



CHECK IT OUT

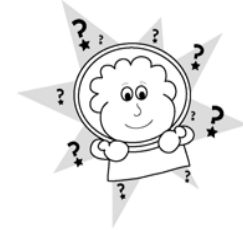
1

On the Space Station astronauts live in microgravity; they are weightless and everything floats. The water they drink floats. Even their rubber duckies would float!



WHAT TO DO

Make a prediction...



WHAT TO ASK...

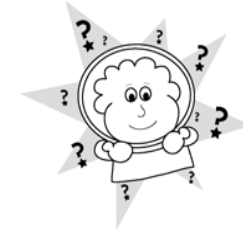
If water outside your body floats around in space, what do you think happens to the water and other fluids *inside* your body in the microgravity of space?



CHECK IT OUT



WHAT TO DO



WHAT TO ASK...

2

Test your prediction by doing this experiment...

Grab a partner, string, ruler, paper, 2 colored markers, and a timer.

Wrap the string around your partner's ankle, mark it, measure it, and record your measurement.

Have your partner lay on the floor near a wall with his or her legs in the air leaning against the wall for 1 minute.

After 1 minute, measure his or her ankle again - *while his or her legs still are propped against the wall* - mark it with a different color, and record *that* measurement.

Did your partner's ankle shrink?

What caused the second measurement to be smaller?



CHECK IT OUT

3

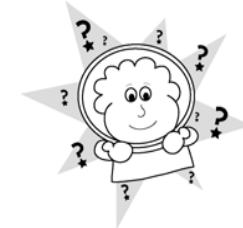
Here's what happened...
...by lying upside down,
the fluid in your partner's
body shifted. It was
pulled down out of the
ankles by Earth's gravity.

Fluids in space shift, too;
but in microgravity,
rather than sinking, fluids
- and everything else! -
floats!



WHAT TO DO

Answer these questions...



WHAT TO ASK...

If the fluid was not in your
ankles (the reason the
second measurement was
smaller), then where did it
go?

What problems do you
think astronauts might
experience when the fluid
(blood and water) in their
bodies begins to float to
the top?