

This is an assessment, not a test: it is meant to help me understand your background and current reading level. You should take about 20 minutes to look at each part. If you can't answer a question, leave it blank and don't worry about it!

READING 1

Some of our summer reading includes Michael Faraday's "The Forces of Matter", which are lectures that Faraday gave in 1859 in London. These can be difficult for modern readers, even adults, because Faraday uses terms that have been replaced by modern physics concepts, and because he is actively talking about the demonstrations he performs for his audience, which of course, we can't see.

Here is a typical paragraph from Faraday's work. Read through it and answer the questions below.

But we must speak of candles as they are in commerce. Here are a couple of candles commonly called dips. They are made of lengths of cotton cut off, hung up by a loop, dipped into melted tallow, taken out again and cooled, then re-dipped until there is an accumulation of tallow round the cotton. In order that you may have an idea of the various characters of these candles, you see these which I hold in my hand—they are very small, and very curious. They are, or were, the candles used by the miners in coal mines. In olden times the miner had to find his own candles; and it was supposed that a small candle would not so soon set fire to the fire-damp in the coal mines as a large one; and for that reason, as well as for economy's sake, he had candles made of this sort—20, 30, 40, or 60 to the pound. They have been replaced since then by the steel-mill, and then by the Davy-lamp, and other safety-lamps of various kinds. I have here a candle that was taken out of the *Royal George*, it is said, by Colonel Pasley. It has been sunk in the sea for many years, subject to the action of salt water. It shews you how well candles may be preserved; for though it is cracked about and broken a good deal, yet, when lighted, it goes on burning regularly, and the tallow resumes its natural condition as soon as it is fused.

1. Are there any words in this paragraph that you don't know, or phrases that don't make sense to you? Which ones? (make a note of words you don't know as you read, so that you can look them up, or ask about them in class).
2. Faraday first describes candles "as they are in commerce". What kind of candles does he mean? Why does he think these particular candles are curious?
3. Faraday explains that coal miners now use safety lamps rather than candles. What does he tell you that explains why coal miners want a safer source of light than an open flame candle?
4. What do you think the *Royal George* was?
5. Can a candle survive submersion in salt water, or will it dissolve?
6. Try to summarize this paragraph in a few sentences.