Outdoor Math Scavenger Hunt

Are you a math wizard? Do you recognize math concepts all around you? Are you able to conquer these math challenges in order to successfully complete the math scavenger hunt and collect all the items? Math plays a significant role in the world and can be found throughout nature.   Are you up for the challenge? Only time will tell. Follow the instructions below to collect the items and complete the challenge. Remember all the items you collect must be found outdoors and exist naturally within our environment. Good luck.

1. 3 leaves with a 45 degree angle

2. 3 x 4 – 20 / 2 = # of beach glass

3. 1 stick with a Y shape

4. 2 unique colored rocks with a diameter of 6/3 + 1/2 centimeters

5. 2 items with patterns

6. A cubed shaped item

7. An item containing two parallel lines

8. An item which displays or represents one axis of symmetry

9. An item which displays more than one axis of symmetry

10. 4 x ½ of pinecones

11. A matter that allows at least some light to pass through

12. Evidence of condensation

13. An organism that uses sunlight, carbon dioxide and water to create its own food

14. A mixture of two or more substances

15. An item that has an area that would respect the following: $4 \text{ cm}^2 < A < 10 \text{ cm}^2$

16. Measure your shadow and your height (in cm) and write it as a simplified ratio.

17. Repeat #16 two hours later. Compare the ratios.

18. Once you have found, the value of n in the following equation $(2n + 10) \div 2 = 11$, find this number of strands of grass.

19. With what you have found in #18, create an isosceles triangle.

20. Find the area and perimeter of the isosceles triangle that you have created in #19.