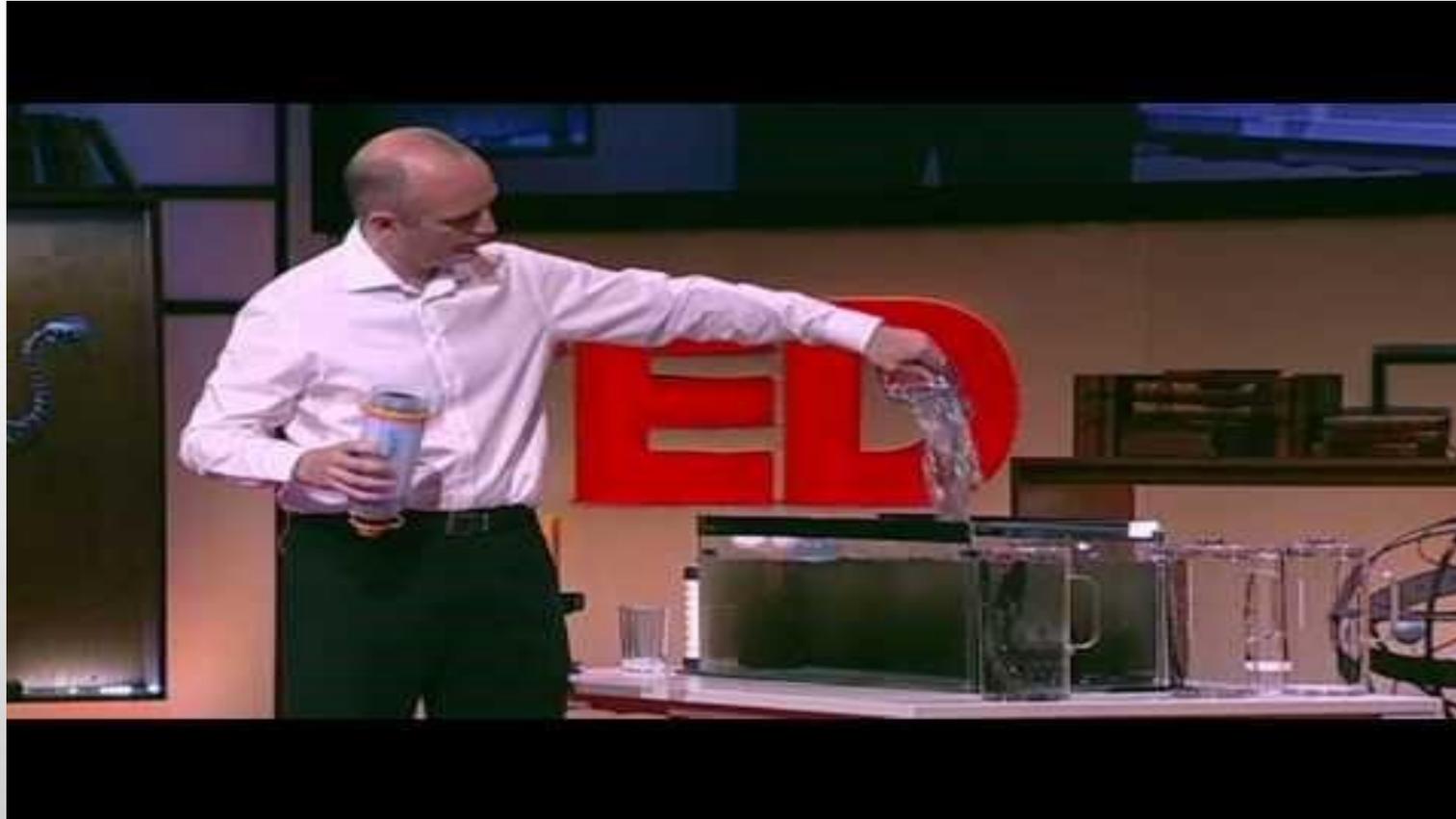
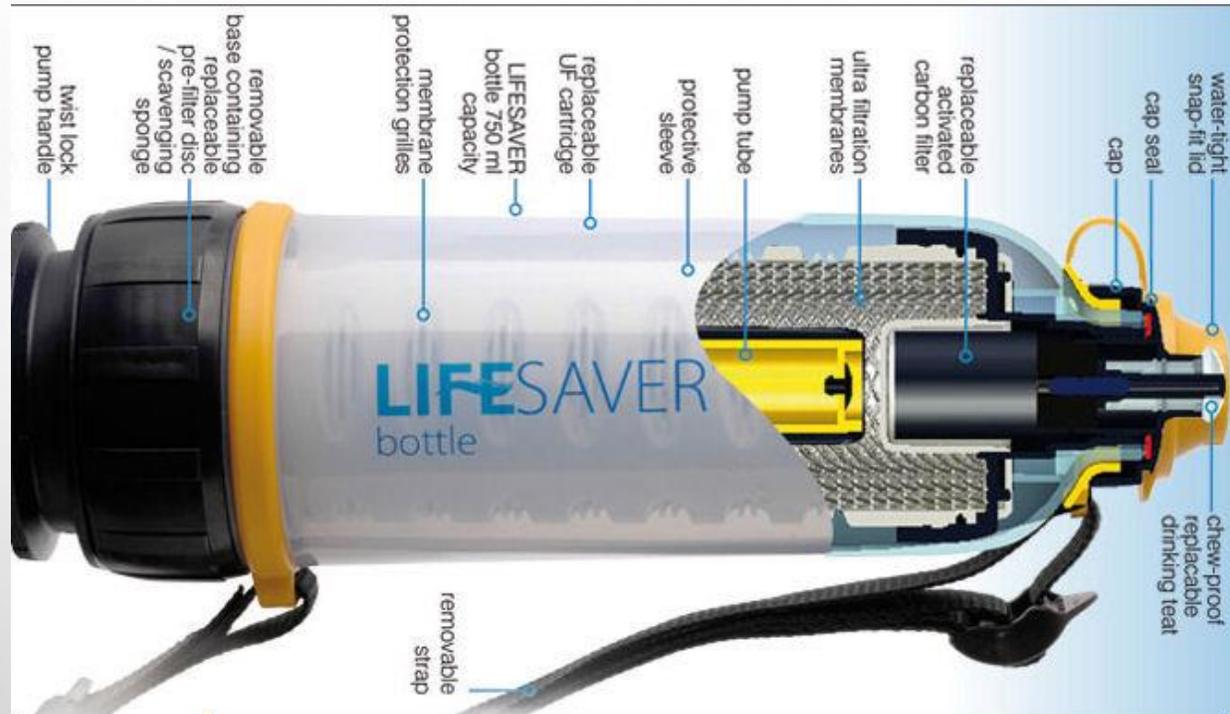


MAKING DIRTY WATER DRINKABLE



LIFESAVER BOTTLE GENERAL DESIGN



BUILD YOUR OWN SELF CLEANING WATER BOTTLE

- YOU WILL DESIGN YOUR OWN LIFESAVER BOTTLE AND TEST IT WITH A SAMPLE OF DIRTY WATER.
- IN YOUR GROUP, DESIGN YOUR BOTTLE. WHAT MATERIALS WILL YOU USE? HOW WILL YOU SET IT UP?
- DRAW YOUR FINAL DESIGN AND HAVE THE TEACHER CHECK IT BEFORE YOU BEGIN.

WATER QUALITY OF THE DIRTY WATER

- POUR 100 ML OF THE DIRTY WATER INTO THE 200 ML BEAKER.
- MAKE OBSERVATIONS ON THE COLOR AND TRANSPARENCY OF THE WATER. RECORD YOUR OBSERVATIONS.
- USE THE PH METER (OR STRIP) TO OBTAIN THE PH OF THE DIRTY WATER. RECORD YOUR RESULTS.
- CLEAN YOUR BEAKER.

TESTING YOUR WATER BOTTLE – PART 1

- POUR 100 ML OF THE DIRTY WATER INTO YOUR WATER BOTTLE. ONCE FILTERED, SQUEEZE OUT THE WATER INTO THE 200 ML BEAKER.
- MAKE OBSERVATIONS ON THE COLOR AND TRANSPARENCY OF THE WATER. RECORD YOUR OBSERVATIONS ON YOUR STUDENT HANDOUT.
- USE THE PH METER (OR STRIP) TO OBTAIN THE PH OF THE TEST WATER. RECORD YOUR RESULTS ON THE STUDENT HANDOUT.
- CLEAN YOUR BEAKER.

SHARE RESULTS

- PICK ONE REPRESENTATIVE TO SHARE THE RESULTS OF YOUR TEST. EXPLAIN YOUR DESIGN AND HOW EFFECTIVELY IT SEEMED TO CLEAN THE WATER.

RETEST

- TALK WITH YOUR GROUP ABOUT WAYS YOU MAY IMPROVE YOUR WATER BOTTLE DESIGN. WHAT WORKED WELL? WHAT CAN YOU IMPROVE UPON?
- SKETCH YOUR IMPROVED DESIGN AND THEN FINALIZE THE DESIGN PROCESS.

TESTING YOUR WATER BOTTLE – PART 2

- POUR 100 ML OF THE DIRTY WATER INTO YOUR WATER BOTTLE. ONCE FILTERED, SQUEEZE OUT THE WATER INTO THE 200 ML BEAKER.
- MAKE OBSERVATIONS ON THE COLOR AND TRANSPARENCY OF THE WATER. RECORD YOUR OBSERVATIONS ON YOUR STUDENT HANDOUT.
- USE THE PH METER (OR STRIP) TO OBTAIN THE PH OF THE TEST WATER. RECORD YOUR RESULTS ON THE STUDENT HANDOUT.
- CLEAN YOUR BEAKER.

REFLECTION

- DESCRIBE WHAT YOU HAVE LEARNED FROM THE LESSON TODAY. MAKE SURE TO INCLUDE:
 - WHAT YOU HAVE LEARNED ABOUT WATER POLLUTION
 - MATERIALS THAT CAN BE USED TO CLEAN WATER
 - ENGINEERING DESIGN PROCESS
 - THE EFFECT THESE WATER BOTTLES CAN HAVE ON SOCIETY.