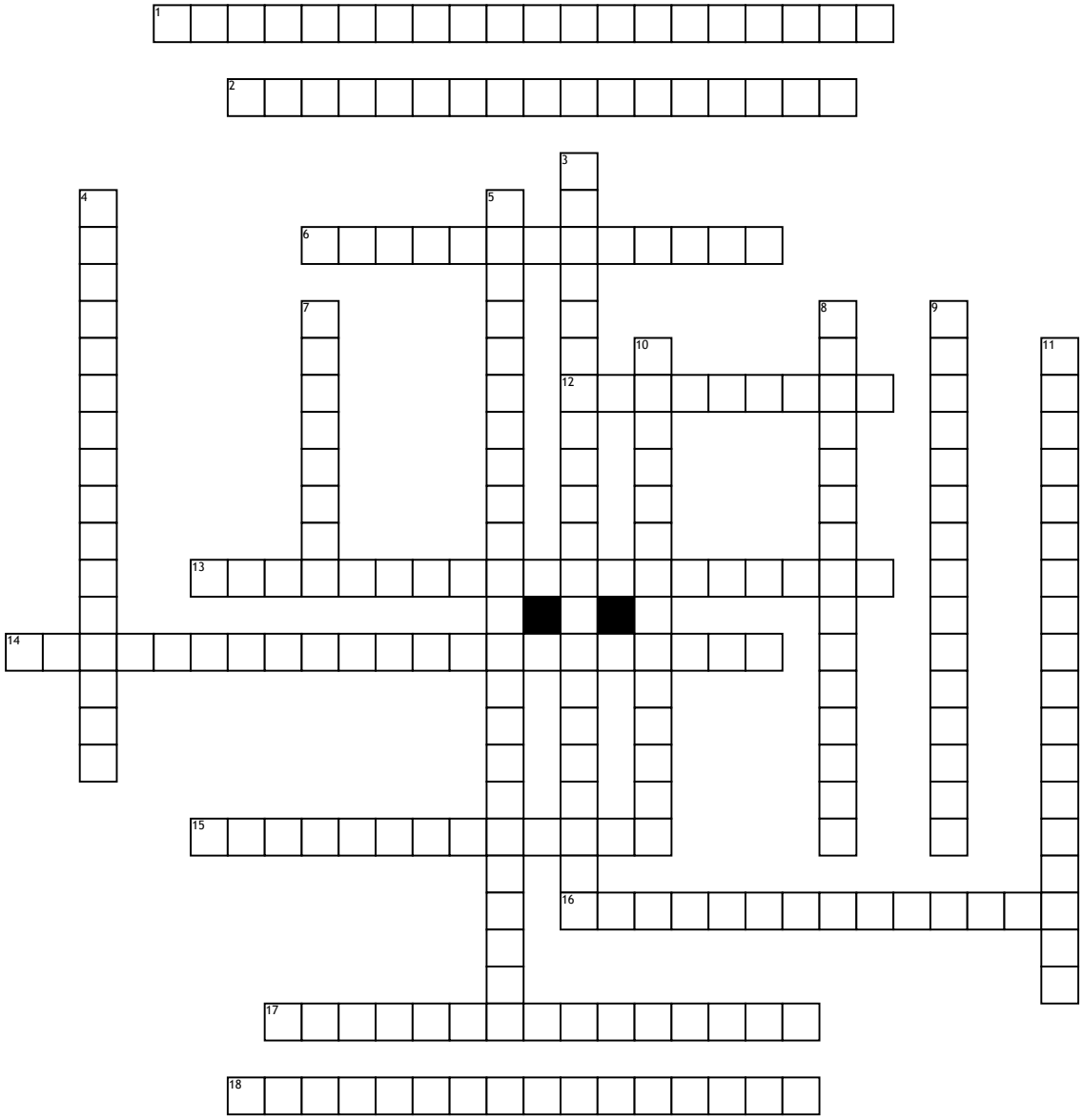
Name: _____ Date: _____

SPINOFFS FROM THE SPACE PROGRAM



Across

1. fabric developed for use in space suits

2. these have heating elements that run on rechargeable batteries worn on the inside wrist or embedded in the sole

6. Portable, self-contained power tools were originally developed to help Apollo astronauts drill for moon samples

12. it does not depend on gravity and it has pressured gas so it can be used upside down

13. these devices evolved from research to develop a controller for the Apollo Lunar Rover, and from other NASA research into how humans actually operate (called "human factors")

14. this is a computer program developed by NASA to analyze a spacecraft or airplane design and predict how parts will perform

15. this was first used in the Earth orbiting space station called Skylab to help detect any toxic vapors

16. NASA developed ways to process signals from spacecraft to produce clearer images

17. NASA developed ways to correct errors in the signals coming from satellites

18. developed for the astronauts to use in space (where spitting is not a very good idea)

Down

3. This uses techniques developed for processing space pictures to examine eyes of children

4. low-cost materials as the base for printed circuits (like those inside your computer) some of these "liquid crystal polymers"

5. it uses NASA research in airfoils (wings) and design software developed for the space program

7. these use accordion-like folds, like the design of space suits, to allow to flex without distortion, yet still give support and control

8. this comes from research done on materials to protect the eyes of welders working on spacecraft

9. uses brackets that are made of a nearly invisible translucent (almost clear) ceramic material

10. instead of measuring temperature using a column of mercury and this technology was originally developed to detect the birth of stars

11. it has an extra-bright primary bulb and an independent backup system that has its own separate lithium battery