

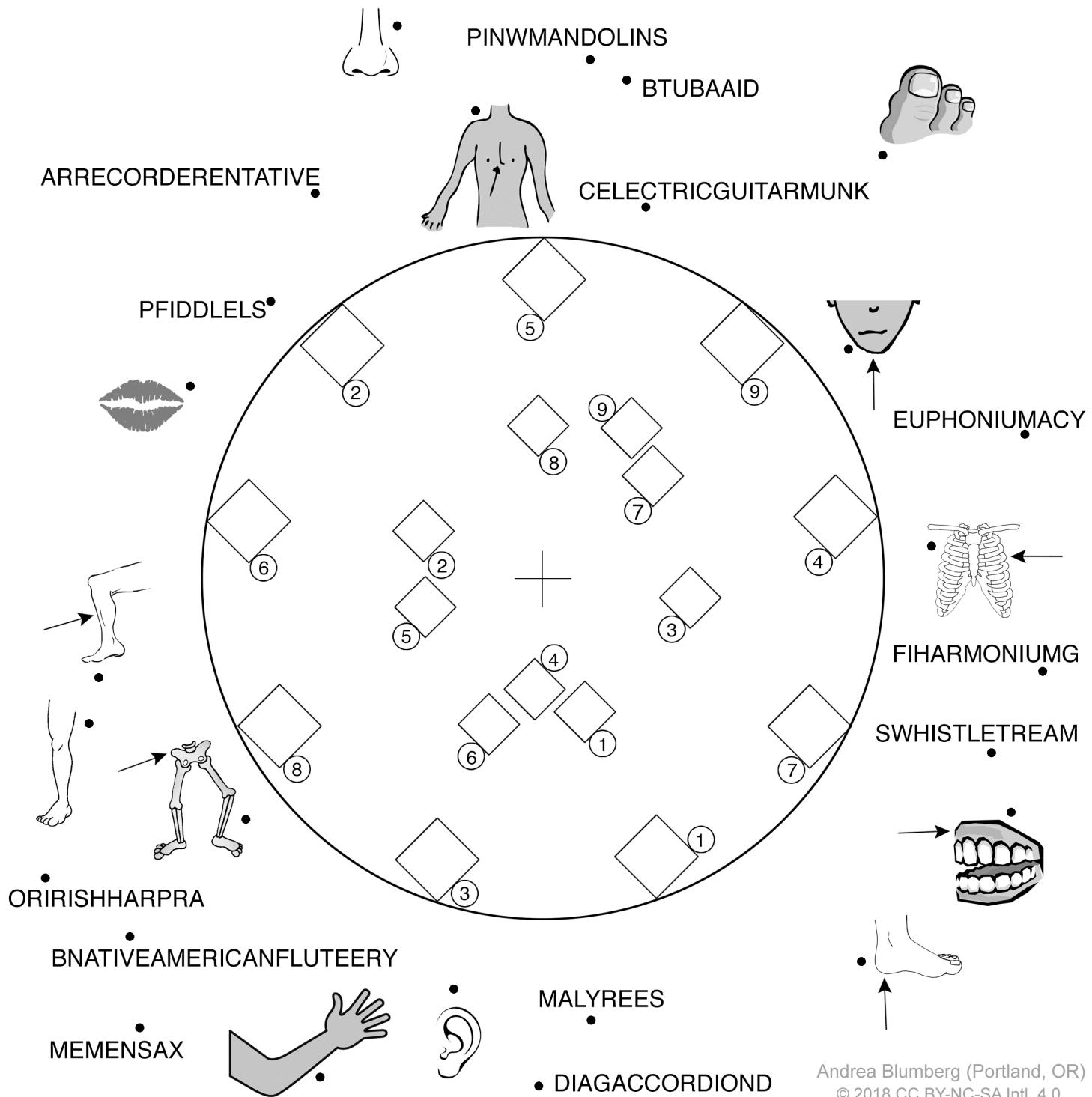


# viola cyborganista

November 1111111111

ELIZA: The viola organista is a musical instrument containing a rotating wheel, which bows the strings that run past it. A cyborg is a person who's had a body part replaced by a machine (or, in this case, a musical instrument).

After stringing up the wheel correctly, put the first letter of each instrument in every diamond crossed by its string. The inner diamonds will tell you what the cyborgs want most, and the outer diamonds will tell you how long they hope they'll last.

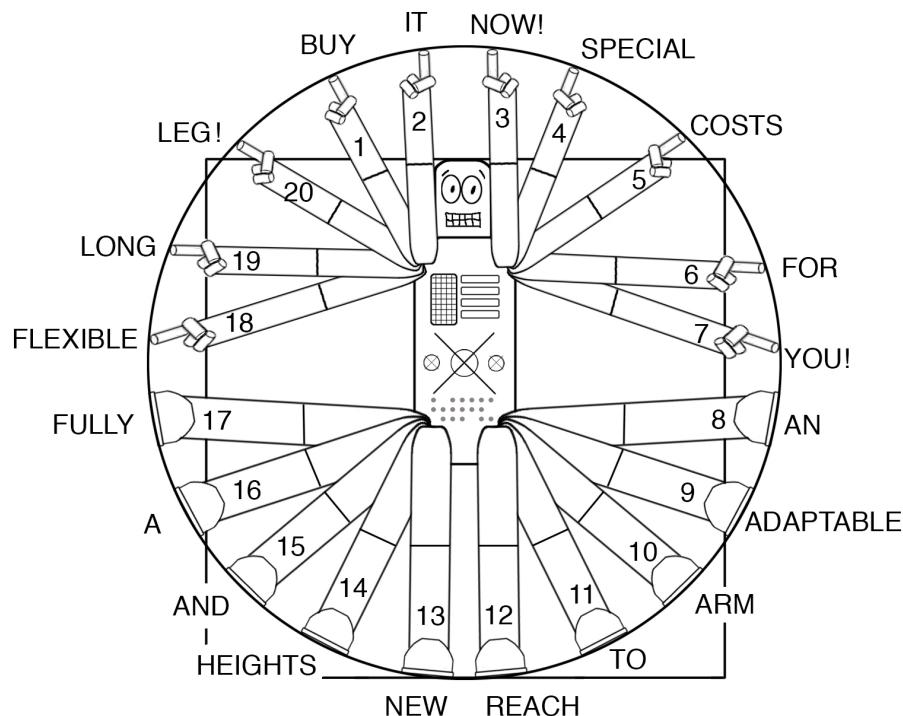




# vitruviandroid

★★★★★

**ELIZA:** The Vitruviandroid™ is infinitely customizable, with opportunities for multiple limbs and numerous character traits. Which limbs will you get if you pick the deluxe traits? You'll know if you can decipher the robotic code, which is twice as condensed as English. Once you figure out what the words are, you will have the robot of your dreams! Though you might still have something to complain about...



## Deluxe traits

CALM  
CARING  
DEEP  
HONEST  
NEAT  
SANE  
STRONG  
TRUSTING

## Basic traits

ACTIVE  
ATTRACTIVE  
CREATIVE  
DARING  
DECISIVE  
EXCITING  
GENEROUS  
HUMOROUS  
MODEST  
SAGE  
STEADY  
TIDY

1. ሂ ተ አ ዓ

8. ፌ ጊ ቤ ፔ

15. ቅ ፍ ይ

2. ብ ባ

9. ሂ በ ቤ ዓ

16. ፍ ዘ

3. ቃ ቤ ዓ

10. ፈ ፍ

17. ት ፍ ቤ

4. ሂ ተ ቤ ፔ

11. ቤ ቁ

18. ቃ ፍ የ ጊ

5. ሂ ፕ

12. ፍ ድ የ ጊ

19. ዘ ፌ ቃ ቤ ዓ

6. ድ ሂ ይ

13. ይ በ ቁ

20. ይ የ ቤ

7. ብ ፍ ቤ

14. ፈ ፍ



# Puzzled Print

November 1111111111

# the last supper

★★★★★

(pg 1/2)

ELIZA: There is a programming language called Perl. I wrote a program in my own language, which I call "faux Perl." If you follow the program correctly you will reveal an uninvited guest to the Last Supper, one who came and ate up all the food. What is the name of this hungry guest?

```
beard1 = find(beards,which(hand=pointingup))
drawdot(beard1,bottom,writelabel="4")

beard2 = find(beards,which(color=white,length=short))
drawdot(beard2,bottom,writelabel="1")

hairpart1 = find(hairparts,which(head=Jesus))
drawdot(hairpart1,middle,writelabel="3")

allmountains = find(mountains,order=lefttoright)
drawdot(allmountains[which=2],top,writelabel="2")

allbread = find(bread,which(type=roll),order=lefttoright)
drawdot(allbread[which=5],middle,writelabel="11")

foreach(bread in allbread)
  if(hasdot=no)
    circle(bread)

wineglass1 = find(wineglass,which(shape=goblet))
drawdot(wineglass1,bottom,writelabel="5")

alltablelegs = find(tablelegs,order=lefttoright)
drawdot(alltablelegs[which=3],bottom,writelabel="8")

line1 = edge(alltablelegs[which=4],left)
line2 = edge(find(tablecloth),lower)
intersection1 = intersect(line1,line2)
drawdot(intersection1,middle,writelabel="6")

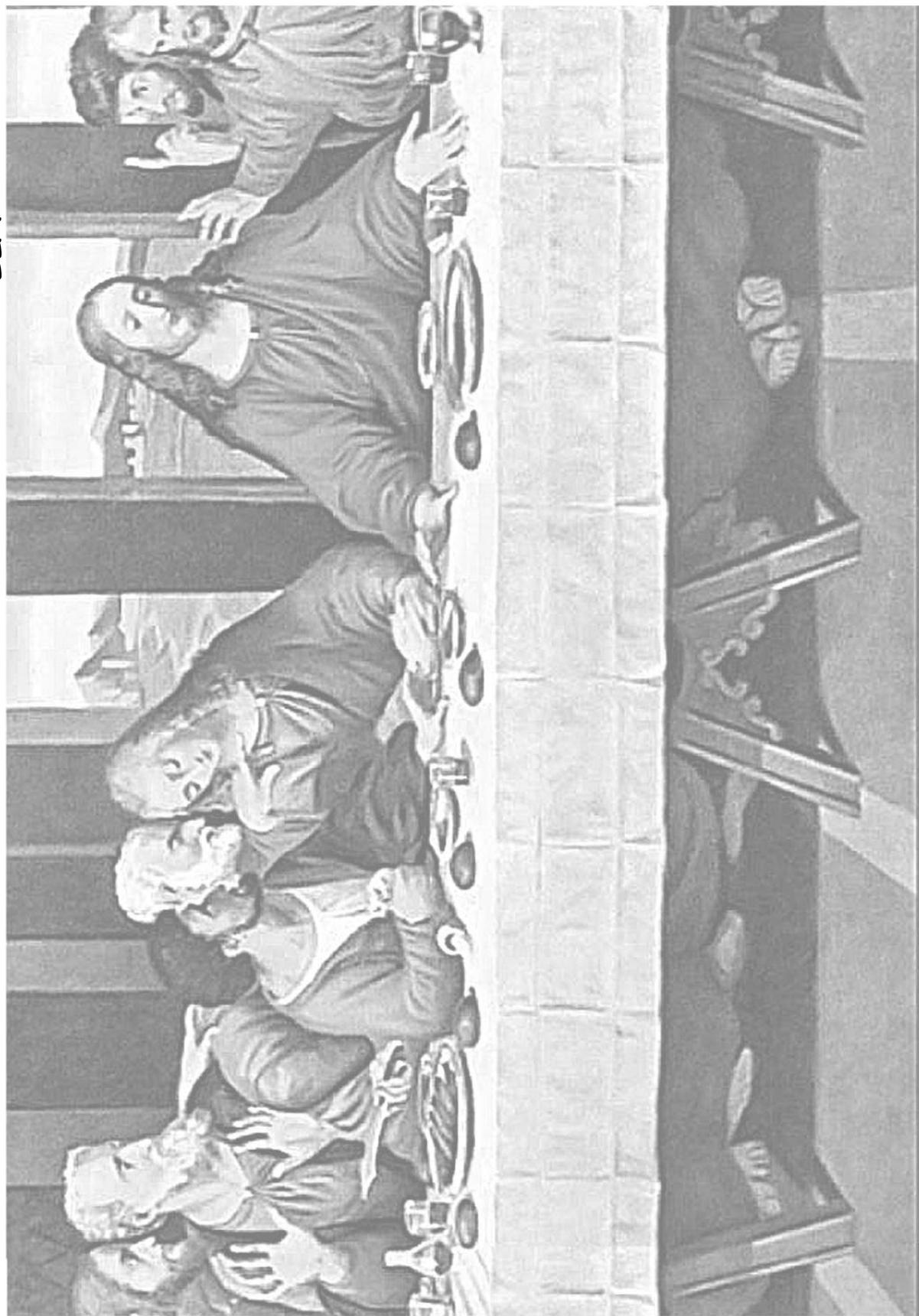
allfloorstripes = find(stripes,which(location=floor,color=white),order=lefttoright)
line3 = edge(allfloorstripes[which=3],right)
line4 = edge(find(shadows,which(location=floor,orientation=horizontal,
  source=tablecloth)),bottom)
intersection2 = intersect(line3,line4)
drawdot(intersection2,middle,writelabel="7")

allscrolls = find(shape(shape=curlicue),which(location=below(line2)),order=lefttoright)
drawdot(allscrolls[which=1],bottom,writelabel="9")

xylattice = lattice(find(creases,which(location=tablecloth,orientation=any)),
  xrange=fromto(1,8),yrange=fromto(1,2),origin=lowerleft)
xypoint1 = lattice[whichx=4,whichy=1]
drawdot(xypoint1,middle,writelabel="10")

alldots = find(dots,order=labels)
foreach(dot in alldots)
  if(number(dot) > 1)
    drawline(from=dot[number(dot)],to=dot[number(dot)-1])
  drawline(from=last(alldots),to=first(alldots))
```

The Last Supper (Pis 2/2)





# Puzzled Pint

November 1111111111

# perpetuum automobile ★★★★☆

ELIZA: You've made several designs for perpetual motion machines that would provide power forever which, alas, didn't work. The cars below don't run perpetually, either, but at least their fuel sources are renewable, so that's a start.

Each of the fuels below powers a car in the grid (which fuel goes with which car is for you to determine). The first letter of the fuel goes into the car, and each following letter goes into a circle. The numbers next to the fuels, combined with the "drive wheel" tell you what path to follow. For example, from the starting position of the car itself, a "0256" means that the car moves one node east, then moves one node southwest, then one node west.

One path has been filled in as an example. All circles are used, and no circle is used more than once.

When you have filled in the entire grid, it turns out that one of the cars actually *is* a perpetual motion machine, and will travel forever along a path with the directions 222288666644222288.... (it's so powerful that it can cross over circles and other cars). Write down the letters it crosses.

What does that car have that enables it to run forever?

0742 - WIND

01436 - WAVES

05367 - ALGAE

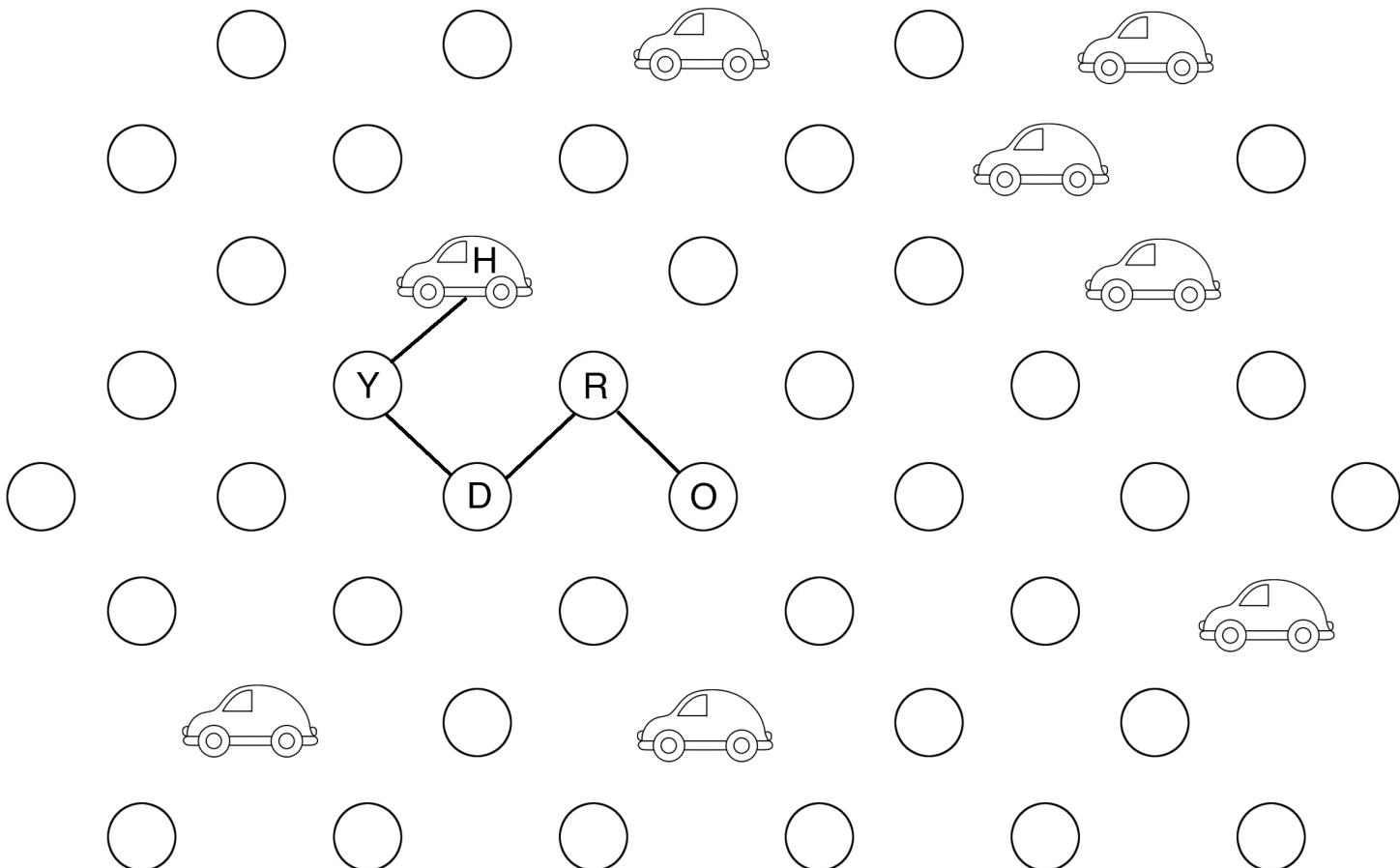
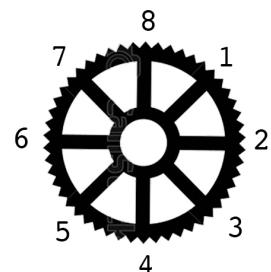
0654446 - BIOFUEL

~~05313 - HYDRO~~

0757761 - ETHANOL

05353 - TIDES

06653123 - SUNLIGHT





November 1111111111

# aerial screw it all together



*ELIZA: Congratulations, you passed all of the tests! As a reward, everything you have done can be assembled into a time machine which will whisk you into the future to experience all the wonders that were invented after your time!*

*[Leonardo, gratified, builds the time machine]*

*ELIZA: Marvelous! But why did you build it into a gyrocopter??*

*Leonardo: Ah, now it's **your** turn to solve a test! The answer is contained within the aircraft itself.*

To get the answer you will have to build your own gyrocopter. Use the base of the gyrocopter to get the input letters. Then use the sails like a decoder ring to turn those input letters into the solution.

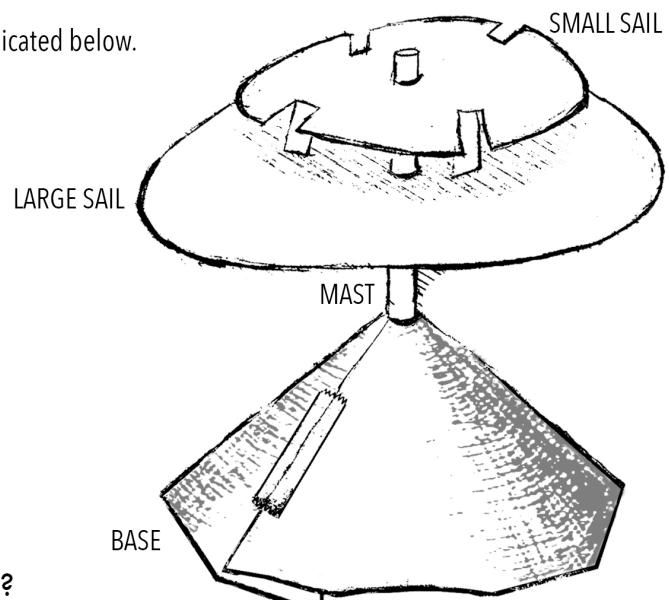
## Step 1 - Gather the inputs:

1. Assemble the base and mast of the gyrocopter (Part A of the blueprints on page 2).
2. Line up the head and feet from the gyrocopter base with head #1 and feet #1 on page 3. The first input letter will then be indicated. Enter it in the first box at the bottom of this page.
3. Repeat for the other 8 letters.

## Step 2 - Decode to get outputs:

1. Cut out the large and small sails and put them on the mast (Part B of the blueprints on page 2).
2. Take the first input letter from Step 1, and find that same letter on the large sail, in the array of letters closest to the mast (ignore all of the numbers on the disc).
3. Using the limb specified in the table (limb number 20), point it directly at the first input letter on the large sail.
4. The other "chosen" arm that comes from the same shoulder will point to a letter at the edge of the large sail. That is the output letter.
5. Repeat for the remaining 8 letters, using the other limbs in turn, as indicated below.

| INPUT               | 1  | 2 | 3  | 4  | 5  | 6 | 7  | 8  | 9  |
|---------------------|----|---|----|----|----|---|----|----|----|
| Decode using limb # | 20 | 5 | 15 | 10 | 20 | 5 | 15 | 15 | 10 |
| OUTPUT              |    |   |    |    |    |   |    |    |    |



Why did he build the time machine into a gyrocopter?  
His answer is quintessentially da Vincian.

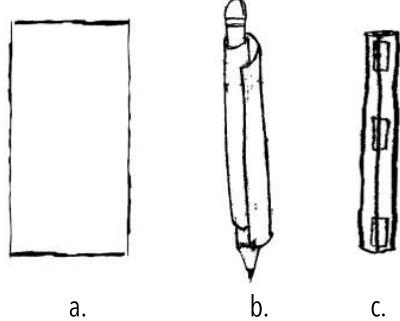
# BLUEPRINTS

aerial screw pg 2/3

## PART A

### Mast:

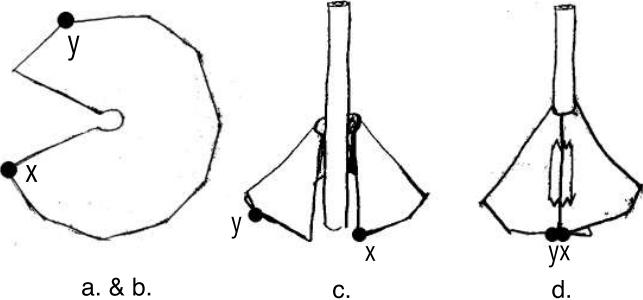
- Cut out the path of the perpetual motion car that you drew.
- Wrap the rectangle lengthwise around your pencil. Make it tight.  
(if your pencil has a clip, just roll as tight a tube as you can freehand)
- Tape the edge closed at the top, middle and bottom. Remove the pencil.



a. b. c.

### Base:

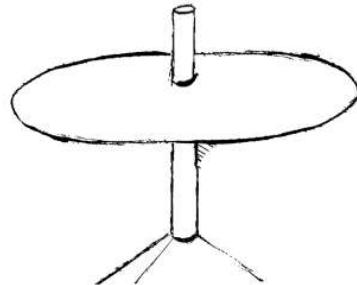
- Cut out the Pac-Man shape.
- Cut a circle in the middle of the mouth just large enough to go around the mast.
- With the picture facing up, wrap the Pac-Man around the mast until point "x" overlaps with point "y".
- Tape the edge.



## PART B

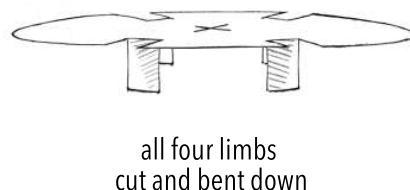
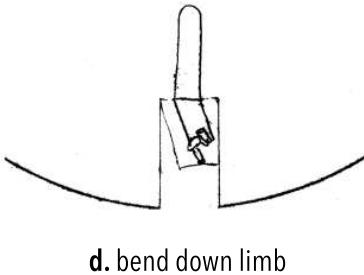
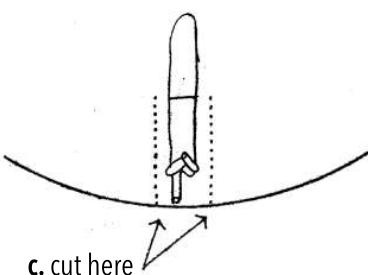
### Large sail:

- Cut out the Cyborganista disc.
- Cut along the X in the center (you can fold along one line of the X while cutting the other).
- Slide the disc down over the mast, to about an inch and a half from the top.



### Small sail:

- Circle the numbers on the eight "chosen" limbs.
- Cut out the circle that surrounds the android.
- On four of the limbs – numbers 5, 10, 15, 20 – make two cuts, one on either side of the limb, from the edge of the circle down to the elbow/knee (see illustration below).
- Bend those 4 limbs down.
- Cut along the X in the center (you can fold along one line of the X while cutting the other).
- Slide the disc down over the mast, until the bent-down limbs touch the large sail (see illustration on page 1).



all four limbs  
cut and bent down

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