B1+ Student Worksheet: The Importance of Science

Discussion, Vocabulary, and Analytical Tasks based on Scientific Literacy

Name: ..... **Date:** .....

> *"The saddest aspect of life right now is that science gathers knowledge faster than society gathers wisdom."*
>
> **— Isaac Asimov (1920 – 1992), American science fiction writer and professor of biochemistry**

Part 1: Science Discussion & Exploration

1. Science Discussion Questions

1. Why is science important? How has science helped society advance?
2. Who are some famous or important scientists that you know of? Why are they famous or important? What did they discover?
3. What have been some of the most important scientific discoveries in history?
4. What are your associations with the scientists of the 21st century?
5. What major scientific discoveries do you think humans will make in the future? How will these help us?
6. How important are scientists in society? Are they the most important individuals?
7. What do you think scientists do in their day-to-day jobs? Would you like to be a scientist?

2. Identify the Characteristics of a Scientist

Match the characteristics of a scientist from the left column (1-8) with their correct definitions on the right (a-h).

1. Intelligent **2.** Objective **3.** Creative **4.** Open-minded **5.** Curious **6.** Talented **7.** Dedicated **8.** Persistent	**a)** Receptive of arguments and ideas **b)** Remaining at a task for a long amount of time to complete a task or project **c)** Making observations and decisions based upon evidence, not personal opinion or hearsay **d)** Very interested in working very hard, devoting a lot of time to complete a task or project **e)** Producing new and original ideas and things, inventive **f)** Having a high degree of mental capacity **g)** Having or showing special abilities for a particular type of work **h)** Eager to know or learn

Answers: 1. ____ 2. ____ 3. ____ 4. ____ 5. ____ 6. ____ 7. ____ 8. ____

3. Match Scientific Roles

Match the scientific roles (1-4) with their appropriate descriptions (a-d).

1. Decision-maker **2.** Communicator **3.** Designer **4.** Inventor	**a)** Searching for new discoveries **b)** Being able to make important choices or/and judgements **c)** Creating new models or designs **d)** Making opinions and information known and understood by others, sharing and exchanging opinions

Answers: 1. _____ 2. _____ 3. _____ 4. _____

4. Personality Traits Selection

Which adjectives from the box do you think go with a true scientist? Explain your choice.

hard-working • lazy • punctual • reserved • emotional • enthusiastic • tolerant • well-dressed • ambitious • humorous • serious • intelligent • absent-minded

5. Topical Exploration Categories

- **Science in Everyday Life:**
  - What is one thing you used today that wouldn't exist without science?
  - How does understanding science help us make better personal choices about food, health, and technology?
  - In what ways do we act like scientists in our daily lives when we solve normal problems?
- **Solving Global Challenges:**
  - Which global problem (like climate change, disease, or food shortages) needs science the most right now?
  - How can countries better work together using science to solve worldwide issues?
  - If science funding was doubled tomorrow, what major world problem should we try to fix first?
- **Curiosity and Exploration:**
  - Why is it important for humans to explore outer space, even if it costs a lot of money?
  - How does deep ocean exploration benefit people living on land?
  - Is discovering new knowledge valuable on its own, even if it doesn't have an immediate practical use?
- **Trust and Society:**
  - Why do some people find it hard to trust scientific facts, and how can scientists build better trust with the public?
  - What is the difference between a scientific theory and a regular everyday guess?
  - How should social media platforms handle scientific misinformation?
- **Ethics and the Future:**
  - Just because science can create something (like advanced AI or gene editing), does that mean we should do it?
  - Who should decide the rules for how new technology is used: the scientists, the government, or the public?
  - What do you think will be the most important scientific discovery of the next 50 years?

Part 2: Science Vocabulary & Application

Key Vocabulary Definitions

the scientific method (noun): a systematic approach to acquiring knowledge through observation, formulation of testable hypotheses, experimentation, and refinement of theories based on empirical evidence.

scientific consensus (noun): the opinion or position of the majority of scientists in a particular field about a particular topic.

peer review (noun): the independent evaluation of research by similarly qualified peers to confirm the veracity of the results of the research.

pseudoscience (noun) / pseudoscientific (adjective): opinions and theories presented as science, but not based on the scientific method or rejected by scientific consensus.

to baffle (verb): to cause extreme confusion.

it's not rocket science (phrase): used to say that something is easy or easy to understand, often in a sarcastic manner.

Exercise: Complete the Sentences

Using the vocabulary words above, complete the following sentences (remember to use the correct form of the word, e.g., verb conjugation or plural noun):

1. A _____ found errors in the experiment, the results of which could not be replicated.
2. Experts were _____ when the latest photos from the James Webb Telescope showed galaxies that shouldn't exist.
3. Homeopathy is dismissed as _____ by respectable medical professionals.
4. _____ is important because it helps to ensure that scientific findings are objective and free from bias.
5. There is a _____ among experts that climate change is real and largely caused by human activity.
6. Why can't you cook? It's not exactly _____!

Science Vocabulary Comprehension Questions

1. What criticisms can you think of for the scientific method?
2. What examples of scientific consensus can you think of?
3. What are some problems with peer reviews?
4. Can you think of any examples of pseudoscience? Why do people believe these?
5. What baffles you the most about science?
6. When might you say (or have said) that something is not rocket science and to whom?

Part 3: Project Work

1. **Presentation:** Think of a scientist from your field of knowledge who made a significant contribution to its development and present him/her and their achievements to the class.
2. **Economic Argument:** Think of the arguments showing how your field of knowledge is crucial for the economy of the country.