
HYDROVILLE CURRICULUM PROJECT

**Student Background Theme Evaluation
Activities 1 & 2: Pump It Up! and Designing a Supersoaker
(Questions 1 – 20 on Scantron Sheet)**

Now that you have completed the Pump It Up! Activity, we would like you to answer a few questions about what you did and what you learned.

1. Which of the following best describes the scientific principle behind the operation of a piston pump?
 - A. Increasing the volume increases the pressure.
 - B. Decreasing the volume increases the pressure.
 - C. Increasing the temperature increases the pressure.
 - D. Decreasing the temperature increases the pressure.

2. How does a Supersoaker differ from a simple piston pump?
 - A. It uses one-way valves.
 - B. It doesn't have a piston.
 - C. It squirts through a nozzle.
 - D. It builds up air pressure in the water reservoir.

3. Which of the following does NOT increase the distance the water will squirt from a piston pump?
 - A. Decreasing the size of the nozzle.
 - B. Increasing the number of slides of the piston.
 - C. Removing the one-way valves.
 - D. Varying the water in the reservoir.

Listed below are a number of things that you did as part of the activity. Please indicate how interesting each one was to you.

4. Taking apart a pump.
 - A. Not at all interesting
 - B. Slightly interesting
 - C. Somewhat interesting
 - D. Very interesting
 - E. I didn't do this part

5. Learning about the functional components of a pump.
- A. Not at all interesting
 - B. Slightly interesting
 - C. Somewhat interesting
 - D. Very interesting
 - E. I didn't do this part
6. Learning how to explain what makes a pump work.
- A. Not at all interesting
 - B. Slightly interesting
 - C. Somewhat interesting
 - D. Very interesting
 - E. I didn't do this part
7. Designing and building a "Supersoaker" pump.
- A. Not at all interesting
 - B. Slightly interesting
 - C. Somewhat interesting
 - D. Very interesting
 - E. I didn't do this part
8. Working together on this activity with other students as a team.
- A. Not at all interesting
 - B. Slightly interesting
 - C. Somewhat interesting
 - D. Very interesting
 - E. I didn't do this part
9. How much writing have you done in your Hydroville Learning Log about this activity? (mark only one answer)
- A. Quite a bit (a page or more)
 - B. Some writing (about a half page)
 - C. A little bit (a few lines)
 - D. I haven't done any writing
10. If you HAVE NOT done any writing in your Hydroville Learning Log about this activity, what are your reasons? (mark all answers that apply)
- A. I haven't started a Hydroville Learning Log
 - B. I don't have time
 - C. I don't know what to write about
 - D. I'm not a good enough writer
 - E. Other:

Part of this activity involved working with other students in a team. In working on this activity, how difficult did you find each of the teamwork elements listed below?

11. Expressing my ideas verbally to others.

- A. Not difficult
- B. Slightly difficult
- C. Somewhat difficult
- D. Very difficult
- E. Too difficult for me to do

12. Listening to others.

- A. Not difficult
- B. Slightly difficult
- C. Somewhat difficult
- D. Very difficult
- E. Too difficult for me to do

13. Staying on task with the group.

- A. Not difficult
- B. Slightly difficult
- C. Somewhat difficult
- D. Very difficult
- E. Too difficult for me to do

14. Asking teammates for help.

- A. Not difficult
- B. Slightly difficult
- C. Somewhat difficult
- D. Very difficult
- E. Too difficult for me to do

15. Receiving criticism from other team members.

- A. Not difficult
- B. Slightly difficult
- C. Somewhat difficult
- D. Very difficult
- E. Too difficult for me to do

16. Giving praise to the ideas or work of others.

- A. Not difficult
- B. Slightly difficult
- C. Somewhat difficult
- D. Very difficult
- E. Too difficult for me to do

17. Getting along with everyone on the team.

- A. Not difficult
- B. Slightly difficult
- C. Somewhat difficult
- D. Very difficult
- E. Too difficult for me to do

18. Using my time efficiently.

- A. Not difficult
- B. Slightly difficult
- C. Somewhat difficult
- D. Very difficult
- E. Too difficult for me to do

19. Overall, how well would you say your team worked together on this activity?

- A. Worked very well
- B. Worked well
- C. Worked OK
- D. Worked poorly
- E. Worked very poorly

20. Overall, how would you rate your experience of teamwork on this activity?

- A. Very positive
- B. Positive
- C. Neither positive nor negative
- D. Negative
- E. Very negative