

Starlogo_Wanthy

Wears down virus protection and then infects new computers.

Observer Procedures

Creates 30 yellow turtles and spreads them all over
to **setup**

ca	<i>Clear all</i>
crt 30	<i>Create 30 turtles</i>
wait 0	<i>Not needed</i>
ask-turtles [setc yellow fd 30]	<i>Tells each turtle to change to yellow and move 30 steps</i>
ask-turtles [patch-setup]	<i>Each turtle runs the patch-setup program</i>
end	

Turtle Procedures

*stamps a black place sky, then finds a sky place, makes it lime, reproduces and then jumps away . Note the button for **go** has the double arrows, which means it keeps executing forever. Also note – **stop** is used in the procedures to exit that specific procedure and return to the calling routine. In other words, **go** tells the turtles to **search-for-chip**. When they find a chip (a black patch) – **go** gets control back, and then the turtles **find-new-pile**. When they find a blue patch, **go** gets control back again and continues. Since the procedures (i.e. **search-for-chip**, **find-new-pile**, etc.) call themselves as the last line, they would run forever without the stop. This behavior (calling themselves) is called recursive.*

(This was the last procedure – moved it up since it is the main procedure)

to go	<i>Button</i>
search-for-chip	<i>Find black patch – change it to sky</i>
find-new-pile	
find-empty-patch	
reproduce	
get-away	
end	

Jumps all over – doesn't really do anything else

Do the following 100 times

Pick a direction between 0 and 359 (randomly)

Jump a distance between 0 and 199 (randomly)

Change your color to yellow (which it is already)

Hence could simply have done

to patch-setup

seth random 360 jump random 200

end

The turtles are already yellow – they may have meant to hit

to patch-setup

repeat 100 [seth random 360 jump random 200 setc yellow]
end

Move one step at an angle between +/- 49 degrees

to wiggle

fd 1

rt random 50

Turn right between 0 and 49 degrees

lt random 50

turn left between 0 and 49 degrees

end

if black – make it sky, otherwise keep looking

to search-for-chip

if pc = black

If patch color is black – has virus protection – weaken it

[stamp sky jump 20 stop]

Change patch color to sky – then jump and stop

wiggle

otherwise Keep moving – one step in random direction

search-for-chip

Keep looking for black patch

end

Stop on a sky pile. If the patch is sky stop, if not, wiggle and keep looking for a sky patch.

to find-new-pile

if pc = sky

If patch color is sky - stop

[stop]

wiggle

otherwise – keep moving

find-new-pile

keep looking for sky patch

end

if sky, make it lime, jump, and stop, otherwise keep looking (this will be the second blue patch it lands on)

to find-empty-patch

wiggle

Move

if pc = sky

If patch is sky

[stamp lime - 5 get-away stop]

Make it lime colored jump away until land on black

find-empty-patch

otherwise keep looking

end

to reproduce

if pc = [setc sky] [hatch []]

end

Go until land on black

to get-away

seth random 360

```
jump 20  
if pc = black [stop]  
get-away  
end
```