Match the Scientist

Time: 45 Minutes **Skill Level:** Elementary (age 6-11)

Background

What is Science Inquiry?

Children are natural scientists. From a very early age they explore the world, ask questions and seek answers. This journey of exploration and discovery is Science Inquiry. Science Inquiry helps young people understand their environment, solve problems and gain knowledge about scientific ideas and processes.

Next Generation Science Standards (NGSS)

Science and Engineering Practices	Disciplinary Core Ideas	Crosscutting Concepts
1. Asking questions **7.** Engaging in argument from evidence	**ETS2:** Links among engineering, technology, science, and society	

Objective

In this activity, students learn about different types of scientists.

Intro to Scientists

Scientists perform research to better understand nature from physical, mathematical, and social perspectives. The word scientist comes from the Latin word, scientia, meaning *knowledge*.

Scientists may be motivated in different ways—by curiosity about the world around us, the desire to improve people's health or benefit the greater good, or even to develop new materials and processes.

Scientists utilize a variety of skills in their everyday work, including the science and engineering practices described above. While curiosity often comes naturally, aspiring scientists will want to develop excellent *observation* skills, so that they can accurately record their findings. Observations commonly use vision and hearing. However, with proper safety precautions, observations may utilize other senses such as touch, smell, and taste.

It's also important for scientists to develop strong *communication* skills, so they can share their results with others.

Materials List:

Scientist definitions	Glue sticks
Inquiry descriptions	Optical illusion cards
Scientist images	Stroop Effect Cards

Prep …Hang up the scientist definitions on a classroom wall, within the students' reach.

Discuss …Welcome and discussion about science. Do you know any scientists? Who are they and what do they do? Talk about the importance of taking observations, recording data, and keeping a journal. Introduce the different types of scientists posted around the room and explain what each does.

List of Scientists

Astronomer	Environmental Scientist	Meteorologist	Volcanologist
Botanist	Geologist	Paleontologist	Wildlife Biologist
Chemist	Horticulturist	Physicist	
Entomologist	Marine Biologist	Seismologist	

Experience "What to Do"- What is the plan for the investigation?
Have students pair up and hand out an inquiry description to each pair. Ask the students to match it to the scientists posted around the room. Once the inquiries are matched, have the students take an image of their scientist and record a journal entry. Explain to students that scientists have to be good at observation.

Two additional activities include:

Optical Illusion
Show the images and ask students what they see. This activity is utilized to help students understand that things are not always as they seem and close observation is a necessary part of science inquiry. Scientists depend heavily on visual information but if we jump to a conclusion without taking in all observations, we will miss things.

1. Vase or Two Faces
2. Young Woman or Old Woman
3. Indian Statue or Eskimo
4. Swan or Squirrel
5. Young Woman or Old Man

Stroop Effect or Selective Attention Theory
When people who can read look at words printed in color, they both see the color and recognize the word. When those two pieces of information are in conflict, most reader will automatically focus on the word's meaning as being more important than font color. In this case, prior knowledge of reading interferes with the ability to focus on font color. Show students the cards and ask them to state the color. What do they do and why?

In science, the discrepancy between what students expect to see and what they actually experience can challenge prior conceptions and move students to more refined conceptual understandings.

Share …Encourage students to discuss their scientists.

Reflect …**Analyze and interpret the data and results. Discuss among the group.** Ask students about their scientists. Which type of scientist is their favorite and why?

Generalize …**to real world examples. Construct explanations.** Do students know a scientist? Do they have a parent or relative that's a scientist?

Apply …**outside the classroom or club meeting.** Do students know of any famous scientists?

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