
  - Teachers: education/licensure, experience, and turnover. (All NC K-12 Public School Teachers and Students)

### Goal
- **To determine the extent to which STEM outreach programs impact long-term educational outcomes**