

Martian Thermometer

Quick COVID-19 Monitoring?

Measures of Central Tendency

D1.2 [Representation and Analysis of Data] represent and statistically analyse data from a real-life situation involving a single variable in various ways, including the use of quartile values and box plots

D2.1 [Application of Mathematical Modelling] describe the value of mathematical modelling and how it is used in real life to inform decisions

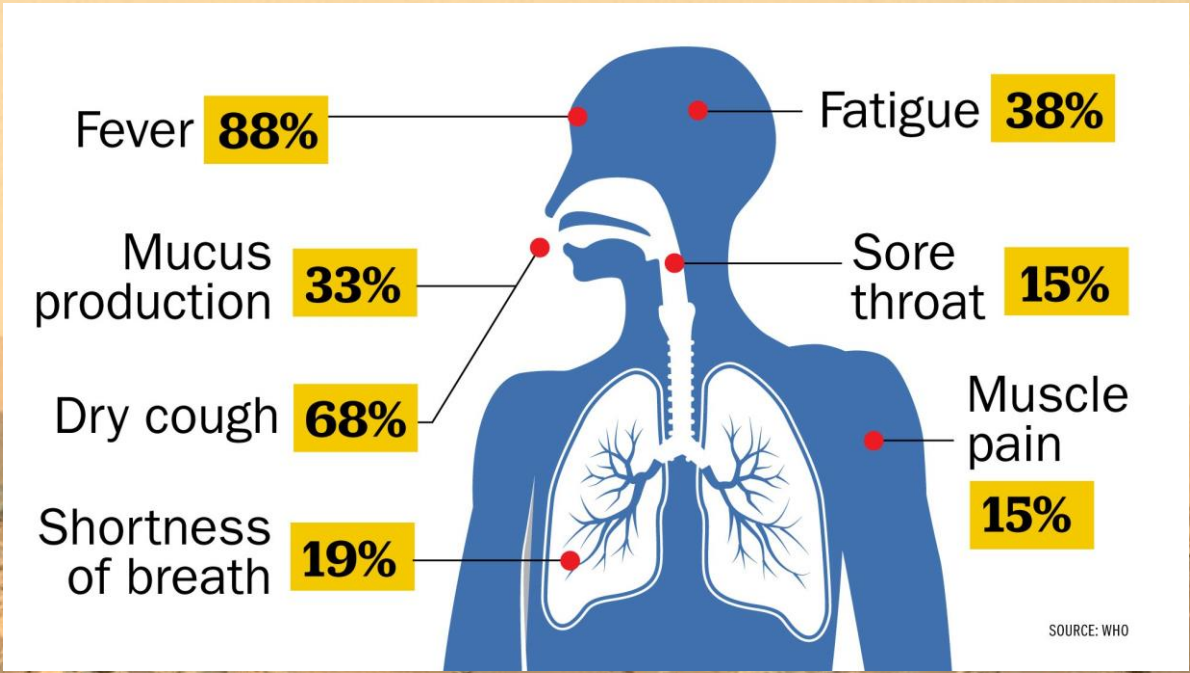
On a recent visit to
Mars, Nasa
discovered
Martians!!



Turns out, the Martians are also experiencing a variant of the COVID-19, the omega variant.



Nasa let the Martians know the symptoms of the virus on Earth...

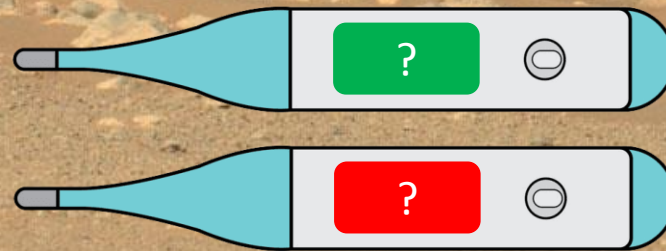
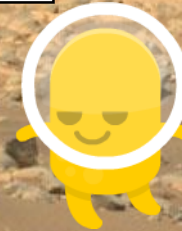


And it turns out
that Martians
have similar
symptoms!



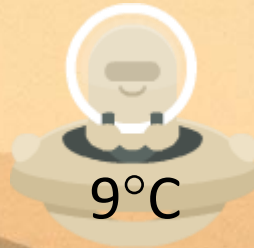
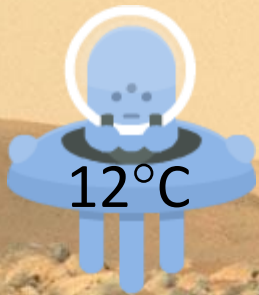
They want to make a thermometer that turns red when the Martian has a fever.

What is the normal Martian Body temperature?





Where is the center of the Martian temperatures?



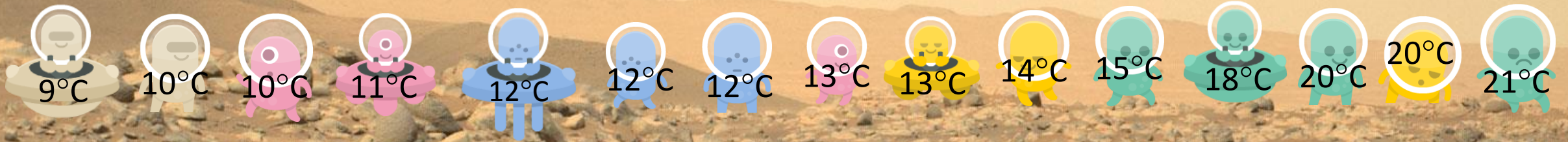
How confident are you with your answer? Explain.

Who might disagree with your answer? Why?





Where is the center of the Martian temperatures?



Mode =
12°C

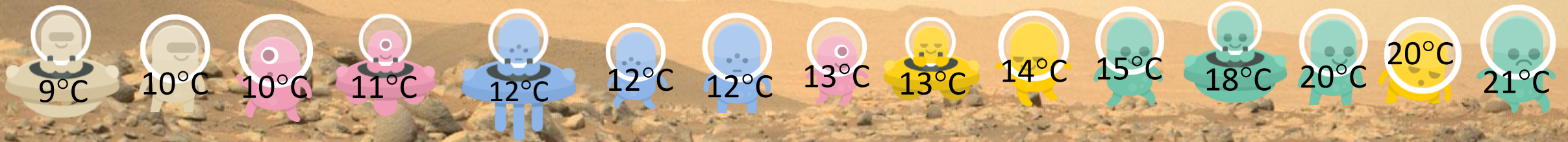
Median =
13°C

Average/
Mean =
14°C





Where is the center of the Martian temperatures?



Mode =
12°C

Median =
13°C

Average/
Mean =
14°C

Replication of 15 aliens is far too low to be accurate. 25,000 humans were used for our average.



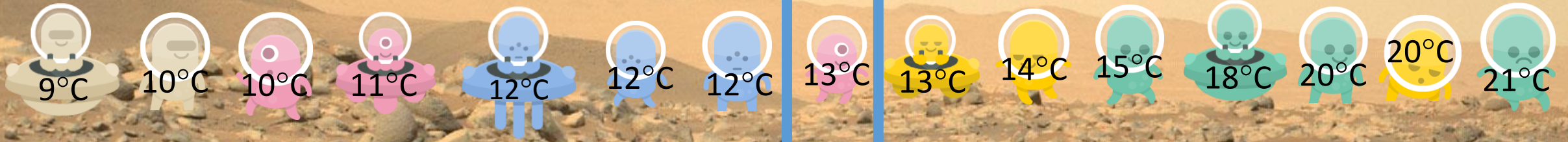


Where is the center of the Martian temperatures?



Only pink, beige, blue

Only yellow, green



Mode = 12°C

Median = 13°C

Average/ Mean = 14°C

Replication of 15 aliens is far too low to be accurate. 25,000 humans were used for our average.

The alien temperatures may need sub-classifications.





Harvard Health
Publishing
HARVARD MEDICAL SCHOOL

STAYING HEALTHY

Time to redefine normal body temperature?

March 17, 2020

By: **Jacqueline Sperling, PhD**, Contributor

Actually, this is a difficult question for humans too.

There is some discussion among doctors that we are using the wrong number for “normal”.

Most people probably grew up being told it was 37 degrees Celsius (or 98.6 degrees Fahrenheit).



Harvard Health
Publishing
HARVARD MEDICAL SCHOOL

STAYING HEALTHY

Time to redefine normal body temperature?

March 17, 2020

By: **Jacqueline Sperling, PhD**, Contributor





Harvard Health
Publishing
HARVARD MEDICAL SCHOOL

STAYING HEALTHY

Time to redefine normal body temperature?

March 17, 2020

By: **Jacqueline Sperling, PhD**, Contributor

Most people probably grew up being told it was 37 degrees Celsius (or 98.6 degrees Fahrenheit).

That widely accepted number originated from a study done by a German physician, Carl Wunderlich, measuring axillary (armpit) temperatures from about 25,000 people. He found that the average was 98.6° F (37° C). And so we've believed that ever since.





Harvard Health
Publishing
HARVARD MEDICAL SCHOOL

STAYING HEALTHY

Time to redefine normal body temperature?

March 17, 2020

By: **Jacqueline Sperling, PhD**, Contributor

Most people probably grew up being told it was 37 degrees Celsius (or 98.6 degrees Fahrenheit).

That widely accepted number originated from a study done by a German physician, Carl Wunderlich, measuring axillary (armpit) temperatures from about 25,000 people. He found that the average was 98.6° F (37° C). And so we've believed that ever since.

Can you identify any groups that were probably missing in Wunderlich's subject group?





Harvard Health
Publishing
HARVARD MEDICAL SCHOOL

STAYING HEALTHY

Time to redefine normal body temperature?

March 17, 2020

By: **Jacqueline Sperling, PhD**, Contributor

Most people probably grew up being told it was 37 degrees Celsius (or 98.6 degrees Fahrenheit).

That widely accepted number originated from a study done by a German physician, Carl Wunderlich, measuring axillary (armpit) temperatures from about 25,000 people. He found that the average was 98.6° F (37° C). And so we've believed that ever since.

Newer studies have shown that the "normal" body temperature can have a wide range, from 97°F (36.1°C) to 99°F (37.2°C)