

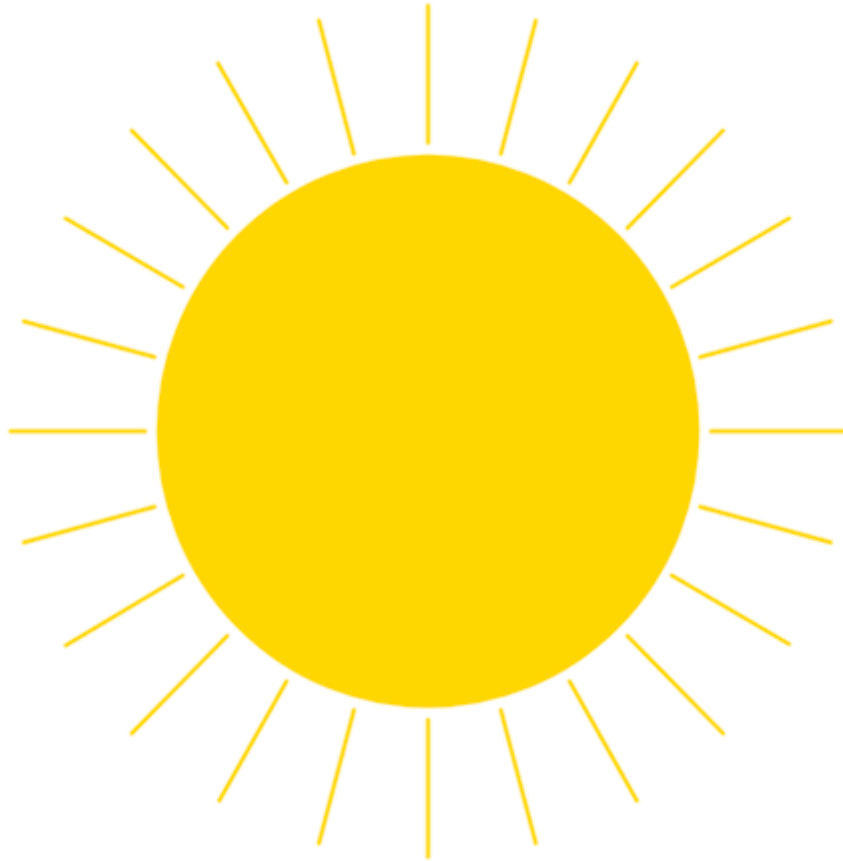
# “Turtle Tuesday” Logo Challenges

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June 6, 2023

## Challenge No. 36

Can you draw a sun with rays in Logo?



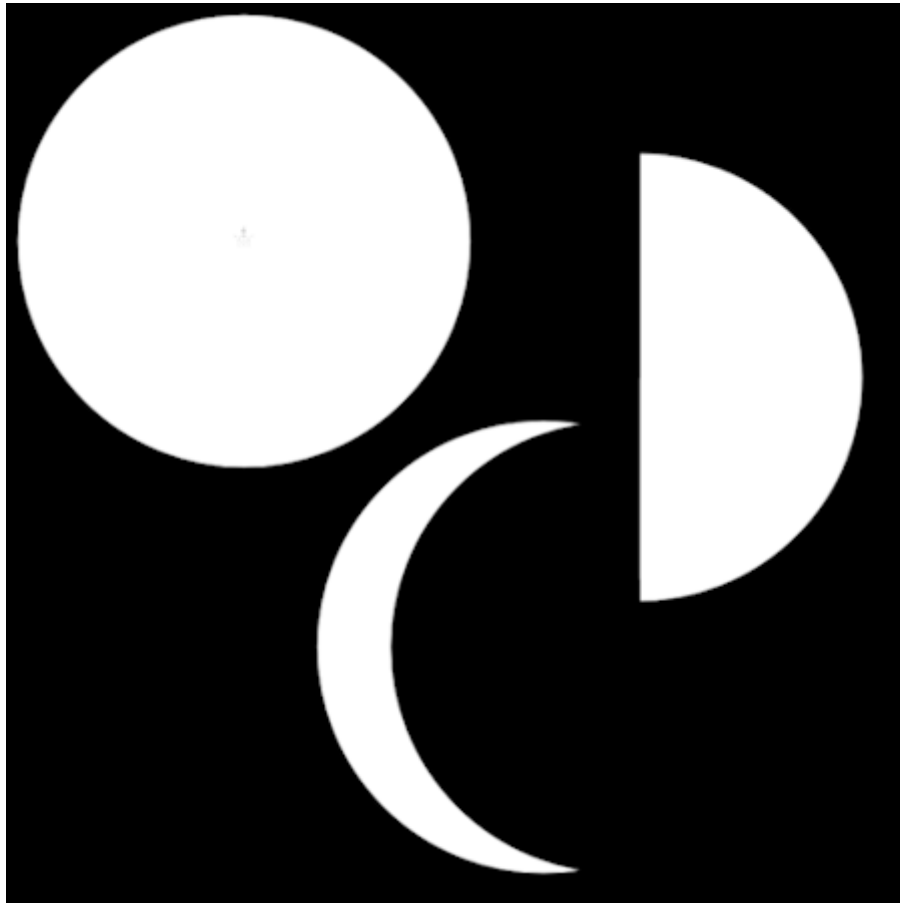
Our solution:

```
TO SUN
DRAW SETPC "GOLD SETW 3
(STAMPOVAL 200 200 "TRUE)
REPEAT 24 [PU FD 210 PD FD 100 PU BK 100 BK 210 RT 360/24]
END
```

**June 13, 2023**

## Challenge No. 37

Can you draw a full moon, a half moon, and a crescent moon in Logo?



Our solutions:

```
TO MOON
DRAW SETBG 0
SETPC "WHITE
(STAMPOVAL 200 200 "TRUE)
END
```

```
TO HALFMOON
DRAW SETBG 0
SETPC "WHITE
(STAMPOVAL 200 200 "TRUE)
SETPC "BLACK SETW 3
FD 200 BK 400 FD 20
PU LT 90 FD 20 PD (FILL 0)
PU HOME PD
STAMPOVAL 200 200
END
```

```
TO PHASES :NUM
MOON
PU SETXY LIST :NUM 0 PD
SETPC "BLACK
(STAMPOVAL 200 200 "TRUE)
HT
END
```

Try these inputs to PHASES:

```
PHASES 0
PHASES 400
PHASES 120
PHASES 250
```

June 20, 2023

## Challenge No. 38

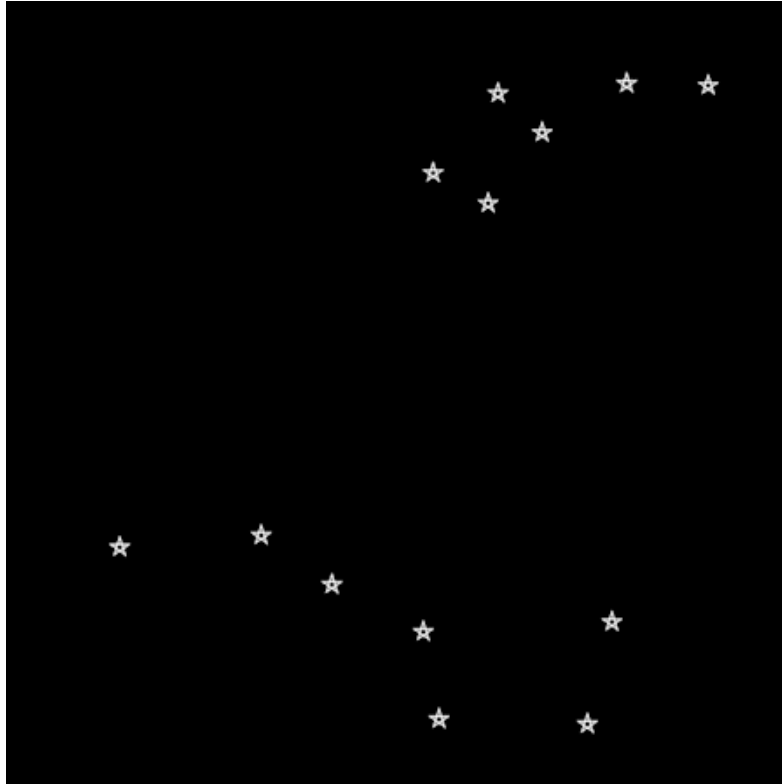
Can you draw a constellation in Logo? Try the Big Dipper and the Little Dipper.

Load this image as a background to help you place the stars.

<https://learnertrip.com/wp-content/uploads/2020/06/differences-big-dipper-little-dipper.jpg>

Move the mouse to a star. Use `SETPOS MOUSE` and press <Enter>.

Use `PR POS` to see the x- y-coordinates of that star.



Our solution:

```
TO DIPPERS
DRAW SETW 2
SETBG 0 SETPC "WHITE
DRAW.DIPPERS
END

TO STAR
RT 18 REPEAT 5 [FD 20 RT 144] LT
18
END

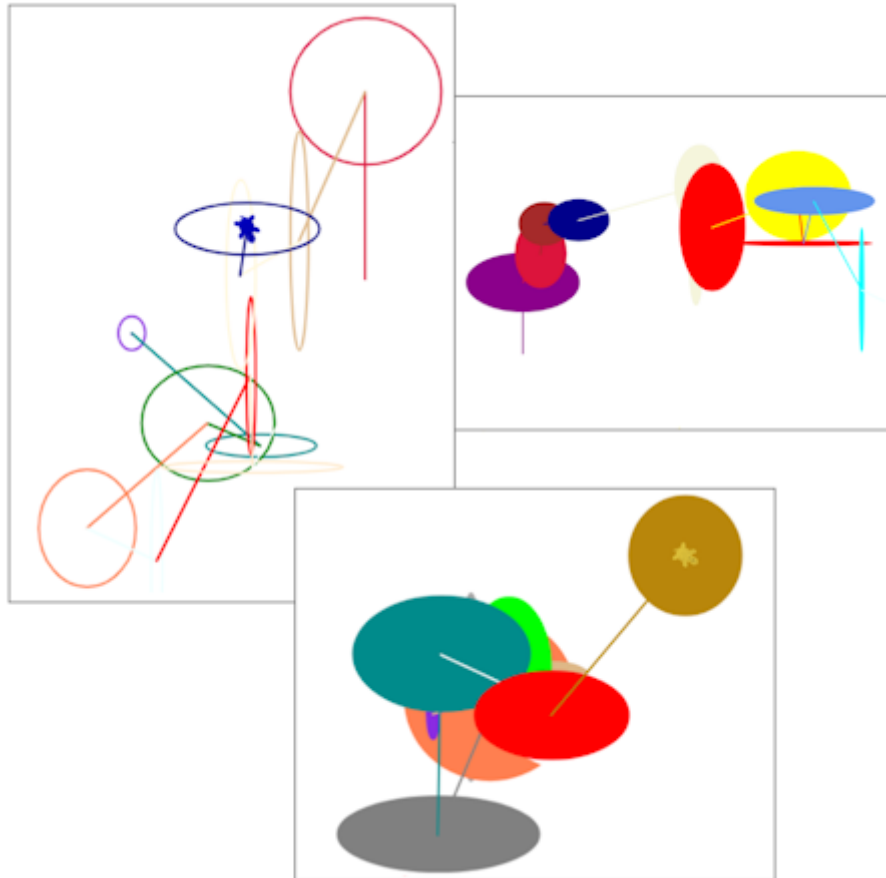
TO DRAW.DIPPERS
; big dipper
PU SETPOS [-473 -170] PD STAR
PU SETPOS [-326 -160] PD STAR

(DRAW.DIPPERS continued)
PU SETPOS [-255 -210] PD STAR
PU SETPOS [-162 -258] PD STAR
PU SETPOS [-146 -343] PD STAR
PU SETPOS [6 -352] PD STAR
PU SETPOS [31 -248] PD STAR
; little dipper
PU SETPOS [211 275] PD STAR
PU SETPOS [128 298] PD STAR
PU SETPOS [45 300] PD STAR
PU SETPOS [-41 250] PD STAR
PU SETPOS [-96 178] PD STAR
PU SETPOS [-152 210] PD STAR
PU SETPOS [-85 293] PD STAR
END
```

June 27, 2023

## Challenge No. 39

Can you create some abstract art in Logo?  
Use the STAMPOVAL command to draw circles.  
Use RANDOM to make them different sizes.



Two solutions (adjust the numbers for different effects):

These instructions create random art of unfilled ovals on the screen.

```
DRAW SETWIDTH 2 REPEAT 12 [SETPC RANDOM 40 FD RANDOM 200 RT RANDOM  
360 STAMPOVAL RANDOM 100 RANDOM 100]
```

These instructions create random art of filled ovals on the screen.

The "TRUE input to STAMPOVAL makes the oval be filled with the current pencolor.

```
DRAW SETWIDTH 2 REPEAT 12 [SETPC RANDOM 40 FD RANDOM 200 RT RANDOM  
360 (STAMPOVAL RANDOM 100 RANDOM 100 "TRUE)]
```