

# Animation Script



## Does city life negatively affect wildlife?

Dr Sarah Guindre-Parker

### To make the most out of this script, you could:

- Stick it in your book as a record of watching Sarah's animation
- Pause the animation and make notes as you go
- Add your own illustrations to the sheet
- Create your own animation to accompany it
- Add notes from classroom discussions
- Make notes of areas you will investigate further
- Make notes of key words and definitions
- Add questions you would like answered – you can message Sarah through the comments box at the bottom of her article:

[futurumcareers.com/does-city-life-negatively-affect-wildlife](https://futurumcareers.com/does-city-life-negatively-affect-wildlife)

## SCRIPT:

European starlings can be spotted in towns and cities, in grassy areas such as parks, or sweeping through the sky.

At Kennesaw State University in the US, ecologist Dr Sarah Guindre-Parker is studying the effects of heavy metals on starlings – and what this might mean for all living organisms, including humans.

Heavy metals are high density metals such as lead, arsenic, cadmium and mercury. Heavy metals occur naturally in the environment, but urban areas often have increased concentrations of them because of human activity. High levels of heavy metals can affect soil, water and air quality.

Starlings live in urban and rural habitats, so Sarah she can study birds from both areas to see what differences the change in habitat might cause.

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Starlings often nest in cavities and vents in buildings and will also lay their eggs in nest-boxes. This means Sarah can put out nest-boxes and monitor the starlings, without having to find hidden breeding sites.

Sarah and her team set bird traps with bird food inside. These traps catch the birds but do not harm them. The researchers then attach a metal band with a unique reference number onto each bird's leg. This allows them to know when and where they saw the starling and prevents them from accidentally analysing the same bird twice.

The team conducts an 'open field test'. This test involves placing the starling in a small, enclosed tent, showing it an unfamiliar object, and filming it for 12 minutes.

Sarah watches the videos to study how confident different birds are in the new environment and how aggressive they are.

The team also collects a tail feather from each bird. The feathers are washed and sent to the University of Georgia's Agricultural and Environmental Services Laboratories to be analysed for heavy metal concentrations.

Combining data from the feather analysis with the video observations, Sarah will be able to see if birds with higher heavy metal concentrations in their feathers behave differently.

While Sarah is still collating results from the test videos, the tail feather analysis has shown that nestlings from urban habitats have higher lead concentrations in their feathers than nestlings from rural habitats. There is no difference between lead concentrations in rural and urban adult starlings. This suggests that nestlings may be a better indicator of elevated lead in urban environments.

So far, Sarah and her team have sampled over 300 starlings across 11 different sites in the state of Georgia, but her work continues!

What would you investigate as an ecologist?