

# Outline of Frogger lessons



## Materials:

- One computer per student, either in computer lab or 1 laptop per student in regular class.
- Agentsheets program loaded on all machines.
- Internet connectivity for each computer and/or tutorial as separate document on each computer

## Level 1

### Day 1:

Share unit objective, end product requirements and grading rubric  
Optional: Have students play with Bridge-Builder as a lead in activity  
Initially teacher to model each step rather than have students use the tutorial unassisted  
Create frog agent,  
Create a worksheet  
Frog able to move in all four directions frog

### Day 2:

Create street and car agents,  
Add streets and cars to worksheet  
Car agents programmed to move on road, left to right  
Note on test run - cars stack up.  
Create tunnel agent - Generation and absorption of cars  
Remind students not to spend too much time on artwork- can always modify the agents later

### Day 3:

Collision of frog and truck  
Create bloody frog agent, add sound  
Extension – regeneration of frog after death (optional instead of hitting reset button)

## Level 2

### Day 4:

Create river agent, log agent,  
Make the log move on water, left to right  
Log generator (bridges) generates and absorbs logs  
Make frog unable to swim, type in “I cannot swim” or make splash sound  
Transport computational thinking pattern – use video or model for students with log and frog.

### Day 5:

Create turtle agent,  
Make the log move on water, right to left  
Turtle generator (palm trees) generates and absorbs turtles  
Transport computational thinking pattern.  
Check for understanding- see if student can create the turtle agent and set up transport independently  
Final assessment – each student uploads game to scalable game design arcade, can play each other’s games.

Extension activities:

- Lives for frog.
- Frog regeneration tied to lives, for example, can only play 3 times before “game over” like arcade game
- Scoring – for example, more points for landing on a more difficult to reach grotto (typically in the upper right corner) or for the least amount of traveling (steps taken)