

## “Skin Deep”

Directions: Read the article provided for you. In it, there are two hypothesis discussed. “Hypothesis A” states that skin color evolved to protect humans from skin cancers. “Hypothesis B” states that skin colors evolved to help maintain levels of certain key nutrients in the skin. Restate each hypothesis in your own words, then look at the evidence present below. Mark whether that evidence supports hypothesis A, B, both, or neither.

A:

B:

Evidence	Supports A	Supports B	Supports Both	Supports Neither
Distribution of skin color patterns is not random				
Darker people tend to be found near the equator				
Melanin is produced in response to UV exposure				
Melanomas tend to strike light-skinned people				
Skin cancers tend to arise later in life than the first reproductive years				
Hairlessness allows humans to stay cool				
Light-skinned people tend to become folate-deficient when exposed to high levels of UV light				
Folate in human blood has been shown to break down when exposed to UV light				
Folate deficiency in mothers has been shown to cause neural-tube defects in their babies				
Folate deficiency can contribute to infertility in men				
Women who use tanning beds during early pregnancy have been shown to give birth to babies with neural-tube defects				
UVB rays are necessary for the synthesis of vitamin D				
Innuit peoples in Alaska have darker-than-expected skin tones				
Women tend to have slightly lighter skin than men				
People who migrate to other regions of the world tend to have higher rates of skin cancer and rickets				
Darker skinned people have fewer skin cancers				

**Conclusion:** Based on the evidence presented, which hypothesis seems like the most likely explanation for the wide range of skin colors present in modern-day humans?

What piece of evidence gives the strongest support of your conclusion? Why?