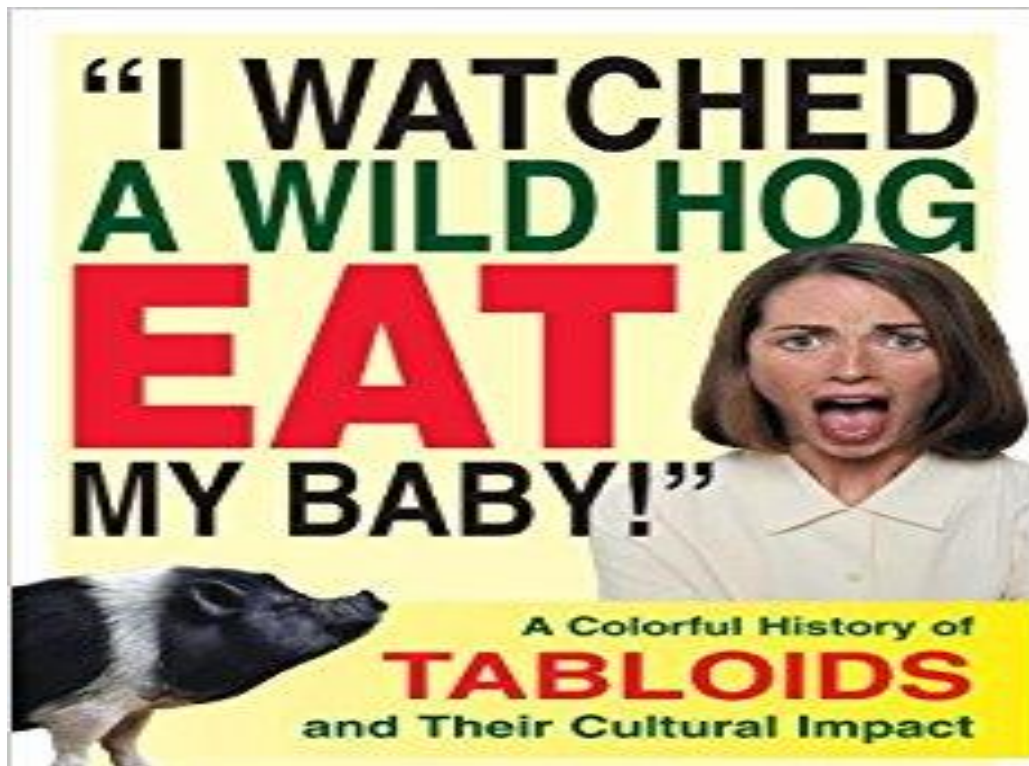


## Week 7

### Modern Myths

#### Lesson 1: Separating Fact from Fiction & Opinion



**Success Criteria:** students will gain a basic understanding of the difference between facts and opinions, and how they are often difficult to distinguish. They will also gain a better understanding of the power and function of modern myths such as Santa Claus, the Easter Bunny, and the Tooth Fairy.

**H**ow do we know what we read in newspapers, online or see on TV, is true?

Being able to tell whether something is true or false or an opinion, is an important skill that can be learned. Before students can master this skill, it is vital to understand some basics.

**Task 1: Fact versus Opinion.** What is the difference between a fact and an opinion? Write the following 3 statements into your Red Book under the heading “Fact vs Opinion.” Are they true or false?

- a. Cristiano Ronaldo is a better soccer player than Lionel Messi.
- b. New Zealanders are more knowledgeable about the world than Americans.
- c. Donald Trump is a better President than Barack Obama.
- d. Cigarette smoking causes cancer.

The answer to the first 3 questions are false. The 4<sup>th</sup> question is true. The first 3 questions are opinions – which is an expression of personal feelings that cannot be proven and are open to interpretation. They are commonly driven by emotion. Astronomer Carl Sagan once wrote that ‘wherever we have strong emotions, we are liable to fool ourselves.’

The last question about cigarette smoking, is true. Facts, on the other hand, can be proven and are beyond reasonable dispute. If I say, ‘The movie was about a boy and his dog,’ it is not an opinion – because it is either true or false based on the evidence. The movie either WAS or WAS NOT about a boy and his dog. One can verify the claim by watching the movie. Scientific facts are claims that are supported by overwhelming evidence including a consensus (majority) of scientists.

**Task 2:** Write the follow claims into your Red Book. Are they true or false?

- a. The MMR vaccine (for Measles-Mumps-Rubella) does not cause autism.
- b. Global warming is caused by humans.
- c. The Earth is at least 4.5 billion years-old.
- e. The Holocaust (the mass killing of Jews by the Nazis), actually happened.
- d. Evolution is true.

### **The MMR Example**

Each of these statements are considered true, as there is an overwhelming agreement among scientists that they are true. In science it is important that study results can be repeated by others. The evidence for the safety of the MMR vaccine, has been published in hundreds of science journals. Many years ago, a single article appeared claiming that there was a link between getting the MMR vaccine and autism. Because the results were so different than what other

scientists had found, people asked to see the data that the new study was based on. It became apparent that the data had been faked. As for the question on Evolution, there is an agreement among members of the scientific community that evolution is a real process.

Therefore, it is not necessary to say, 'In my view, smoking causes cancer' or 'It is my opinion that evolution is real.' Most scientists would agree that smoking *does* cause cancer and nearly every biologist at every major university would agree in evolution. But keep in mind, there will always be a small number of scientists who will make unsupported claims such as 'Bigfoot exists' or that 'Global warming is a hoax.' For instance, Professor John Mack was a Harvard University Psychiatrist who was a competent scientist and people still use his publications to teach university classes. He also believed that humans were being abducted by space aliens. This was a personal opinion, and he had every right to express it, and while his views on psychiatry are still respected, his claims about aliens are not supported by evidence, and hence, almost all scientists reject it. Just because a few scientists believe something, does not make it true or even likely.

Remember, facts are provable statements as they can be shown to be **true** or **false**. Opinions are expressions of personal beliefs and ideas. They are not provable.

**Task 3:** Write the following statements into your Red Books. The answers have been provided.

**Fact or Opinion**

1. Rats make better pets than dogs. **Opinion**
2. Cats are more intelligent than cows. **Opinion**
3. Ice cream is a dairy product. **Fact**
4. Christianity is the best religion. **Opinion**
5. Devout Muslims do not eat pork. **Fact**

**Now**, create 5 statements of your own that are either facts or opinions. Write them into your Red Books.

**Fact or Opinion (My own list of 5)**

- 1.
- 2.
- 3.
- 4.
- 5.

## Week 7 Lesson 2:

### Understanding Facts vs Fiction

It is important to be clear on what you are discussing. Consider the next set of statements. **Task 1:** Write them into your Red Books. Would you consider them to be true or false?

- a. UFOs (Unidentified Flying Objects) are real.
- b. Ghosts exist.

Each of these statements are TRUE.

They highlight the importance of being specific about what you are talking about. For instance, there is no question that UFOs exist, but are they an alien spacecraft, natural objects like stars and planets, or experimental aircraft? There is also no question that ghosts exist. Polls consistently show that about 30% of people around the world report having seen a ghost. The central question is not whether ghosts exist, the key question is ‘What are ghosts?’ Are they spirits of the dead or are they hallucinations created by the human mind? Incidentally, books on people claiming to have contacted space aliens and communicated with ghosts, are catalogued under the library’s Dewy Decimal System as ‘Nonfiction,’ but that does not mean they are real! **Task 2:** So, write the 2 sentences below into your Red Books. Do you think they are true or false?

- a. Some UFOs are alien spaceships.
- b. Some ghosts represent spirits of the dead.

Some UFOs may actually be ET spacecraft, and some reports of ghosts may be spirits of the deceased, however, there is no scientific evidence to support these claims. It is very possible that there is alien life across the universe, but to claim that ETs have visited Earth and are abducting humans, is far from established.

**Task 3:** Write the 2 sentences below into your Red Books. Do you think they are true or false?

- a. Some UFOs may be alien spaceships.
- b. Some ghosts may represent spirits of the dead.

Both statements are TRUE. While the existence of ghosts and space aliens has not been proven, it is certainly possible.

What about the statement, ‘Bigfoot is real?’ This would be considered false. Throughout history, there are no fossils, bones, DNA evidence or a body of Bigfoot that has ever been found. Fuzzy photos and visual sightings are scientific proof. Hence, 99.9% of the world’s scientists consider Bigfoot to be a mythical creature for which there is no evidence of its existence. To say, ‘In my opinion,

Bigfoot is a myth' is more than just a personal opinion. There is NO scientific evidence of its existence. Photos and sightings from witnesses are not high-quality evidence. Eyewitness testimony is unreliable. On the other hand, there is a massive weigh of scientific evidence supporting the existence of global warming.

There is a common saying among journalists, that you are entitled to your own opinions but not your own facts. This is especially true in science because scientists use evidence in the form of data, to support or refute a hypothesis. The field of science does not have an opinion, it has an accumulation of evidence that the MMR vaccine is safe and climate change is caused by humans.

**Task 4:** In you Red Books, complete the following tasks:

1. Write down the definition of a 'fact.'
2. What is the definition of an opinion?
3. What is an editorial?
4. Define the word 'neutral.'
5. Define the word 'bias.'

## Week 7 Lesson 3:

### Are Myths Good for Us?

#### **Is the Internet Robbing us of Harmless Myths like Santa Claus, the Easter Bunny & the Tooth Fairy?**

As a child, I remember believing in all 3 of these myths. I think I was about 8 when I realised the truth about Santa Claus and the Easter Bunny – and maybe a year later for the Tooth Fairy. Remember I grew up on a remote farm in a tiny town and there was no internet, and we had no neighbours.

Across the world, millions of young children still believe in the existence of a chubby man with red cheeks who slides down the chimney at Christmas and delivers presents. Millions of other children believe in the Easter Bunny and the Tooth Fairy. Today it sounds ridiculous to think that I once believed in the existence of a giant rabbit that could make and deliver chocolate Easter eggs! But more kids are learning about these myths at a younger age – or never at all.

#### **Writing Task:**

Early in this unit we learned about the power of myths and how they can teach people important lessons. I don't think that my believing in these myths harmed me at all. As a child it made life fun and exciting. I want you to write a few sentences on this topic in your Red Book. An **editorial** is a piece of writing where the author gives their opinion on a particular subject.

**Please write on the following:** A belief in creatures like Santa Claus, the Easter Bunny and Tooth Fairy can offer important lessons for children. What is the power of these stories for little kids? Could believing in these stories help grow their imaginations? If you believed in any of them, do you think it was a good thing or bad? Can you think of any lessons that these stories teach or any messages they send? You can write a few sentences to a couple of paragraphs.

**Possible sentence starter:** In this unit we have learned that myths can have positive and powerful impacts on the lives of children....