Who Decides?

Sort studies by who assigns the conditions.

S.DC.1.1 "Distinguish among sample surveys, experiments, and observational studies."

NAME _____ DATE _____

ASSIGNED TREATMENT	NO ASSIGNED TREATMENT
Investigators decide which treatment or condition each subject gets, then compare outcomes. This makes the study an experiment.	Investigators do not decide who gets a treatment or condition. They may ask questions in a sample survey or record what happens in an observational study.
A gardener places half the tomato seedlings under blue lights and half under white lights, then compares their growth.	A librarian checks past borrowing records to see which novels were returned late.

1 SORT

8 items

For Part 1 SORT, circle ASSIGNED or UNASSIGNED for each item; for Part 2 PROVE IT, choose two items, one from each category, and explain how you knew.

1.	A city gives some commuters free bus passes and others no passes, then compares commute times.	ASSIGNED UNASSIGNED
2.	A company puts identical batteries in warm or cool rooms, then records how long they last.	ASSIGNED UNASSIGNED
3.	A poll asks selected adults which streaming service they prefer.	ASSIGNED UNASSIGNED
4.	A trainer flips a coin to assign athletes to music or silence during a warmup, then times their sprints.	ASSIGNED UNASSIGNED
5.	Investigators compare blood pressure records for people who already bike or drive to work.	ASSIGNED UNASSIGNED
6.	A school asks a sample of students how many hours they spent gaming last weekend.	ASSIGNED UNASSIGNED
7.	A wildlife group counts birds at feeders that neighbors already installed.	ASSIGNED UNASSIGNED
8.	A store assigns online shoppers one of two checkout page designs, then records purchases.	ASSIGNED UNASSIGNED

2 PROVE IT

Explain your thinking

Choose two items, one from each category, and explain how you knew.

ITEM # _____ **HOW I KNEW** _____

ITEM # _____ **HOW I KNEW** _____

3 MAKE YOUR OWN

One of each

Part 3 MAKE YOUR OWN: Write one new study with an assigned treatment and one new study with no assigned treatment.

ASSIGNED _____

UNASSIGNED _____

CHALLENGE

Choose one UNASSIGNED item. Change its study into an experiment, then explain what you changed.

ANSWER KEY # Who Decides?

PART 1 · SORT

#	ITEM	CATEGORY	WHY
1	A city gives some commuters free bus passes and others no passes, then compares commute times.	**ASSIGNED**	The city assigns the bus passes before measuring commute times.
2	A company puts identical batteries in warm or cool rooms, then records how long they last.	**ASSIGNED**	The company assigns the batteries to temperature conditions.
3	A poll asks selected adults which streaming service they prefer.	**UNASSIGNED**	The poll asks a question but assigns no treatment or condition.
4	A trainer flips a coin to assign athletes to music or silence during a warmup, then times their sprints.	**ASSIGNED**	The trainer assigns the warmup conditions.
5	Investigators compare blood pressure records for people who already bike or drive to work.	**UNASSIGNED**	The people chose how to travel; investigators assign nothing.
6	A school asks a sample of students how many hours they spent gaming last weekend.	**UNASSIGNED**	The school collects survey answers without assigning a condition.
7	A wildlife group counts birds at feeders that neighbors already installed.	**UNASSIGNED**	The group observes existing feeders without assigning them.
8	A store assigns online shoppers one of two checkout page designs, then records purchases.	**ASSIGNED**	The store assigns the page designs before recording purchases.

PART 2 · PROVE IT

Task: Choose two items, one from each category, and explain how you knew.
Accept any explanation that names the deciding feature from the rule box for the chosen item.

PART 3 · MAKE YOUR OWN (SAMPLE ANSWERS)

- **ASSIGNED**: A lab assigns half its fish to one food and half to another food, then compares their growth.
- **UNASSIGNED**: A coach asks a sample of players how many hours they slept last night.

Challenge: For item 5, randomly assign willing commuters to bike or drive to work for a month, then measure their blood pressure. The study becomes an experiment because the investigators assign each person's travel method.

For Part 2, accept explanations that identify the assigned condition in an experiment or state that investigators only asked questions or recorded existing conditions. A sample survey and an observational study both belong in UNASSIGNED.