

# 101+ AMAZING Science Project Ideas: HUMAN BEHAVIOR

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### **Do the Eyes Have It?**

Some people have a photographic memory and can memorize anything they see almost instantly! Wouldn't that make homework easy? Other people can remember almost anything they hear. Try this experiment to see which type of memory you have.

[Difficulty](#) = 1 – 2

### **How Many Numbers Can You Remember?**

Are you good at remembering addresses and phone numbers? How many numbers do you think you can remember? Try this experiment to test your digit span, the maximum number of digits that you can remember.

[Difficulty](#) = 1 – 2

### **Do Preferences Bias Our Choices?**

What is your favorite color and why? Do you think that simple tasks might be biased by your preferences? Find out in this science project if your color preferences will bias your fine motor skills when doing quick, repetitive tasks.

[Difficulty](#) = 2 – 3

### **The Bouba-Kiki Effect**

I am always amazed when I hear stories of expeditions into native lands, especially when voyagers are able to communicate with native peoples without sharing a language. Are there certain human sounds with meanings that can cross the language barrier? In this experiment you will investigate the Bouba-Kiki Effect to find out if abstract visual properties can be linked to sound.

[Difficulty](#) = 2

### **Apparent Motion & Animation**

Have you ever heard the phrase, "Seeing is believing"? Well, it's more accurate than you might think! In this project, you can investigate the phenomenon of apparent motion by making your own flip-book animations.

[Difficulty](#) = 3

### **Get the Scoop on Stroop**

Do you like to read? Did you know that most people read without even thinking about it? Find out in this experiment how a simple reading/color test called the Stroop Effect can show you how your brain works.

[Difficulty](#) = 3 – 4

### **Mixing Light to Make Colors**

You know how to make new colors by mixing paint or crayons. For example, you get green by

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mixing yellow and blue, or orange by mixing red and yellow. With paint, blue, yellow, and red are primary colors, which you can use to make other colors. Have you ever tried making colors with light? Are the primary colors the same ones you use for paint? Do this experiment and find out.

[Difficulty](#) = 4

## [Now You See It, Now You Don't: A Chromatic Adaptation Project](#)

This project shows that our perceptions can change, even with the stimulus remains the same. A clear color difference in an image disappears after just 20 seconds of looking at another (special) image. Now you see it, now you don't!

[Difficulty](#) = 4

## [Fear Factor: Using Pulse Rate to Measure Emotion](#)

Oh, were you ever scared! Your heart pounded, your breath rate shot up, your palms got cold and clammy. Fear does that to us. Here's a science project based on roller coaster rides to see if heart rate is an accurate measurement of fear. Are you brave enough to take on this frightfully fun project?

[Difficulty](#) = 5 – 8

## [The Nose Knows Smell but How About Taste?](#)

Ahchoo! Got that stuffy nose and I-can't-breathe kind of cold? Those sniffles and clogged sinuses are bad enough, but why does it also seem everything tastes so bland and flavorless when we are sick? Is there really truth to the idea that smell is a key part of taste? Gather up a few volunteers, hit the kitchen, and try this experiment to find out.

[Difficulty](#) = 5 – 8

## [The Brains Behind 'Where's Waldo?'](#)

What makes you notice someone in a crowd? Why do some things stand out, while others melt into the background? In this experiment you can investigate the psychology of how things get noticed, by studying how our brains perform a visual search.

[Difficulty](#) = 6

## [Measuring Your Threshold of Hearing for Sounds of Different Pitches](#)

If you're like most people, you like listening to music. Have you ever wondered how your ears and your brain turn the sound waves out there in the world into the experience of music in your head? If you're interested in doing a project about how we hear, this is a good one for you. With this project, you'll do background research and make measurements to understand how the sensitivity of your own hearing varies with the pitch of the sound.

[Difficulty](#) = 6 – 7

## [Twirls, Whirls, Spins, & Turns: The Science & Reflexes of Dizziness](#)

Tilt-A-Whirls, Merry-Go-Rounds, Spinning Tea Cups...does just the thought of them make you dizzy? Why should something so fun make our heads spin so long even after the ride has stopped? Learn about spins, turns, and the mixed signals that fire in our brains when the sensation of dizziness takes over. Weak stomachs, beware. This project has tests that will make your head spin!

[Difficulty](#) = 6 – 8

## [Measuring Your Taste Threshold](#)

This project is so good you can taste it! You'll find out how sensitive your tongue is for three different types of taste: sweet, sour and salty.

[Difficulty](#) = 6 – 7

## [What Conflicting Mental Tasks Reveal About Thinking: The Stroop Effect](#)

Can you pat your head with one hand while you rub your stomach with the other? This

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experiment is kind of like that, but it can actually give you some insight into how your mind works. The task is to name colors. It sounds simple enough, but see what happens when color words get in the way.

[Difficulty](#) = 6 – 8

## [Shaping Your Thoughts?](#)

This is an interesting experiment that explores certain aspects of how your brain pays attention. In this project, you'll have to recruit a bunch of volunteers to take a simple test: naming a list of printed shapes. What makes the test tricky is that words will be printed on top of the shapes. The word/shape combination creates the potential for the brain to get conflicting information. Which information is more likely to grab your attention: the shape you are supposed to name or the word just waiting to be read? [Read more...](#)

[Difficulty](#) = 6 – 8

## [Interpreting Area Data from Maps vs. Graphs: An Experiment in Visual Perception](#)

Graphical methods of data presentation are a key feature of scientific communication. This project asks the question, "What's the best way to compare the land area of states: a map or a bar graph?" You'll be measuring performance on two different visual discrimination tasks: comparison of areas vs. comparison of position on a common scale. Which method is more accurate? Which method is faster? This project will get you thinking about how to find the best way to communicate scientific information.

[Difficulty](#) = 6 – 8

## [What's the Best Method to Communicate Data Graphically?: An Experiment in Visual Perception](#)

Graphical methods of data presentation are a key feature of scientific communication. This project will get you thinking about how to find the best way to communicate scientific information.

[Difficulty](#) = 6 – 8

## [Candy Confusion: Can Small Children Mistake Medicine for Candy?](#)

Many medicines come in bottles with special child-proof caps so that small children can't accidentally open the bottle and eat the pills. To a small child who can't read the label, the pills might look just like candy. What cues do we use to tell the difference between medicine and candy? At what age can we tell them apart? This project can show you how to find out.

[Difficulty](#) = 6

## [Warped Words and the Stroop Effect](#)

The Stroop effect describes an experiment about the time it takes to name the color of printed words. When you try to name the color in which color words are printed, it takes longer when the color word differs from the ink color than when the color word is the same as the ink color. This project is an interesting variation: what happens if you 'warp' the words into a curved shape that is harder to recognize as a word? Will the Stroop effect still happen? How 'warped' do the words have to be in order to negate the Stroop effect?

[Difficulty](#) = 7 – 9

## [Calling It Quits: What Is the Most Effective Way to Quit Smoking?](#)

Maybe you know someone who smokes, and you want to help them to quit. They've probably already told you how hard it is to stop once a person has started smoking. This project tries to answer the question: What is the most effective way to stop smoking?

[Difficulty](#) = 7

## [Multitasking: Brain Drain or Boost in Efficiency?](#)



Think it's a good idea to plug into iTunes, surf the Web, or watch TV while doing homework or trying to read? Lots of people do it and claim that jumping from one activity to another keeps their

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attention level up and even gives their brain some time to "relax" between the more challenging tasks. Just how efficient is multitasking? In this project, you'll find out after testing the ability of volunteers to successfully do two or more things at once.

[Difficulty](#) = 7

## **Honesty: How Prevalent Is It?**

How trusting are you? Do you think people are basically honest, or do you think people are usually honest only when they think someone is watching? This project explores how well the honor system works for a bake sale-type charity donation. Find out if your hunch is correct.

[Difficulty](#) = 7

## **Testing for Bias in a Photo Lineup**

You may have read about criminal cases where innocent people have been wrongly convicted of a crime. Sometimes, modern DNA analysis techniques have provided the evidence to exonerate these innocent people. In many cases, mistaken identification by eyewitnesses provided strong evidence for the original conviction. How can prosecutors and defense attorneys make sure that photo lineup procedures used to identify criminal suspects are unbiased? This project shows you how to conduct an objective test for bias in a simulated photo lineup.

[Difficulty](#) = 7

## **Testing the Accuracy of Eyewitness Testimony**

Think back to the last time you went to the grocery store. How well can you describe the person who was ahead of you in the check-out line? How many details do you remember about the person? How accurate do you think your memory is? Here is a project to investigate the accuracy of people's observations during everyday life.

[Difficulty](#) = 7

## **Correlation Between Relative Pitch and Age, Gender, or Musical Background**

Here's an interesting way to get some music into your science fair project. What predictions would you make about people with relative pitch?

[Difficulty](#) = 7

## **Does a Cell-Phone Conversation Affect Reaction Time?**

Does talking on a cell phone make one a more dangerous driver? Here is an experiment you can do to investigate whether reaction time is adversely affected by a simultaneous phone conversation.

[Difficulty](#) = 8