The Comparison Crew

Sort the groups in studies about learning history.

P.1.3 "Create testable hypotheses pertaining to the interaction between independent and dependent variables and distinguish between experimental and control groups and how both processes contribute to scientific theories."

NAME _____ DATE _____

EXPERIMENTAL GROUP	CONTROL GROUP
This group receives the change being studied. Researchers compare its results with the control group's results.	This group does not receive the change being studied. It provides a baseline for comparison.
In a study of fertilizer and plant growth, these seedlings receive extra fertilizer.	In a study of fertilizer and plant growth, these seedlings receive no extra fertilizer.

1 SORT

8 items

Circle EXPERIMENT or CONTROL for each item, then choose two item numbers and explain how you knew where each belonged.

1.	1. To study whether a new timeline improves recall of events, this group uses the timeline.	EXPERIMENT CONTROL
2.	2. To study whether a new map lesson improves recall of places, this group has its usual lesson without the new map lesson.	EXPERIMENT CONTROL
3.	3. To study whether an audio guide helps visitors understand museum objects, this group visits without the guide.	EXPERIMENT CONTROL
4.	4. To study whether a new checklist improves source analysis, this group uses the checklist.	EXPERIMENT CONTROL
5.	5. To study whether a digital archive helps students find historical evidence, this group uses the archive.	EXPERIMENT CONTROL
6.	6. To study whether a video lesson improves knowledge of ancient trade, this group has its usual lesson without the video.	EXPERIMENT CONTROL
7.	7. To study whether a new question guide helps students interpret speeches, this group uses the guide.	EXPERIMENT CONTROL
8.	8. To study whether color-coded notes improve recall of key dates, this group uses the notes.	EXPERIMENT CONTROL

2 PROVE IT

Explain your thinking

Pick two items from Part 1. For each one, tell how you knew where it belonged.

ITEM # _____ **HOW I KNEW** _____

ITEM # _____ **HOW I KNEW** _____

3 MAKE YOUR OWN

One of each

Write one new experimental group and one new control group for the same question about learning history; say what each group does.

EXPERIMENT _____

CONTROL _____

CHALLENGE

Using your two groups, write a testable hypothesis, state what you would measure, and explain how the comparison could help build a theory about learning history.

The Comparison Crew

PART 1 · SORT

#	ITEM	CATEGORY	WHY
1	1. To study whether a new timeline improves recall of events, this group uses the timeline.	**EXPERIMENT**	The group receives the new timeline being studied.
2	2. To study whether a new map lesson improves recall of places, this group has its usual lesson without the new map lesson.	**CONTROL**	The group does not receive the new map lesson.
3	3. To study whether an audio guide helps visitors understand museum objects, this group visits without the guide.	**CONTROL**	The group does not receive the audio guide.
4	4. To study whether a new checklist improves source analysis, this group uses the checklist.	**EXPERIMENT**	The group receives the new checklist being studied.
5	5. To study whether a digital archive helps students find historical evidence, this group uses the archive.	**EXPERIMENT**	The group receives access to the digital archive.
6	6. To study whether a video lesson improves knowledge of ancient trade, this group has its usual lesson without the video.	**CONTROL**	The group does not receive the video lesson.
7	7. To study whether a new question guide helps students interpret speeches, this group uses the guide.	**EXPERIMENT**	The group receives the new question guide being studied.
8	8. To study whether color-coded notes improve recall of key dates, this group uses the notes.	**EXPERIMENT**	The group receives the color-coded notes being studied.

PART 2 · PROVE IT

Accept any explanation that names the deciding feature from the rule box for the chosen item.

PART 3 · MAKE YOUR OWN (SAMPLE ANSWERS)

- **EXPERIMENT**: Experimental group: Students use a new checklist to evaluate a historical diary.
- **CONTROL**: Control group: Students evaluate the same historical diary using their usual method, without the new checklist.

Challenge: If students use the new checklist, they will identify more unsupported claims in a historical diary than students using their usual method. Measure how many unsupported claims each student correctly identifies. Comparing the groups can show whether the checklist helps, and repeated studies could support a broader theory about evaluating historical evidence.

For Part 2, accept explanations that identify whether a group receives the change, such as item 1 receiving the timeline or item 3 visiting without the audio guide. In Part 3, the groups should address the same question and differ in whether they receive the change.