



# So, Prove It

## Psychology Research



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<b>Grade Level</b>	11th – 12th Grade	<b>Time Frame</b>	3-4 classes
<b>Subject</b>	Social Studies	<b>Duration</b>	150+ minutes
<b>Course</b>	Psychology		

### Essential Question

How does the scientific method help test ideas about human thought and behavior?

### Summary

This lesson will explore the particular challenges of experimental design in psychology. Students will get to know the fundamentals of experimentation, and how they apply to psychological research. They will come to appreciate why the scientific method is necessary, and how psychology employs it, including the use of deception and its ethical guidelines. In the end, students will design their own experiments, presenting them for peer review before the class.

### Snapshot

#### Engage

Students will decide if psychological statements are “Always, Sometimes, or Never True” and watch a video explaining them.

#### Explore

Students participate in a card sort with relevant vocabulary.

#### Explain

Students will determine different parts of experimental design by jigsawing examples of psychological experiments.

#### Extend

Students design their own proposals for psychological experiments.

#### Evaluate

Students share their proposals and practice peer reviewing classmates’ designs.

## Standards

*Oklahoma Academic Standards (Social Studies: Psychology (9th through 12th grade))*

**PS.2:** The student will examine the development of psychology as an empirical science by describing the scientific method, explaining research strategies, and identifying ethical issues.

## Attachments

- [Asch Conformity Experiments—So, Prove It - Spanish.docx](#)
- [Asch Conformity Experiments—So, Prove It - Spanish.pdf](#)
- [Asch Conformity Experiments—So, Prove It.docx](#)
- [Asch Conformity Experiments—So, Prove It.pdf](#)
- [Card Sort—So, Prove It - Spanish.docx](#)
- [Card Sort—So, Prove It - Spanish.pdf](#)
- [Card Sort—So, Prove It.docx](#)
- [Card Sort—So, Prove It.pdf](#)
- [Invisible Gorilla Experiment—So, Prove It - Spanish.docx](#)
- [Invisible Gorilla Experiment—So, Prove It - Spanish.pdf](#)
- [Invisible Gorilla Experiment—So, Prove It.docx](#)
- [Invisible Gorilla Experiment—So, Prove It.pdf](#)
- [Lesson Slides—So, Prove It.pptx](#)
- [Let's Prove It—So, Prove It - Spanish.docx](#)
- [Let's Prove It—So, Prove It - Spanish.pdf](#)
- [Let's Prove It—So, Prove It.docx](#)
- [Let's Prove It—So, Prove It.pdf](#)
- [Mapping out Research—So, Prove It - Spanish.docx](#)
- [Mapping out Research—So, Prove It - Spanish.pdf](#)
- [Mapping out Research—So, Prove It.docx](#)
- [Mapping out Research—So, Prove It.pdf](#)
- [Milgram's Shocking Experiment—So, Prove It - Spanish.docx](#)
- [Milgram's Shocking Experiment—So, Prove It - Spanish.pdf](#)
- [Milgram's Shocking Experiment—So, Prove It.docx](#)
- [Milgram's Shocking Experiment—So, Prove It.pdf](#)
- [Peer Review Checklist—So Prove It - Spanish.docx](#)
- [Peer Review Checklist—So Prove It - Spanish.pdf](#)
- [Peer Review Checklist—So Prove It.docx](#)
- [Peer Review Checklist—So Prove It.pdf](#)
- [Stanford Prison Experiment—So, Prove It - Spanish.docx](#)
- [Stanford Prison Experiment—So, Prove It - Spanish.pdf](#)
- [Stanford Prison Experiment—So, Prove It.docx](#)
- [Stanford Prison Experiment—So, Prove It.pdf](#)

## Materials

- Lesson Slides (attached)
- Mapping out Research handout (attached; one per group; see Teacher's Note below)
- Card Sort handout (attached; one set per group; see Teacher's Note below)
- Let's Prove It handout (attached; one per student)
- Invisible Gorilla Experiment handout (attached; one per group)
- Milgram's Shocking Experiment handout (attached; one per group)
- Stanford Prison Experiment handout (attached; one per group)
- Asch Conformity Experiment handout (attached; one per group)

- Peer Review Checklist handout (attached; 2-3 per student depending on number of groups; see Teacher's Note in Evaluate section)
- Pencil/Pen
- Electronic device
- Sticky notes
- Poster paper (optional)

**Teacher's Note: Preparing the Card Sort**

Students will use a Card Sort activity in the Explore section. To prepare for this activity, be sure to print and cut-out the attached Card Sort handout, one per group of students. Students will also need a copy of the attached Mapping out Research handout for their Card Sort. We recommend laminating both the map and cards to add durability and longer use for these resources.

20 minutes

## Engage

### Teacher's Note: Preparing the Google Poll

Make a force copy of the provided "Always Sometimes Never True Psychology Myths" google poll then add the link and QR code to slide 5.

Steps:

1. Click [HERE](#) and create a copy of the poll.
2. We suggest making a copy of this poll for all of your classes or to reset the results before every class.
3. Click on the "Send" button at the top right. Navigate and click on the link icon, select "Shorten URL," then copy/paste the new URL onto slide 5.
4. Take the same URL and create a QR code using a [QR Codes](#) Generator and add this to slide 5 as well.

Use the attached **Lesson Slides** to facilitate the following lesson.

Display **slides 3** and **4** to introduce the essential question and learning objectives.

Move to **slide 5**. Tell students to scan the QR code, type in the link to your copy of the form, or share the Google form quiz with students on your LMS. Explain to students that they are reading statements about psychology and need to decide if they are "[Always, Sometimes, or Never True](#)." Ask students to complete the form. After students have finished, take a few minutes to discuss their answers. Ask them why they chose what they did or what, if any, rationale they had.

Display **slide 6** and show the video [7 Widely Believed Myths in Psychology You Probably Thought Were True](#).

#### Embedded video

[https://youtube.com/watch?v=rs5cGZp5q1Y?si=cEk\\_u3gq4ZEPNjKV](https://youtube.com/watch?v=rs5cGZp5q1Y?si=cEk_u3gq4ZEPNjKV)

After showing the video, facilitate a discussion with students asking them *How did the video change or affirm your thoughts? What is your reaction after viewing that video?*

20 minutes

## Explore

Have students get into pairs or small groups. Pass out one of the attached **Mapping Out Research** handouts and one set of attached **Card Sort** cards to each group (see Teacher's Note in the Materials section). Display **slide 7** and introduce students to this modified [Card Sort](#) strategy. Explain that students should read the sample experiment statement cards and determine where they go in the research process. Point out to students that some of the statements may be "red herrings" or distractors and should be placed on the fish spaces. Allow students time to work on their card sort.

Once students have completed their maps, ask students how they placed their cards and clear up any misconceptions. Use the answers hidden on **slides 8-10** as a reference, or unhide them so your students can double check their work. Ask students if anything surprised them about parts of the experiment.

45 minutes

## Explain

Display **slide 11**. Explain to students that they will be participating in a [jigsaw](#) activity. Each student will get one of four attached articles (**Invisible Gorilla Experiment**, **Milgram's Shocking Experiment**, **Asch Conformity Experiment**, and **Stanford Prison Experiment** handouts) to read. Evenly distribute the articles and the attached **Let's Prove It** note catcher handout. Next, have students form groups with everyone who has the same article as they do. Give students time to read, answer questions on the handout, and discuss their answers with their group members.

After students have finished reading and filling out the note catcher, divide them into groups of four. Make sure there is one of each article represented in each group. Have students summarize and discuss the readings and information they wrote on their note catcher. As a class, ask individuals to share out and make connections.

After everyone has had a chance to share their responses, use **slides 12-13** to lead a discussion on the Institutional Review Board (IRB). Review the slide content in as much detail as you feel necessary, then ask students the following questions: *How did you see these ethical concerns in the experiments you read? Did all of them have control groups? How does not having a control group connect with the IRB?*

### Teacher's Note: Sample Student Responses

If students don't make the connection, be sure to point out that some of the experiments they read about occurred before the IRB was created (in fact the Stanford Experiment was one of the experiments that inspired the creation of the IRB). Also, the necessity of a control group during experiments is not only so that scientists have something to compare their results to but also how the IRB evaluates the scientific validity of the study. If the design lacks a proper control group, the IRB may question the reliability of the findings, which could ultimately affect participant welfare if results are used in clinical or policy contexts.

### Teacher's Note: Alternative Explain

If there are time constraints and students are not able to jigsaw all four articles, consider having them engage with this interactive video reviewing parts of psychological research methods. Upload this link: <https://k20center.ou.edu/h5p/that-time-i-was-a-guinea-pig/> to your LMS or distribute to students in whatever way makes sense.

Have students work through the interactive video individually or consider working through the video as a class. Once the class has worked through the whole video, facilitate a conversation about the hypothetical research study.

60 minutes

## Extend

Transition to **slide 14** and introduce students to the [Canva](#) tech tool explaining that they will create their own digital poster presentation for their own psychological research experiment proposal. Have students turn over their Let's Prove It handout to the graphic organizer on the back. With their same initial Jigsaw group, have students work together to design their own experiment. Encourage students to choose concepts you've already taught. If necessary, provide resources they can use. Tell students once they have their graphic organizers filled in with the correct information, they should choose a template from Canva and create a visual representation of their proposed experiment. Unhide **slide 15** to give students template ideas they can use for their presentations.

### Teacher's Note: Optional Paper Version

Instead of using Canva or Google Slides, this digital poster presentation may be done with chart or poster paper.

60 minutes

## Evaluate

### Teacher's Note: Printing Peer Review Checklist

The attached Peer Review Checklist handouts should be printed front and back. Students will be cutting each sheet in half and completing the front and back of each half sheet per group presentation.

Students now get an opportunity to share their proposed study. Pass out 2-3 copies of the attached **Peer Review Checklist** handout to each student. Explain to students that they will act as the IRB and evaluate the proposal from that lens as well as give feedback based on the content of the presentations. At the end of each presentation, allow student reviewers time to complete their checklists (make sure they do front and back) and turn it into the presenting group.

Display **slide 16**. Once each group gets feedback from their classmates, have them review the feedback. On a sticky note, have students reflect on their experiences using the strategy [I Used to Think...But Now I Know](#), answering these two questions: *What did I used to think about psychological experiments?* and *What do I think now?* Have students write their brief reflections on a sticky note and stick it to the door on the way out of class.



## Resources

- K20 Center. (n.d.). Always, sometimes, or never true. Strategies. <https://learn.k20center.ou.edu/strategy/145>
- K20 Center. (n.d.). Canva. Tech tools. <https://learn.k20center.ou.edu/tech-tool/612>
- K20 Center. (n.d.). Card sort. Strategies. <https://learn.k20center.ou.edu/strategy/147>
- K20 Center. (n.d.). I used to think . . . but now I know. Strategies. <https://learn.k20center.ou.edu/strategy/137>
- K20 Center. (n.d.). Jigsaw. Strategies. <https://learn.k20center.ou.edu/strategy/179>
- PSYCHSIDE. (2020, August 31). 7 Widely Believed Myths in Psychology You Probably Thought Were True [Video]. YouTube. <https://youtu.be/rs5cGZp5q1Y?feature=shared>