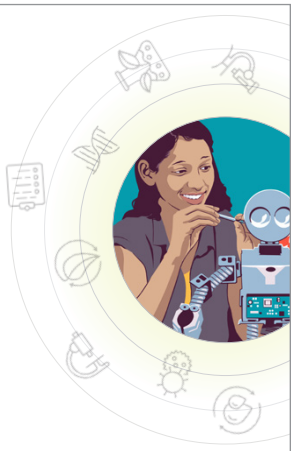
Name _____



FIND SOURCES OF ERROR

Every **scientific inquiry** experiment has errors—but this isn't the same as making a mistake! Learn the most common types here.

PART A: Read and Respond

TYPE OF ERROR	CHARACTERISTICS	EXAMPLES
Systematic Error	★ Predictable (repeated) ★ Affects how accurate a measurement is (accurate = how close it is to the real value?)	★ Instrument is old or not calibrated ★ You only survey a very small group of people
Random Error	★ Not predictable ★ Affects how precise a measurement is (precise = same result with multiple measurements)	★ A reading on a scale fluctuates ★ You estimate a measurement when it falls between two markings on an instrument

Now help the Green Team figure out the source of their errors:

1. When Aaliyah is measuring a plant, she notices the height falls between the 4.1 cm mark and the 4.2 cm mark on her ruler. What type of error does this cause? _____

2. When Quan is measuring a plant, he notices that the markings on the end of the ruler he is using have worn away. What type of error does this cause? _____

3. When Matt is measuring a plant, he notices that the soil has shifted, affecting the height of the plant. What type of error does this cause? _____

PART B: Your Turn—Check Your Project

Summarize your project's errors on this chart.

TYPE OF ERROR	EXAMPLES IN OUR PROJECT
Systematic Error	
Random Error	