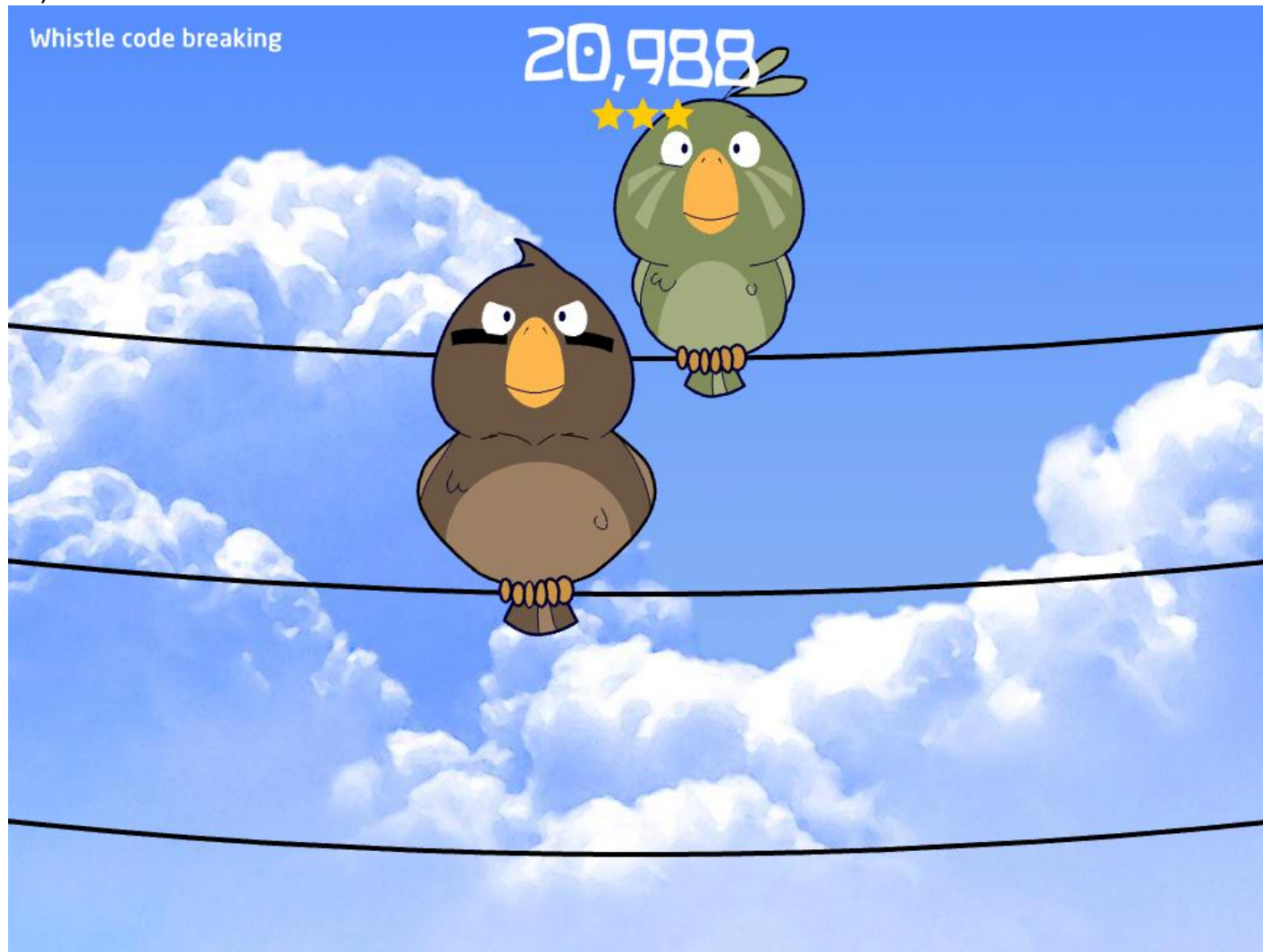# acousticpioneer

Lateralization – 1 of 4 frequencies will play in either the right or left ear. If the sound plays in the right ear tap the bird on the right side of the screen. If the sound plays in the left ear, tap the bird on the left side of the screen. It will start with the bottom birds and work up to the highest birds.

Tonal Patterns has two screens – pre-explain both before testing – in the first screen, two tones are going to play. One will be a tone higher in pitch and another lower in pitch. If you hear the high tone play, then the low tone play, tap the top bird, then the bottom bird. If you hear the low tone, then the high tone, tap the bottom bird, then the top bird. Next there will be three tones. But it will still be just 2 pitches. So it might be high, high, low, at which point you tap the top bird, top bird, then the bottom bird. Or you might hear low, high, low, so you top the bottom, top, bottom birds. Or any other example like that (hhl, hlh, hhl, lhh, lhl, llh).

Tonal Patterns continued – Now there will be three birds. The bottom bird sounds the lowest whistle, the middle bird the middle whistle, and the top bird the highest whistle. First the sounds will play 3 in a row, either bottom, middle, high bird, or high, middle, low bird. So either from top to bottom or bottom to top. THEN the birds will play in any order starting with three, then four, then increasing in number until you can no longer recall them.
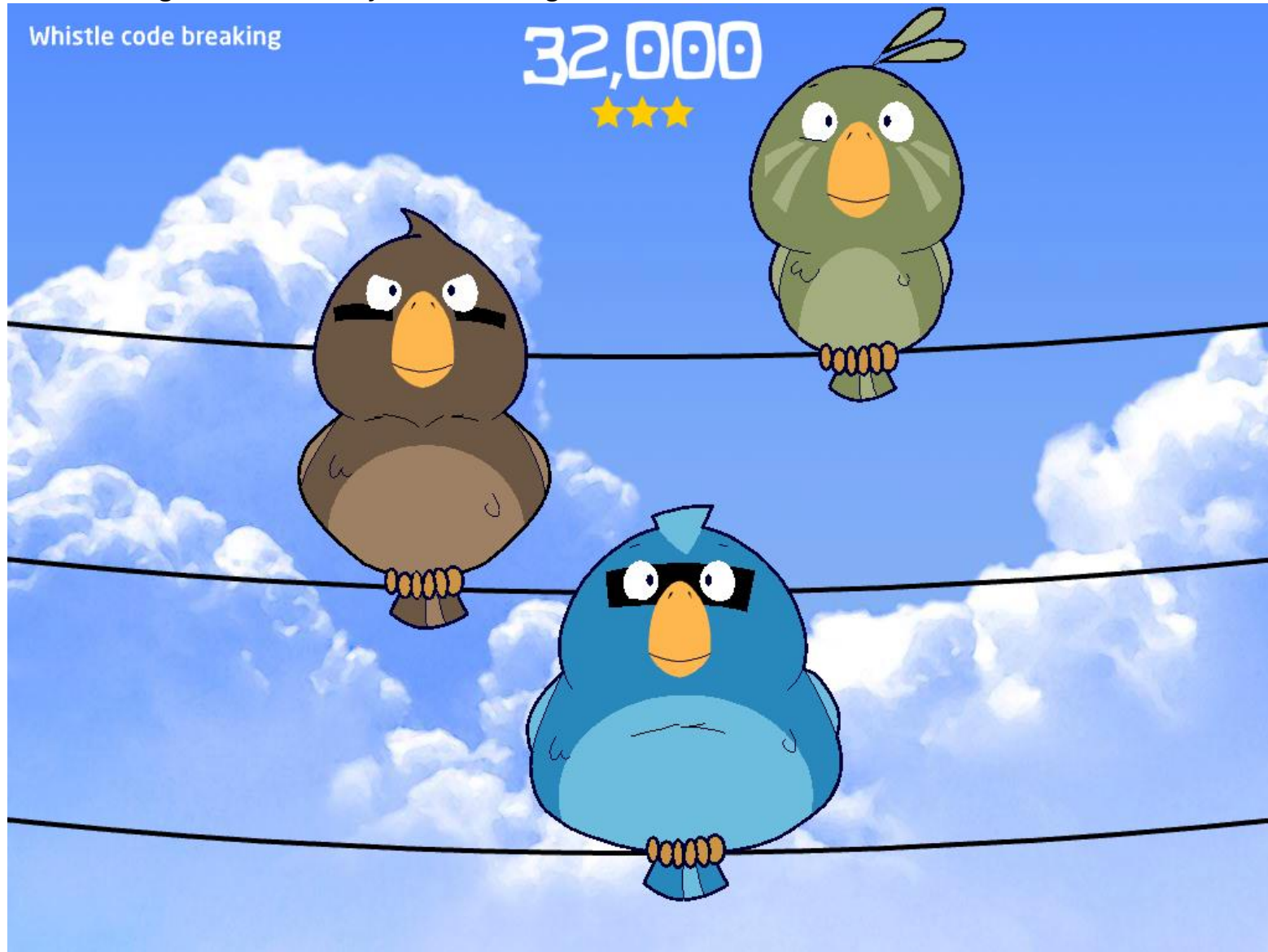
Tonal Speed – this task is similar to the first tonal patterns task. Two whistles/tones will play. They will play either low/high, high/low, low/low, or high/high. If they play high/low tap the down arrow as the whistles went down in pitch. If they play low/high tap the up arrow. If the whistles play the same (low/low or high/high) tap the 'side-by-side stars' button as they are the same sounds.
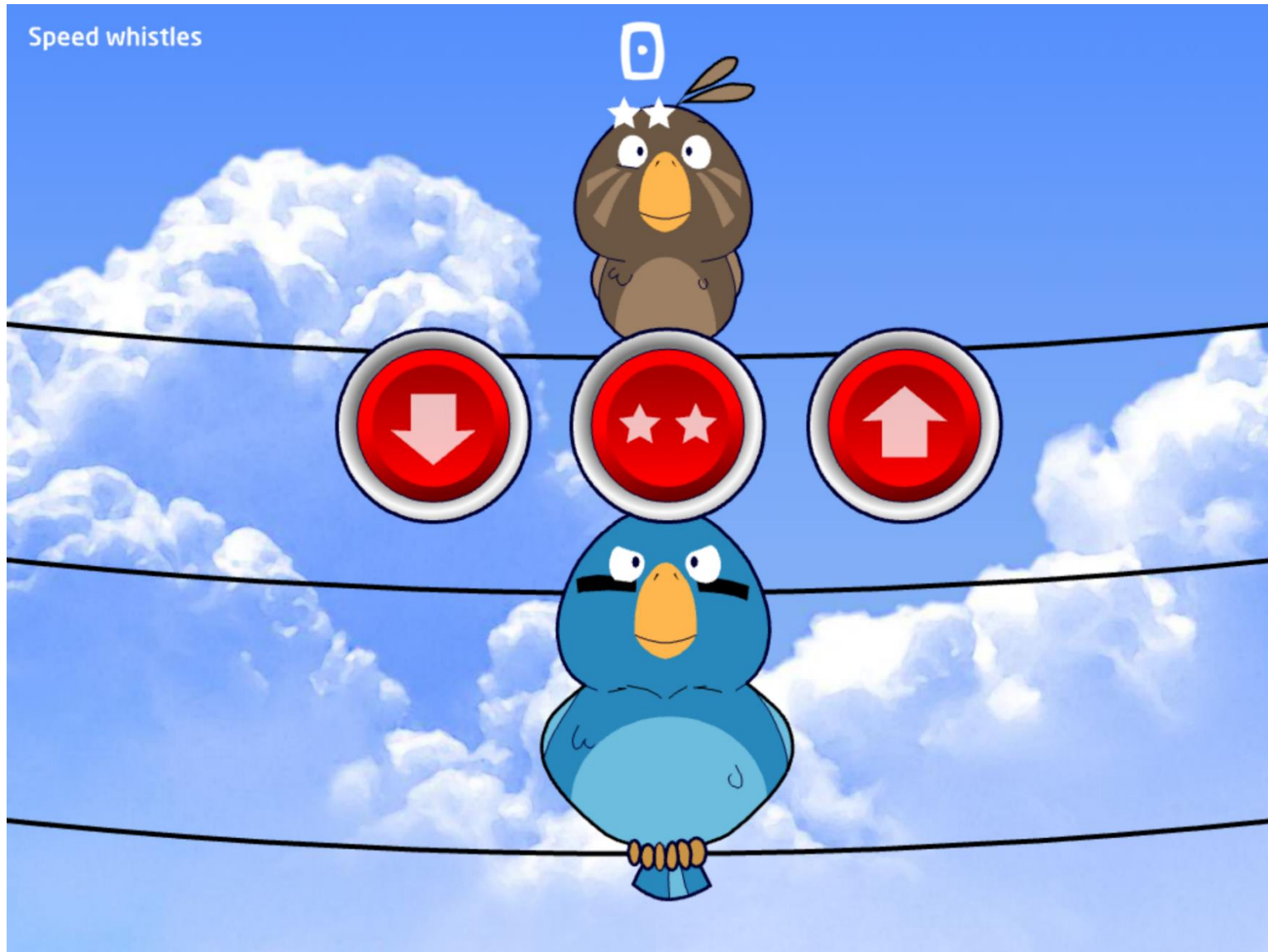
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Animal dichotic sounds – in this game, the listener will hear either 1 animal sound (if aged 5-7) or 2 animal sounds (if 8+) in each ear at the SAME TIME. So that means the 5-7 years will hear 2 sounds total – 1 per ear, and the 8+ will hear 4 total. After the 2 or 4 animals have sounded, the listener just needs to select all the animals they heard. It doesn't matter which order they tap them. Please guess if you aren't sure. Please listen closely to the animals before playing the game so you know which animal is which.
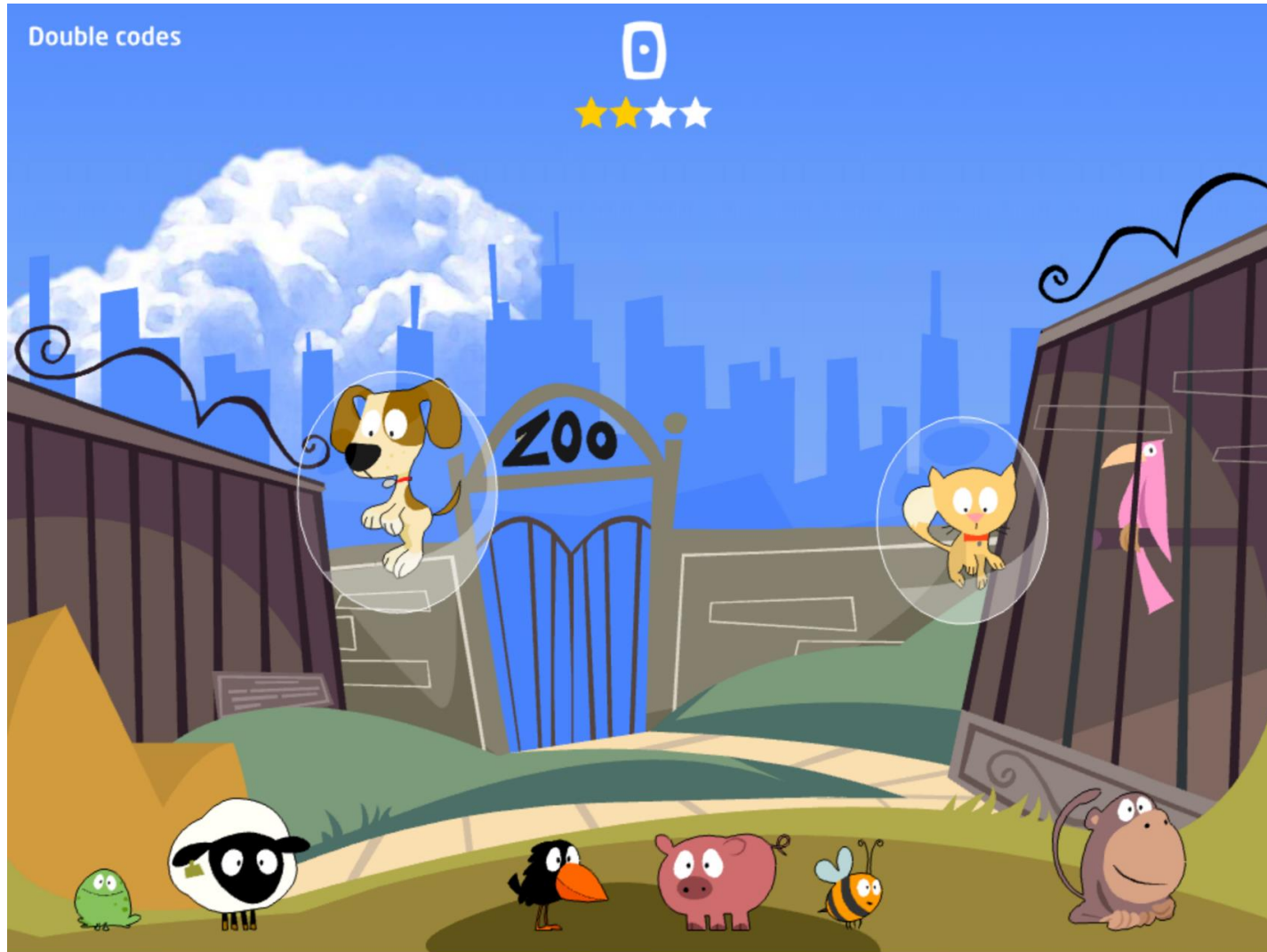
Color/Word memory – in this game (5-7 years) will hear colors presented and (8+) will hear numbers. They will need to tap the sounds in the same order they play. If successful, a new set will play but it will keep adding more and more to see how many they can keep track of in a row.
5-7

8+ -Word memory

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Rapid Speech – In this game, two colors will be called out. Tap the colors you hear in the same order they were played. They will play in one ear or the other. The person calling out the codes will call them out faster and faster and faster. Do your best to tap the colors in the order you hear them.

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Dichotic Speech/numbers – In this game, 5 to 7-year-old listeners will hear 1 color per ear play at the same time. They need to tap both colors on the screen in any order. 8+ year old children will hear 2 numbers per ear at the same time. They need to tap all 4 numbers that played in any order.

Dichotic Colors (5-7 years)

Double Dichotic words (8+)

Speech in Noise – In this game (5-7 years) will only hear a color called out, they just tap the bug with that color. For 8+, they will hear a color and descriptor (like fuzzy, stripy, slimy, skinny, spikey, fluffy, spotty) and they need to tap on the bug that matches both of those like Red stripy in this example pic. There will be NO noise during the familiarization phase and then the noise will start. It is a broadband type noise. The first stage the speech and noise will seem to come from directly ahead of the listener (at 0 degrees azimuth) and once they finish that test, the speech moves about 40 degrees off to the left of 0 but the noise stays at 0 degrees azimuth. This SHOULD allow the listener to hear in higher noise levels. The familiarization phase looks a bit like this.

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The speech in noise sections look similar to this. For the speech off to the left, the gray bird will move to the left-hand side of the screen.